The Influence of the Paris Agreement on Mitigation Actions toward the Reduction of Greenhouse Gas Emissions Post 2015:

A Comparative Study of Nordic, Asian and African Regions

A thesis

Submitted in fulfilment of the requirements for the degree

of

Degree of Doctor of Philosophy in Law

at

The University of Waikato

by

Kemi Mildred Hughes

THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

2022

ABSTRACT

The Intergovernmental Panel on Climate Change (IPCC) has stepped up its warning on climate tipping points as scientists warn of the impending irrevocable disaster that will occur with continued emissions. Since the signing of the Paris Agreement in 2015, countries are encouraged to substantially reduce their greenhouse gas (GHG) emissions to limit the global temperature increase to 2ºC and pursue efforts to limit global temperatures to 1.5ºC. So, have countries adhered to the IPCC warnings by reducing emissions and does the international environmental regime (IER) have anything to do with their emissions-reductions efforts since 2015? To answer these questions, this thesis tracks the emissions reductions efforts of eight countries to determine whether the IER vis-à-vis the Paris Agreement and the United Nations Framework for Climate Change (UNFCCC) have influenced the emissions reduction effort in these countries. The eight countries are China, Denmark, Finland, India, Morocco, Nigeria, Norway and Sweden selected based on their emissions contributions, emissions reductions ambition and efforts since 2015.

Further, the significance of the IER has been interrogated for several decades in relation to major environmental concerns such as ozone layer depletion, biodiversity loss and climate change. The thesis responds to the current gap in the literature that has not addressed the influence of the Paris Agreement on emissions reductions efforts across four continents. Previous literature has examined other international environmental agreements (IEA) such as the Montreal Protocol and the Kyoto Protocol and have utilised parameters to measure the IER's effectiveness. The thesis distinguishes by examining the influence of the Paris Agreement utilising the existing parameters proffered by various scholars such as compliance, enforcement, monitoring, problem structure and institutional design. The thesis also introduces new parameters that have not been used in the existing literature to analyse international environmental regime influence, such as political will subsumed under behavioural changes, equipping of environmental judges and climate litigation under the enforcement parameter, and NDC target review under the implementation parameter.

The thesis builds a conceptual framework using the green political theory and the regime theory as its pillars. These theories are best suited to the thesis as they support state and non-state engagement in environmental issues concerning the global commons. The thesis also relies on the Paris Agreement's preamble that recognises the importance of all levels of government and

various actors (corporate and non-state actors) to aid its analysis of the selected countries' engagement with emissions reduction.

The analysis of the selected countries reveals that their climate action benefited from cross-influences from the IER, regional environmental organisations (REOs) and non-state actors. The thesis found that there was significant IER influence in Morocco, India and Nigeria. The regime also moderately influenced Sweden, Norway, Denmark, Finland and China. In addition, the thesis found that REOs such as the European Union (EU), Economic Community of West African States (ECOWAS) and Association of Southeast Asian Nations (ASEAN) played a commendable role in encouraging emissions reductions efforts. Non-state actors also played a crucial role to pressure governments to act through climate litigation and protests.

The thesis' significance lies in its ability to present an up-to-date view of the interplay among the IER, the REOs and other non-state actors in emissions reductions post-Paris 2015. In addition, new parameters as mentioned above, have been introduced that could be relevant in assessing the influence of future environmental regimes.

DEDICATION

This thesis is dedicated to my late father, Dr Patrick Soyomi Hughes, the smartest man I ever knew. I miss you daddy, and your memory reminds me that I can too.

ACKNOWLEDGEMENTS

The journey toward completing this thesis has been fraught with highs and lows, particularly with the challenges encountered at the heels of the coronavirus pandemic. Nevertheless, the journey has shaped and moulded my academic and career path. My appreciation goes to my chief supervisor, Associate Professor Trevor Daya-Winterbottom and my second supervisor Michael Dizon, for their time in providing feedback as I conceptualised and wrote my thesis.

I wish to thank Associate Professor Nathan Cooper for entrusting me with academic engagements, collaborating with me on research projects and providing career advice when I required it. I wish to thank my fellow PhD students for their camaraderie that helped make the journey enjoyable. I wish to thank the law librarians Em and Carolyne for supplying me with the various resources I needed throughout the thesis writing.

Importantly, my most profound appreciation goes to my precious husband, who encouraged me throughout the thesis writing, I love you. In addition, my love and thanks go to my darling mum Dns. Estella Hughes and my sister Diana Malomo for constantly praying for me and encouraging me all through the thesis. I wish to thank all my friends who also supported me in one way or the other.

Finally, to the One who knows all things, sees all things and does all things- thank you, God!

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LIST OF ABBREVIATIONS

AAPJRC	ASEAN Action Plan on Joint Response to Climate
AAU	Assigned Amount Units
ACCF	Africa Climate Change Fund
ACPC	Africa Climate Policy Center
ADB	Asian Development Bank
ADPC	Asian Disaster Preparedness Center (ADPC)
AEEAP	ASEAN Environmental Education Action Plan
AfDB	African Development Bank
AGN	African Group of Negotiators
AMCEN	African Ministerial Conference on the Environment
AMME	ASEAN Ministerial Meeting on the Environment
AOSIS	Alliance of Small Island States
APAEC	ASEAN Plan of Action for Energy Cooperation
ARF	ASEAN Regional Forum (ARF)
ASEAN	Association of Southeast Asian Nations
ASOEN	ASEAN Senior Officials on the Environment
BAU	Business as Usual
BOAD	Banque Ouest Africaine de Développement also referred to as the West African Development Bank
BTR	Biennal Transparency Reports
CAHOSSCC	African Heads of State and Government on Climate Change
CAMENA	Climate Action in the Middle East and North Africa
CAP	Common Agricultural Policy
CAT	Climate Action Tracker
CBDR-RC	Common but Differentiated Responsibilities and Respective Capabilities
CCPI	Climate Change Performance Index
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CEEPR	Center for Energy and Environmental Policy Research

CER	Certified Emissions Reductions
CFC	Chlorofluorocarbons
CIF	Climate Investments Fund
CITL	Community Independent Transaction Log
CMA	Conference of the Parties Serving as the Meeting of the Parties to the Agreement
CMP	Conference of the Parties Serving as the Meeting of the Parties to the Protocol
COP	Conference of Parties
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CPC	Climate Policy Council
CTF	Clean Technology Fund
DANIDA	Danish International Development Agency
DIAPOL-CE	Policy Dialogue and Knowledge Management on Low Emission Strategies
D2S	Diesel to Solar
ECCP	European Climate Change Programme
ECOWAS	Economic Community of West African States
ECOWREX	ECOWAS Observatory for Renewable Energy and Energy Efficiency
ECRAN	Environment and Regional Climate Regional Accession Network
ECREEE	ECOWAS Renewable Energy and Energy Efficiency
ECJ	European Court of Justice
ECCJ	Community Court of Justice of the ECOWAS
ECT	Environmental Courts and Tribunals
EEA	European Economic Authority
EEC	European Economic Community
EEEP	ECOWAS Energy Efficiency Policy
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIR	Environmental Implementation Review
ENGO	Environmental NGO
EPASES	ECOWAS Programme on Access to Sustainable Electricity Services

EREF	ECOWAS Renewable Energy Facility
EREP	ECOWAS Renewable Energy Policy
ERERA	ECOWAS Regional Electricity Regulatory Authority
EIR	Environmental Implementation Review
EPA	Environmental Protection Agency
EPASES	ECOWAS Programme on Access to Sustainable Electricity Services
EPI	Environmental Performance Index
ERDF	European Regional Development Fund
ESF	European Social Fund
ETF	Enhanced Transparency Framework
EU	European Union
EUEA	EU Enforcement Authorities
EU ETS	European Union Emissions Trade System
FFU	Fossil Fuel Technologies
FYP	Five Year Plan
GATT	General Agreement on Tariffs and Trade
GCC	Gulf Cooperation Council
GCF	Green Climate Fund
GDP	Gross Domestic Profit
GEF	Global Environment Facility
GHG	Greenhouse Gas
GJIE	Global Judicial Institute on the Environment
GWP	Global Warming Potential
GIZ	German Development Cooperation
HCFC	Hydrochlorofluorocarbons
HFC	Hydrofluorocarbons
HI-AWARE	Himalayan Adaptation, Water and Resilience
HICAP	Himalayan Climate Change Adaptation Programme
ICEM	International Centre for Environmental Management
IEA	International Environmental Agreement

IER	International Environmental Regimes
IET	International Emissions Trading
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IPPC	International Plant Protection Convention
IRENA	International Renewable Energy Agency
ISID	Inclusive and Sustainable Industrial Development
ITL	International Transaction Log
ITMOS	Internationally Transferred Mitigation Outcomes
IUCN	International Union for the Conservation of Nature
IUCNWCEL	International Union for the Conservation of Nature World Commission on Environmental law
LCANZ	Lawyers for Climate Action New Zealand
LDCF	Least Developed Countries Fund
LMDC	Like-Minded Developing Countries
LULUCF	Land Use Land-Use Change and Forestry
MEA	Multilateral Environmental Agreement
MENA	Middle East and North Africa
MLF	Multilateral Fund
MNRE	Ministry of New and Renewable Energy
MOU	Memorandum of Understanding
MPG	Modalities, Procedures and Guidelines
MRET	Minimum Renewable Energy Target
MRV	Monitoring, Reporting and Verification
MW	Megawatts
NAMA	Nationally Appropriate Mitigation Actions
NAPCC	National Action Plan on Climate Change
NDC	Nationally Determined Contribution
NDC-SF	NDC Support Facility
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGO	Non- Governmental Organisations

NGT	National Green Tribunal
NREA	New and Renewable Energy Authority
NREEEP	National Renewable Energy and Energy Efficiency Policy
NZCCC	New Zealand Climate Change Commission
OAS	Organisation of American States
ODS	Ozone-Depleting Substance
OECD	Organisation for Economic Cooperation and Development
PAICC	Paris Agreement Implementation and Compliance Committee
PIDACC/NB	Programme for Integrated Development and Adaptation to Climate Change in the Niger Basin
PROMASOL	Programme National de Développement du Marché de Chauffe-eau Solaire
PV	Photovoltaic
QUELRC	Quantified Emissions Limitation and Reduction Commitments
R&D	Research and Development
RCREEE	Regional Center for Renewable Energy and Energy Efficiency
RE	Renewable Energy
REC	Regional Economic Communities
RECo	Renewable Energy and Conservation
REDD	Reducing Emissions from Deforestation and Forest Degradation
REO	Regional Environmental Organisations
RES-H	Renewables in Heating Applications
RGGI	Regional Greenhouse Gas Initiative
SACCN	Southeast Asia Climate Change Network
SAPCC	State Action Plan on Climate Change
SAARC	South Asian Association for Regional Cooperation
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
SBTi	Science-Based Targets
SCF	Standing Committee on Finance
SDG	Sustainable Development Goal
SDM	Sustainable Development Mechanism

SDMC	SAARC Disaster Management Centre
SEADRIF	Southeast Asia Disaster Risk Insurance Facility
SEC	SAARC Energy Centre
SEEA-WA	Supporting Energy Efficiency for Access in West Africa
SPWA-CC	Strategic Program for West Africa Climate Change
STCGCC	Scientific and Technical Consultative Group on Climate Change
TACC	Territorial Approach to Climate Change
TER	Technical Expert Review
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
TPES	Renewable Energy in Energy Use
UN	United Nations
UNCHE	United Nations Conference on the Human Environment
UNDP	United Nations Development Programme
UNECA	United Nations Economic Commission for Africa
UNECE	UN Economic Commission for Europe
UNEP	United Nations Environmental Program
UNFCCC	United Nations Framework Convention for Climate Change
UNGASS	United Nations General Assembly
UNGCAP	United Nations Global Climate Action Portal
UNICAO	United Nations International Civil Aviation Organisation
UNIDO	United Nations Industrial Development Organisation
UNISDR	United Nations International Strategy on Disaster Reduction
US	United States
WACC	West African Alliance on Carbon Markets and Climate Finance
WRI	World Resources Institute
WTO	World Trade Organisation

CHAPTER ONE

INTRODUCTION

I. Background

Over fifty years ago, the global clamour for an international environmental regime (IER) that could adequately tackle climate change issues with most sovereign nations' support began.[1] In 1990, the Intergovernmental Panel on Climate Change (IPCC) dire reports underscoring the challenges and global consequences of climate change that required immediate international cooperation stirred global concern. Consequently, this led to establishing the United Nations Framework Convention on Climate Change (UNFCCC) that became the key international treaty to reduce global warming. It also became the main IER on climate change, and since then, the role of the UNFCCC has continued to evolve. However, in the aftermath of the IPCC's warning report in 1990, greenhouse gas emissions (GHG) from anthropogenic activities continued to rise, raising questions of the IER's effectiveness in emissions reductions.

Various opinions of the UNFCCC and the Paris Agreement's effectiveness have been articulated based on varied perceptions of the roles, responsibilities, and power of IERs. As the Paris Agreement's implementation is still in its early stages, the thesis does not seek to determine the Paris Agreement's effectiveness; the thesis instead investigates the influence of the UNFCCC and the Paris Agreement on countries' efforts to emissions reductions. The thesis investigates the influence of the IER on the selected countries using some parameters derived from scholarly perceptions of regime effectiveness that have over the years crystallised into parameters for measuring effectiveness of a regime. They are as follows: institutional architecture, implementation, compliance, enforcement, time and economic structure, and behavioural effects parameters. Subsumed under the implementation parameter are investigations into IER's role in the legislative and regulatory framework, government policies and programmes, and fulfilment of NDC targets. Under the enforcement parameter, the role of IERs in environmental courts, climate change litigation and enforcement outside the courts are examined. Finally under the behavioural effects parameter on state and non-state actors, the IER's role in the political will of state actors and climate action of non-state actors are examined.

The thesis' main research question is: has the IER, specifically the UNFCCC and the Paris Agreement, influenced emissions reductions efforts in China, Finland, Denmark, India,

[1] See Daniel Bodansky "The History of the Global Climate Change Regime" in Luterbacher and Others (eds) *International Relations and Global Climate Change* (MIT Press, London, 2001).

Morocco, Sweden, Nigeria and Norway? This question is pertinent for two reasons, first to track countries' actions after adopting and ratifying the Paris Agreement and second, because of the global attention that focuses on the present-day usefulness of the UNFCCC and the Paris Agreement's ability to motivate countries to honour their Nationally Determined Contributions (NDCs) and other global climate commitments. Subsumed under the main research question are sub-questions that ask whether the IER has influenced regional actors' emissions reduction efforts, whether other actors (regional, sub-national and individuals) also play a role in influencing the emissions reduction efforts of the selected countries and what the degree of their influence is, if any. It also asks whether the IER has influenced non-state actors to reduce emissions in the case of businesses and to equip NGOs and climate activists to demand climate action from governments. The thesis proposes that the IER has directly and indirectly influenced emissions reductions efforts of China, Finland, Denmark, India, Morocco, Sweden, Nigeria and Norway. The thesis also proposes that the IER has influenced emissions reduction efforts to varying degrees at the regional level. Finally the thesis proposes that the IER has directly and indirectly influenced businesses to commit to reducing emissions and equipped and influenced NGOs and other climate activists to demand climate action from the governments in the selected countries.

The use of the term 'influence' rather than 'effectiveness' in relation to the analysis of the performance of the IER is deliberate. Effectiveness is defined as the degree to which something is successful in producing a result. On the other hand, according to the Oxford English Dictionary, influence is defined as the capacity or faculty of producing effects by intangible means without the employment of material force or the exercise of formal authority.[2] Where effectiveness embodies a tangible result or outcome of a complete process either in part or in full, influence is reflective of the potential to deliver an outcome in an ongoing process. Using the term effectiveness rather than influence is not advisable for the following reasons. First, climate change is an ongoing global issue, and countries are in the process of implementing their NDCs. Further, most countries have long-term NDC goals, the earliest being 2030. The term influence, less ambitious in its quest, encompasses outputs such as laws, regulations, creation and improvisation of implementation and enforcement strategies and infrastructure created to move the objectives of the IER from paper to practice, and outcomes or changes in the behaviour of actors relevant to the problem at hand.

[2] Oxford English Dictionary (2nd edn, 2021, online ed) https://www.oed.com/view/Entry/95519?rskey=qeqnrL&result=1# .

The thesis significance lies in the unprecedented approach in applying the various parameters utilised by various scholars to examine the Paris Agreement. Scholars have not exhaustively utilised all of the parameters identified to measure the effectiveness of any regime. This thesis stands out in the way it applies the existing parameters and adds new parameters to examine the Paris Agreement. The thesis also sets a solid foundation for future research on the Paris Agreement, through further and more current studies of the NDC implementation and the Paris Agreement inbuilt implementation and compliance mechanisms that enables countries reduce their emissions.

Concisely, this chapter provides the foundational basis for investigating the role of the UNFCCC and the Paris Agreement in GHG emissions reduction and climate change mitigation. It introduces the IER responsible for the mitigation and adaptation of climate change. Next, it briefly explores scholarly debates regarding the relevance of the UNFCCC and the regime's ability to command environmental compliance among its members. The chapter highlights the hybrid structure adopted by the UNFCCC and the Paris Agreement that employs both bottom-up and top-down approaches where countries take on principal responsibility for emissions reduction, and the UNFCCC secondarily complements those efforts. Thus, when perceptions of the role of an IER considers this structure, it can enable better insight into the influence of such an IER. The chapter also offers the rationale for selecting these countries and concludes with the methodology and chapter structure.

II. The Global Climate Change Regime: A Brief Overview

At the World Climate Conference, scientists identified the burning of fuels, deforestation and changes in land use as the drivers of rising atmospheric carbon dioxide concentrations and consequently climactic changes. As the atmosphere has no borders, climate change became a global commons problem requiring global cooperation to combat the global-scale effects that would be visible by the end of the 20th century. The IPCC also reported in 1990 that the world would warm at the rate of 0.2°C to 0.5°C per decade[3] and projected that by 2025 earth's temperature would be about 1°C higher than 1990 levels, and by 2100 would be 3°C higher.[4] The gradual temperature increases would lead to rising sea levels from glacier melting and ocean water expansion, extreme temperatures and other events, such as flooding, droughts and

[3] IPCC "IPCC First Assessment Report: Overview and Policymaker Summaries and 1992 IPCC Supplement" https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments/ at 52.
[4] Ibid.

hurricanes.[5] Amidst the uncertainty in climate science linking man's anthropogenic activities to climate change, the UNFCCC entered into force on March 21 1994.[6]

Article 2 of the UNFCCC set out its objective, stating:

"The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."[7]

The definition section of the UNFCCC states that "climate system" means the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions. Climate system in this sense is explained as constituting a shared natural resource having limited capacity to accommodate increasing GHG concentration while providing for a stable global climate.[8] The atmosphere which is a subset of the climate system means the envelope of gases surrounding the earth, within which the transport and dispersion of degrading substances occurs. This means that deleterious activities arising from past and future contributions of countries to GHG impact on the atmosphere and inevitably impact on the capacity of the climate system to accommodate increased levels of GHG emissions. This creates the need for collective action [9]and also a form of global regulation to ensure that states are not dangerously interfering with the climate system. However, unlike the second largest resource which has a comprehensive legal regime- the law of the sea, the atmosphere is not presently subject to a comprehensive legal regime. The global atmospheric commons are rather regulated by a 'regime complex' comprising of several

[5] Kenneth M. Strzepek and Joel B. Smith *As Climate Changes: International Impacts and Implications* (Cambridge University Press, New York and Australia, 1995) at 20.
[6] UNFCCC "What is the United Nations Framework Convention on Climate Change" <https://unfccc.int/process-and-meetings/the-convention/what-is-the-united-nations-framework-convention-on-climate-change> .
[7] United Nations Framework Convention on Climate Change 1771 U.N.T.S. 107 (opened for signature 9 May 1992, entered into force 21 March 1994), Art 2.
[8] Christina Voigt "State Responsibility for Climate Change Damages" (2008) Nordic Journal of International Law 77 1 at 14.
[9] See Elinor Ostrom *Governing the Commons: The Evolution of Institutions of Institutions for Collective Action* (Cambridge University Press, 1990).

international instruments dealing with different uses of the atmosphere, different geographical sectors, different vertical zones and categories of risks.[10]

The complexity of the climate change regime equally raises complex governance issues. From a legal perspective, international law has grappled with issues of common spaces and common resources particularly with questions of right to exploitation of and access to resources of the world's shared spaces which complicate global atmosphere regulation. To expand, while international law acknowledges the right of states to permanent sovereignty to their resources and its exploitation, states should also have access to shared spaces and should not be prevented from enjoying the benefits of these shared spaces.

The Rio Declaration emphasises that States' sovereignty means that they are free to govern their people and to manage their resources within their territory as they deem appropriate, provided that such actions do not harm other countries. This means that States must act with due diligence not only to minimise transboundary harm, as is the case of climate change but also to equitably balance state's interest in the utilisation of the global commons.[11] Voigt elucidates, referring to Article 2 of the UNFCCC that the reference to climate change and its effects as a 'common concern of humankind' points to the idea that states have corresponding rights to the usage of the atmosphere and the freedom from dangerous atmospheric interference with the climate system. This creates a corresponding responsibility of states not to interfere with the rights to the usage of the atmosphere.

The transnational challenges of climate change required the need for transnational climate governance. Although some scholars view the UNFCCC as a form of 'monocentric governance', the past decades of intergovernmental efforts to address climate change has revealed that it operates as part of a polycentric governance system.[12] Hickman and others argues that as a mode of governance, the UNFCCC which had hitherto been seen as a 'rather technocratic body' that served national governments, increasingly interacts with different subnational governments, and non-state actors to push the global response to climate change

[10] Peter H. Sand and Jonathan B. Weiner "Towards a New International Law of the Atmosphere" (2016) 7 Goettingen Journal of International Law 2 at 198.
[11] Jesse L Reynolds "The International Legal Framework for Climate Engineering" in Jason Blackstock and Sean Low (Eds) *Geoengineering our Climate? Ethics, Politics and Governance* (Routledge, United Kingdom, 2018) at 128.
[12] Harro Van Asselt and Fariborz Zelli "International Governance: Polycentric Governing by and beyond the UNFCCC" in Andrew Jordan and Others (eds) *Governing Climate Change: Polycentricity in Action* (Cambridge University Press, 2018) at 29.

forward.[13] The role of the UNFCCC secretariat in global policy making is understood as a case of orchestration[14] which is an indirect mode of governance where the "given agent (i.e. the orchestrator) uses one or more intermediaries to influence a target group. To do this, the orchestrator employs various techniques and different facilitative measures to work with intermediary actors.[15] This implies that the UNFCCC regime does not operate in a vacuum but interacts with a complex environment of other institutions. Internally, the current climate regime also initiates, guides, broadens, and strengthens its transnational governance by facilitating measures to work with non-state and/or substate actors' to achieve its objective of preventing dangerous interference with the climate system.

Going back to the preamble of the UNFCCC provides that:

"States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction…"[16]

Read together with Article 2 of the UNFCCC, these provisions creates a duty for Parties to the UNFCCC to prevent dangerous interference with the climate. Voigt buttresses the above, stating that Article 4.2 UNFCCC in conjunction with Article 2, therefore, obliges Parties to take action to adopt policies and measures to secure the stabilization of atmospheric concentrations of greenhouse gases.[17] This duty therefore transcends national jurisdiction but extends beyond national jurisdiction owing to the transnational nature of climate change impacts. So, Parties to the UNFCCC who have ratified the UNFCCC have a duty, even an obligation to prevent dangerous interference with the climate system. With the birth of the Paris Agreement, the broad goal of the UNFCCC which has been referred to as general has become more streamlined through the Paris Agreement goal to keep temperatures well below 2°C and even further to 1.5°C.[18] The UNFCCC through its Secretariat as a facilitative orchestrator, facilitates international and regional cooperation toward fulfilling its objective. This is

[13] Thomas Hickman and others "The United Nations Framework Convention on Climate Change as an Orchestrator in Global Policymaking" (2021) 87 International Review of Administrative Sciences 1 at 22
[14] Karin Bäckstrand & Jonathan W. Kuyper "The Democratic Legitimacy of Orchestration: the UNFCCC, Non-State Actors, and Transnational Climate Governance" (2017) 26 Environmental Politics 4 at 765.
[15] Ibid at 23.
[16] United Nations Framework Convention on Climate Change above n7, Preamble.
[17] Christina Voigt above n8 at 6.
[18] Harro Van Asselt and Fariborz Zelli above n12 at 41.

observed from the Secretariat's involvement in a number of initiatives that seek to incorporate local and regional governments, nongovernmental organizations, and private entities more directly into a policy dialogue.[19]

The foundations of the UNFCCC drew footing from the 'seeming' success of the Montreal Protocol on Substances that Deplete the Ozone Layer. The Montreal Protocol is a landmark multilateral environmental agreement (MEA) designed to regulate the production and consumption of nearly one hundred manufactured chemicals known as ozone-depleting substances (ODS).[20] It is, to date, the only UN treaty that all 197 UN member states have ratified. The UNFCCC itself enjoys near universal membership with 197 Parties consisting of 196 states and 1 regional economic integration organisation.[21] Some scholars argue that "the overwhelming majority of Parties value the UN climate regime because it is open to their influence and because they have development needs that may be potentially met within its expanding activities".[22] Bodansky notes that the UNFCCC represents a carefully balanced compromise as its provisions attempted to preserve the positions of all sides.[23] Prior to the adoption of the Convention, countries had divergent interests which ranged from disagreements with targets and timetables to limit GHGs, staunch economic positions that the Convention must not hinder countries abilities to develop, allocation of responsibility for addressing climate change and discussions of financial resources and whether developed countries should provide financial resources based on their historical responsibility or capacity to pay. In this sense, Parties valued the UNFCCCs provisions which were equitable to a large extent and it was politically acceptable by a wide variety of states.[24] Other scholars suggest that some members, for example countries within the EU have long been comfortable with a supra national approach to law and policy making and the support for international 'constitutionalisation' has some of its roots in European states' desire to embed nationalism in a collective, international enterprise.[25]

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[19] Thomas Hickman and others above n13 at 27.
[20] UNEP "About Montreal Protocol" <https://www.unenvironment.org/ozonaction/who-we-are/about-montreal-protocol>
[21] UNFCCC "Status of Ratification" https://unfccc.int/process-and-meetings/the-convention/status-of-ratification/status-of-ratification-of-the-convention
[22] John Vogler "The UNFCCC Regime" in John Vogler (ed) *Climate Change in World Politics* (Palgrave Macmillan, 2016) at 35.
[23] Daniel Bodansky "The United Nations Framework Convention on Climate Change: A Commentary" (1993) 18 Yale J. Int'l L 451 at 493
[24] Ibid at 555-556.
[25] Jutta Brunnee "Europe, the United States, and the Global Climate Regime: All Together Now? (2008) 24 Journal of Land Use and Environmental Law 1 at 39.

The UNFCCC's large membership is also linked to its flexibility that foundationally rests on the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).[26] This principle acknowledges the different capabilities and responsibilities that individual countries bear in causing and addressing climate change. The 1992 UNFCCC treaty incorporates the CBDR-RC principle with text that reads:

"… the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions."[27]

The CBDR-RC has been invoked in almost all major decisions and instruments adopted in the UNFCCC, including the Kyoto Protocol[28] and the Paris Agreement. The effect of Article 3(1) of the UNFCCC created a North-South divide that placed countries in the categories of Annex 1 and non- Annex 1 countries. Annex 1 countries, otherwise referred to as developed countries, were to take the lead in emissions reductions and provide climate support for developing countries.[29] There is no corresponding obligation for non- Annex 1 countries under Article 4(10), which considers Parties with economies that are vulnerable to immediate implementation of the Paris Agreement objectives.[30] The Kyoto Protocol also relied on the principle above when it was adopted in 1997.[31] The Kyoto Protocol, unlike its successor, the Paris Agreement, is recognised as the world's only legally binding treaty mandating countries to reduce GHGs .[32] However, significant emitters, for example, the US refused to agree to the Protocol, and Canada, withdrew from the Protocol.

The 21st session of the Conference of Parties (COP 21) that produced the Paris Agreement successfully navigated the negotiation hurdles of specifying, quantifying and allocating actions to be taken to reduce emissions and prevent global warming. These hurdles were a significant bottleneck in the 1992 Climate Conference held in Rio de Janeiro. COP21 negotiations also

[26] Daniel Bodansky above n23 at 557.
[27] United Nations Framework Convention on Climate Change above n7.
[28] Jutta Brunnée and Charlotte Streck "The UNFCCC as a Negotiation Forum: Towards Common but More Differentiated Responsibilities." (2013) 13 Climate Policy 5 at 589.
[29] United Nations Framework Convention on Climate Change above n7, article 4(2).
[30] Ibid, art 4(10).
[31] Kyoto Protocol to the United Nations Framework Convention on Climate Change 2303 U.N.T.S. 162 (opened for signature 10 December 1997, entered into force 16 February 2005).
[32] European Commission "Kyoto 1st Commitment Period (2008-2012)" https://ec.europa.eu/clima/policies/strategies/progress/kyoto_1_en#:~:text=The%201997%20Kyoto%20Protocol%20%E2%80%93%20an,about%2018%25%20of%20global%20emissions.

avoided the 1997 Kyoto Protocol negotiation pitfalls, where certain developing countries were not assigned targets to reduce emissions, much to the chagrin of developed nations. Instead, it mandates developing countries to reduce emissions at a slower pace. Further, unlike the delay in the entry into force of the Kyoto Protocol over seven years after its adoption in 2007 due to a complex ratification process,[33] the Paris Agreement was more successful, entering into force on November 4, 2016 barely a year after its adoption. Currently, 193 out of 197 Parties have ratified the Paris Agreement.[34]

The clear objective of the Paris Agreement is contained in Article 2 that expressly provides for *"holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change…."*.[35] The expectations of the Paris Agreement and the UNFCCC are substantial emissions reductions from countries to achieve this goal. In addition to pursuing a reduction in global average temperatures, Parties are to increase their climate change adaptation abilities, foster climate resilience in a manner that does not threaten food production and make finance flows consistent with a pathway towards low GHG emissions and climate-resilient development. [36] In implementing the Agreement, consideration must be given to the CBDR-RC and different national circumstances.

Scholarly debates have metamorphosed after the adoption and ratification of the Paris Agreement. The debates prior traversed preferred and desirable means to tackle climate change and whether they could take the form of legal, regulatory, socio-economic or political changes to recommending an internationally binding legal regime. Shortly after the Agreement's adoption and ratification, scholarly debates now revolve around the strength/weakness of the Agreement in tackling climate change impacts. These will be discussed in more detail in chapters 3 and 4.

[33] UNFCCC "What is the Kyoto Protocol" https://unfccc.int/kyoto_protocol
[34] United Nations "The Paris Agreement" https://www.un.org/en/climatechange/paris-agreement#:~:text=Today%2C%20193%20Parties%20(192%20countries,strengthen%20their%20commitments%20over%20time.
[35] Paris Agreement to the United Nations Framework Convention on Climate Change, T.I.A.S. No. 16-1104 (opened for signature 12 December 2015, entered into force 4 November 2016), art 5.
[36] Ibid at art 2.

III. The Hybrid Approach: Justifying Country-Driven Responsibilities

The nature of climate change requires efforts from all levels of government. Efforts at the local, subnational, national and regional levels must be pooled to tackle climate change impacts. Architecturally, the Paris Agreement encapsulates both the bottom-up and top-down approaches to global climate governance.[37] It concedes domestic politics' predominance in climate change action and allows countries to determine their level of ambition for emissions reduction and mitigation and adaptation actions.[38] Employing the bottom-up approach, the Paris Agreement, unlike the Kyoto Protocol, prescribes country-driven climate change mitigation and adaptation commitments. Article 4(4) provides that developing country Parties should continue enhancing their mitigation efforts based on their national circumstances. Parties should also adopt a country-driven approach to strategy designs[39] for climate change, adaptation action [40] and capacity building. [41] Therefore, while the Agreement creates international legal obligations that strengthen, develop and implement actions, member states have the discretion to fashion out the domestic policy contents.[42] The Paris Agreement also explicitly mentions that Parties are to undertake and communicate ambitious efforts toward reducing emissions in their nationally determined contributions. Against this backdrop, the thesis examines the selected case studies' actions through their nationally determined contribution (NDCs)to determine the UNFCCC's influence on members' emissions reductions. For clarity, NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change.

The Paris Agreement's adoption of the bottom-up approach that encourages countries to deliver emissions-reduction outcomes underscores the IERs recognition of sovereignty and the need for countries to have agency to solve climate change issues. In addition, the principle of sovereignty over natural resources by states was reaffirmed in the UNFCCC that provides:

"that States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities

[37] Daniel Bodansky "A Tale of Two Architectures: The Once and Future U.N. Climate Change Regime" (2011) 43 Arizona State Law Journal 3 at 697-712.
[38] Robert Falkner "The Paris Agreement and the New Logic of International Climate Politics" (2016) 92 International Affairs 5.
[39] The Paris Agreement above n35, art 9 (3) and(4).
[40] The Paris Agreement above n35 art 7(5).
[41] The Paris Agreement above n35, art 11(2).
[42] Radoslav S. Dimitrov "The Paris Agreement on Climate Change: Behind Closed Doors" (2016) 16 Global Environmental Politics 3 at 2.

within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction".[43]

This provision reinforces the argument that States have the moral obligation to protect the environment. It would go against reason to insist that the IER usurp the State's powers in controlling how she utilises her resources. Therefore, instead of looking to an independent and sovereign global environmental authority to control States' resource exploitation, the Paris Agreement and the UNFCCC challenge States to rise as trustees of the global commons. Adelman, however, argues, using the example of the UNFCCC's REDD+, that it is illogical for the regime to endorse the right of states to exploit their forests and expect them not to damage the environment of other states.[44] The REDD+ is a framework created by the UNFCCC Conference of Parties to guide activities in the forest sector that reduces emissions from deforestation and forest degradation, as well as the sustainable management of forests and the conservation and enhancement of forest carbon stocks in developing countries.[45] He extends his argument of the 'paradoxical position' of the UN that a State's sovereign prerogative to emit GHGs is not compatible with the injunction not to cause harm to the environment, nor with principles of sustainable development, precaution and cooperation. However, Hugo's maxim that "the liberty of one citizen ends where the liberty of another citizen begins" refutes Adelman's position, especially when contextualising and applying it to states and the need to exercise moral restraint in resource exploitation.

States will undoubtedly continue to exploit their resources, and the IER can only, at best, appeal to their sense of environmental trusteeship. Bosselmann supports this, stating that as long as states continue to exercise legal control and power over their territories, nothing can stop them from destroying the earth.[46] He, however, proposes that where states begin to view themselves as owners of the global commons, they may begin to view themselves as trustees of the environment. In illustrating how this would function, Bosselmann suggests that the rights or

[43] UN Commission on Human Rights, Human Rights and the Environment, E/CN.4/RES/1994/65, (9 March 1994)

[44] Sam Adelman "Tropical Forests and Climate Change: A Critique of Green Governmentality" (2015) 11 Int. J.L.C 2, 195 at 201.

[45] UNFCCC "What is REDD+?" https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd; Art 5 Para 2(a) of the Paris Agreement also provides for Parties to take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1 (d), of the Convention, including forests

[46] Klaus Bosselmann "Governing the Commons- Can States be Trustees?" in Laura Westra, Janice Gray and Antonio D'Aloia (eds) *The Common Good and Ecological Integrity: Human Rights and the Support of Life* (Earthscan Routledge, Oxon and New York, 2016) at 286.

immunity exercised within state sovereignty and private property automatically stops where common property, for example, the environment, begins.[47] He further supports his argument for states to take on a more active role in environmental trusteeship by stating that he does not expect trusteeship governance to be initiated at the "top" (i.e. the UN and its member states themselves), but rather by forces outside the system, in particular global civil society.[48] Interestingly, he does not dispense with the role of the IER but rather opines that governments would act as environmental trustees at the national levels and internationally, states would jointly act as trustees for the global commons such as the atmosphere. At this juncture, the IER can serve as an overarching trusteeship framework for all member states.

Buttressing the need for collective efforts, the preamble to the Paris Agreement expressly "*recognises that the importance of the engagement of all levels of government and various actors, in accordance with the respective national legislation of Parties, in addressing climate change"*. This provision recognises the importance of state and non-state actors' roles, for example, corporations and civil societies. This thesis explores this proposition, arguing that non-state actors' role should not be overlooked as it points to the influence of the Paris Agreement and the UNFCCC. Bosselman concurring reiterates the importance of the global civil society that has so far galvanised protests by calling for institutional change. He recommends that civil society's role be elevated to critical decision-makers alongside the UN and its member states.[49]

IV. The Rationale for Case Study Selection

The thesis examines eight countries comprising China, Denmark, Finland, India, Sweden, Morocco, Norway, and Nigeria. Broadly, the countries fall into the European, Asian and African groupings. As the central research question is whether the IER has influenced countries' emissions reductions efforts, the basis of selection of these countries is drawn from their historical and current responses to the IER obligations. On the one hand, there are four developing countries, China, India, Morocco and Nigeria and on the other hand, Denmark, Finland, Norway and Sweden which are developed countries.

For context, developing countries had consistently argued that they were not historically responsible for climate change issues, have less capacity to respond to it and should not be

[47] Ibid at 272.
[48] Ibid at 272.
[49] Ibid at 272.

expected to pledge to any specific emissions-reductions international commitments.[50] In the lead up to the Paris Agreement and afterwards, developing countries have committed to international targets and are increasing their commitments. It is against these changing positions that the thesis chooses the four developing countries. Selecting these countries are useful in examining the influence of the IER in the countries' behavioural change toward the climate regime's objectives and means of achieving them. On the other hand, the four developed countries chosen have largely supported international climate action and made commitments toward emissions reduction. With the four developed countries that have willingly supported international climate action, the thesis investigates why they did to offer a richer and more robust dimension to IER influence. The thesis investigates in both cases what role the IER has played in both sets of countries and examines the extent of IER influence.

The selection draws on Young's strand of the regime theory that highlights behavioural changes of members in a regime as an indicator of regime 'effectiveness' and this supports the rationale for the selection of countries in the thesis. It is important to note that the rationale for the selection of these countries does not derive from a box of parameters, rather the behavioural effects strand of the regime theory which forms part of the theoretical framework of the study. These countries are selected to be analysed under the parameters the thesis has set to assess the influence of the IER. These parameters are set out in the third chapter of the thesis. It is needful to flag that while there are other countries that are large GHG emitters, such as the United States, Australia and Canada, and countries that are more vulnerable than others such as the small island countries, the thesis cannot realistically engage with all these countries.

Sweden is chosen partly because of her concerted emissions reduction efforts earning her the top position in the latest Climate Change Performance Index (CCPI) report. The CCPI amongst other environmental performance indexes is an independent monitoring tool that tracks countries' climate change mitigation and adaptation performance. Its independence enables it transparently highlight and compare individual countries' climate efforts and progress. Currently it assesses 64 countries and all the selected countries except Nigeria in the thesis are part of the CCPI's assessment. Sweden recorded a significant drop in emissions, included a high share of renewables in its Energy Mix and is rated EU's climate leader.[51] Sweden also exceeded the EC's target and is well on its way to fulfilling the Paris Agreement objectives by

[50] Daniel Bodansky "The Copenhagen Climate Change Conference: A Post-mortem" (2010) 104 American Journal of International Law 2 at 3.
[51] Lee Roden, "Sweden the EU's 'Climate Leader': Report'" (The Local, 28 March 2017).

committing to completely phasing out GHG emissions by 2045, five years ahead of the EU's target.

Denmark is chosen partly because of its overall objective to become a green and sustainable society and its legal system that has significantly contributed to climate compliance. Before 2017, Denmark occupied the top spot for climate compliance in both the Environmental Performance Index (EPI) [52] and the CCPI and earned a leader's reputation in climate performance. Furthermore, with its integration of renewable energy (RE) technologies and energy savings, its national climate policies remain strengthened. [53] However, in 2018, Denmark ranked 17th place on the CCPI Index, primarily because the government cancelled both coal phase-out and existing reduction target plans, accounting for their low rating.[54]

Finland was reputed to implement some 'fairly' progressive environmental policies, although decisions affecting national climate policy were scarcely made with climate change as the chief consideration.[55] Although Finland was the first country to introduce tax measures on carbon dioxide emissions, she has generally been passive in its overall climate policy. Between 2014 and 2016, Finland has fluctuated in its ranking. In 2014, she ranked 18th out of 178 countries, whilst in 2016 she went ahead of Sweden and Denmark to emerge top position of the EPI.[56] This dramatic improvement may be linked to the climate action momentum following the signing of the Paris Agreement. Further, Finland's environmental policies have recently improved significantly, earning her sixth position globally.

Norway is a party to over seventy major international environmental agreements attributed to influencing Norway's environmental policy.[57] Norway is, however, reliant on oil and gas and is sometimes perceived as a paradoxical phenomenon because of her continuous fossil-fuel exploration yet high profile in international environmental cooperation. Norway has also been

[52] The EPI is a joint project of the Yale Center for Environmental Law & Policy and the Center for International Earth Science Information Network (CIESIN) at Columbia University's Earth Institute that provides a data-driven summary of the state of sustainability around the world. The EPI offers a scorecard that highlights leaders and laggards in environmental performance.

[53] Jan Burck and Others "The Climate Change Performance Index Results 2015" German Watch <http://germanwatch.org/en/download/10407.pdf >.

[54] Jan Burck and Others "The Climate Change Performance Index Results 2018" <https://www.legambiente.it/sites/default/files/docs/ccpi2018-results.pdf >.

[55] Markku Wilenius, Juhani Tirkkonen "Building a Regime for Climate Protection: Finland and International Climate Policy"(1998) 8 Global Environmental Change 4 at 295.

[56] Sustainable Governance Indicators "Finland" <http://www.sginetwork.org/2017/Finland/Environmental_Policies >.

[57] See Jon Birger Skjaerseth *International Regimes and Norway's Environmental Policy* (Reissued Routledge, NY, 2018).

performing highly on both the EPI and the CCPI. Therefore, it is essential to investigate whether the IER has influenced these actions within this region, mainly because of their high climate performance rating. The investigation will clarify the degree of IER influence, if any, and whether other factors account for these countries' climate actions.

China and India make fascinating case studies considering the shift in their hard-line position not to take responsibility for reducing emissions decades ago. China and India have both agreed to reduce their GHG emissions and have invested in RE technologies. Further, both the CCPI and the EPI results reveal that China and India had gone several places up the ranks. It is therefore vital to investigate the reasons behind these changes. The thesis reveals that the IER, directly and indirectly, influences both countries. The thesis also highlights countries influencing each other, for example, China's environmental framework is modelled on Sweden's environmental framework. China has adopted some key features of Sweden's environmental regime, such as the Swedish judicial system, particularly environmental courts' creation and acknowledgement of public interest litigation in environmental issues.

Nigeria is chosen because it is a high performer in enacting environmental legislation and policies and participates actively in climate change negotiations. However, Nigeria encounters implementation challenges that slow its climate action.[58] It is useful to examine the influence behind domestic climate action in Nigeria.

Morocco is chosen for its stellar performance and rating in various environmental performance indexes. Morocco changes the narrative of developed countries doing better than developing countries in emissions reductions. Morocco comes third in its climate compliance efforts within the four categories of GHG emissions, RE, Energy Use and Climate Policy, ranking higher than many developed nations. Morocco makes for an interesting case study because of its RE-focused investments and removal of non-RE energy subsidies.[59] The thesis reveals significant direct IER influence on Morocco's enviable climate action that will be discussed in the fifth and sixth chapters.

The selection of countries are also based on a functional approach, particularly in relation to the common problem of climate change and the globally recognised legal solutions or

[58] This Day Newspapers "Nigeria: Paris Climate Change Agreement - How Has Nigeria Fared?" (All Africa, 28 December 2017) https://allafrica.com/stories/201712280028.html .
[59] World Bank/ Arne Hoel "MARRAKECH: Middle East and North Africa Region Taking Action to Combat Climate Change" (United Nations, November 6, 2016) https://news.un.org/en/story/2016/11/545472-marrakech-middle-east-and-north-africa-region-taking-action-combat-climate .

approaches to tackling climate change issues. Further the parameters outlined for assessing IER influence can be applied to all the selected countries.

V. Methodology

This thesis set out to:

i) examine the relevance of the UNFCCC and the Paris Agreement as an IER to the dilemma of climate change;

ii) examine the interactions of regional actors, i.e. regional environmental and financial organisations, with the UNFCCC and amongst themselves in emissions reductions and climate change mitigation and adaptation actions;

iii) analyse and identify direct interactions between Parties to the UNFCCC and the Paris Agreement to determine the influence of the UNFCCC and the Paris Agreement on regional and country climate action.

The research relies on sources that are used for conventional legal analysis. It utilises a desk-based review of international, regional, and domestic primary sources such as environmental legislation and case law within the selected countries' jurisdiction. In addition, it utilises secondary sources that include legal reports, official government documents and communications, books, journal articles, news articles, conference papers, websites and non-legal material. All of these resources were within the public domain.

The research adopts a functionalist approach in analysing the legal actions taken by the select countries to tackle emissions reductions. While the legal arrangements may differ among the select countries, they all function to tackle the same challenge - emissions reductions.[60] The thesis acknowledges that understanding a country's environmental laws and policies requires an understanding of that country's culture, history, and political organisations.[61] This is because the social, cultural, political, and economic characteristics of countries certainly influence implementation and compliance. Further, cultural and political differences amongst countries can impact countries' legal landscape and receptivity to international environmental laws and principles. The cultural considerations are examined in a nuanced manner, as the thesis scope

[60] See Jorge E. Viñuales 'Framing Comparative Environmental Law: Structuring a Field in Emma Lees and Jorge E. Viñuales (eds) *The Oxford Handbook of Comparative Environmental Law* (Oxford Handbooks, 2019).
[61] A. Dan Tarlock and Pedro Tarak "An Overview of Comparative Environmental Law" (1983) Denv. J. Int'l L. & Pol'y 85 at 90.

is unable to accommodate the gamut of cultural considerations of each parameter used in the thesis to demonstrate IER influence. Chapter 3, for example, discusses the monist and dualist theories which explore the reasoning behind the varied reception of international environmental law by different countries and more specifically within the selected studies. This is because cultural considerations apply to how countries translate international commitments to their domestic regulations. The receptivity of international environmental law and treaties is also shaped by the legal culture of both monist and dualist countries. This legal culture is in turn influenced by the historical experiences and political orientation of each country. The section on monist and dualist theories explores this broadly. It is significant to note that all the selected countries have ratified the Paris Agreement and submitted NDCs. The thesis also discusses political will as a parameter to indicate a shift in countries attitude pre and post Paris to commit to emissions reduction. This discussion delves into cultural considerations as it examines the behavioural changes of countries resulting in the ratification and implementation of the Paris Agreement and the submission of NDCs.

Regarding NDCs, which are countries' self-defined mitigation goals, the Paris Agreement allows for flexibility in how countries implement their NDCs. The flexibility allows for a bottom-up approach in the formulation of NDCs which reflects common but differentiated responsibilities and respective capabilities in the light of different national circumstances. This means that countries are expected design their NDCs as it is most suited to their economic, political, cultural and social landscape. An examination, however of the gamut of each of these considerations in the implementation of the Paris Agreement through the parameters set out may extensively and unmanageably broaden the thesis' scope. Therefore the thesis approaches cultural considerations by offering a discussion of the monist and dualist theories in chapter 3 which examines the rationale behind receptivity of international environmental law or treaty. Further, cultural considerations strain through the sections that examine the relationship and influence of the IER on regional environmental organisations (REOs) and REOs on their members in chapters five and six.

The research also employs the hierarchical comparative approach. First, a comparative analysis is conducted amongst three IERs: The Montreal Protocol, The Kyoto Protocol and the Paris Agreement. An analysis of these Protocols sets the tone for the evaluation of the Paris Agreement. Given that both Protocols relate to climate change and have been in operation for decades, any testing of the parameters in chapter three applied to them can equally be applied to the Paris Agreement. Next, a comparative analysis is conducted among the various regional

organisations that the selected countries belong to. An analysis of regional organisations is important as climate change also has regional dimensions. The UNFCCC and the Paris Agreement multiply refer to regional organisations and recognise their role as channels that enhance the capacity of Parties to implement the agreement.[62] Implementation support includes transfer of technology and financial resources, information exchange, development of regional scenarios and strategies for monitoring, adaptation, and mitigation, to be used also in planning responses at national and smaller scales. The regional organisations examined are the European Union (EU) Commission, the Economic Community of West African States (ECOWAS) Commission, ASEAN and MENA. Finally, the third tier of comparative analysis is conducted within the selected countries in the same region, for example, comparing Norway, Denmark, Sweden and Finland within the Nordic group, India and China within the Asian group, and Morocco and Nigeria within the African group. The figure below illustrates this better.

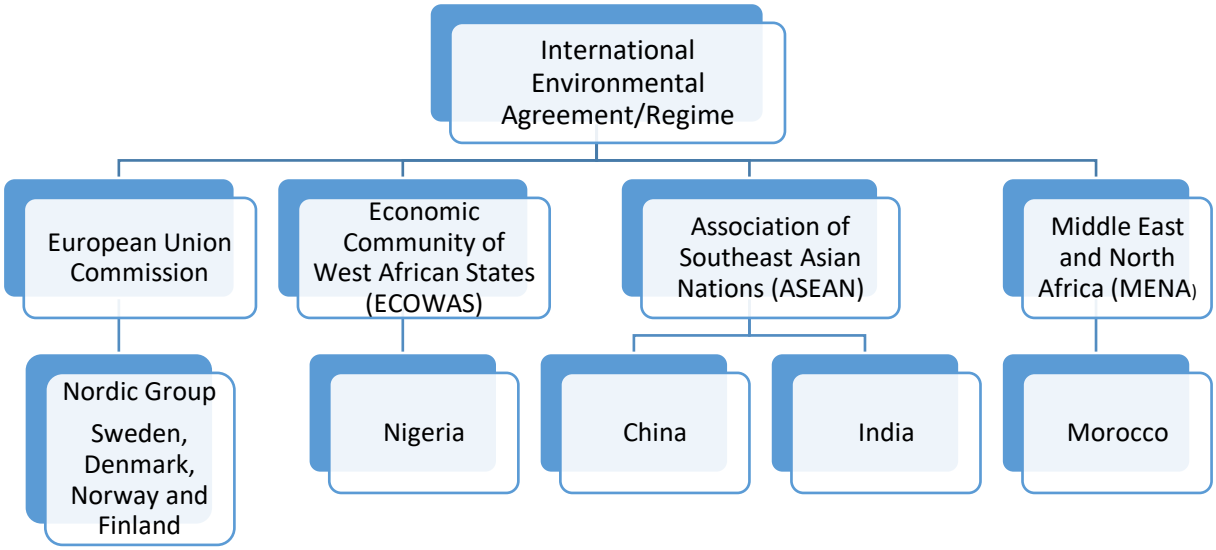

Figure 1.1 showing the hierarchical relationship between IERs/Agreement, Regional Environmental organisations and selected countries.

Not all the countries fit into neat groupings in terms of direct interactions with regional groups. Interactions include supervisory and monitoring activities. For example, the EU Commission monitors and sanctions climate actions amongst the Nordic countries except Norway, although Norway collaborates with the EU on several environmental-related actions. The diagram shows that China and India fit under the ASEAN regional environmental organisation, but the thesis

[62] The United Nations Framework Convention on Climate Change, above n7, Art 11(5).

reveals direct interactions with other associations such as the South Asian Association for Regional Cooperation (SAARC).

Unlike the EU, there is no recognised regional monitoring group that China and India report to, and ASEAN's environmental objectives are at best persuasive to China and India. The same applies to Morocco that is subsumed under the Middle East and North African region. This region does not have an overarching regional environment organisation either. The thesis also explores patterns of direct interactions with the IERs and their institutions such as the World Bank, Global Environment Facility (GEF), Green Climate Fund (GCF) and Clean Technology Fund (CTF) to establish influence through financial mechanisms.

Further, interactions between the UNFCCC and the Paris Agreement, REOs and case studies are examined. The diagram below illustrates the interactions among the various regional institutions in emissions reductions, for example, between the EC and ECOWAS. Both are regional organisations that drive and monitor environmental obligations amongst member states. The research investigates how both institutions interact with each other and their member states in driving international climate change obligations. Further, the thesis explores interactions between countries of different groupings that may point to indirect IER influence.

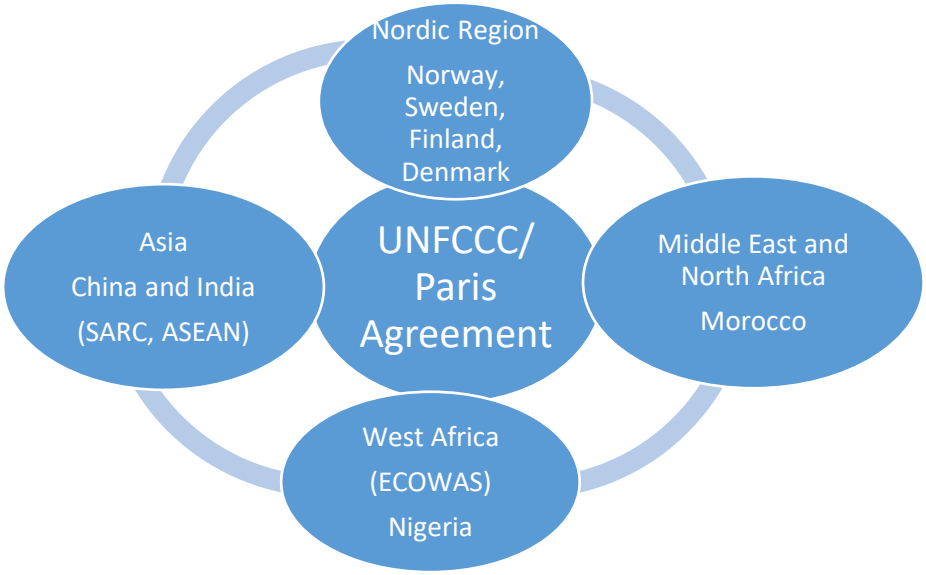

Figure 1.2. Showing the relationships between the UNFCCC and the various regional groupings and countries.

The legal analysis captures changes in the regulatory, administrative and institutional framework of the selected countries post-2015 to assess the country's success in carrying out the environmental objectives of their NDCs. Each NDC contains commitments that reflect the Paris Agreement's objectives, and the assessment is vital in drawing out IER influence, if any, in achieving these objectives.

The research is qualitative as it seeks to answer questions of how the Paris Agreement as an International Environmental Agreement (IEA) and the UNFCCC as an IER influences states' environmental compliance outcomes. This method allows an investigation of the legal, regulatory, institutional and socio-political factors affecting or promoting environmental/climate compliance amongst actors at the local, regional and international levels. Furthermore, this method enables the research to go beyond the statistics evaluating climate compliance (obtained from climate and environmental performance indexes) to the motives for compliance and their implications for the future.

This research also endeavours into conceptual legal thinking and inquiry to assess the legal, regulatory, and enforcement frameworks of the IER concerned with climate change on the one hand and the corresponding frameworks of the member states on the other hand to determine the extent of direct or indirect influence of the regime on the actions of member states. The research also adopts a socio-legal approach that examines how the law sits in the relevant social context, such as investigating the drivers behind mitigation and adaptation actions and policymaking.

Finally, the thesis utilises the regime theory, notably expanded conceptualisations proposed by authors such as Young and Levy and the green political theory. Both theories capture the context in which the research questions are formed and answered. The thesis also applies climate justice and sustainable development concepts, which are also applied as parameters for measuring the influence of the IER. It is hoped that the findings of this research will reiterate the importance of IERs and IEA reflected in positive strands of regime analysis arguments.

As chapter seven signals, the thesis represents a starting point for further research into the influence of the IER in emissions reductions. The next few years are crucial to delay and possibly reverse the global temperature tipping point predicted in the next 20 to 30 years, and it is crucial for future research to explore more ways that the IER can motivate countries climate

change engagement.[63] The thesis has engaged with eight countries across four continents, it does not engage with climate action in the Americas and Oceania, and future research may benefit from exploring these regions.

VI. Chapter Structure

Based on the data available and responding to the research question, the thesis reviews, analyses, and organises into the following chapters:

Chapter Two explains the theoretical framework for the thesis. The green political theory and the regime theory are examined and contextualised. The regime theory explains the relevance of an IER and the parameters for an effective IER. These parameters will be used to examine both the UNFCCC and the Paris Agreement (as the relevant climate change IER) in chapter three. The green political theory advocates for the collective moral responsibility of caring for the environment, further justifying the Paris Agreement's bottom-up approach that has been severely criticised.

Chapter Three examines the role of IERs and IEAs in climate change issues. First, it examines the nature, structure and functions of the IER and IEA's, particularly the UNFCCC and the Paris Agreement. Second, it establishes common themes from a wide range of scholarly literature surrounding the perceptions of the role of the IER and the perceived impact of these regimes on state and non-state actors. Third, the parameters for a successful and effective IER and IEA are drawn from the various scholarly perceptions which will be useful to portray the Paris Agreement's influence on the selected countries' climate actions in chapter six. Finally, the chapter captures the attitudinal approaches toward domesticating international environmental law from the lens of monist and dualist perceptions.

Chapter Four generally analyses the Kyoto Protocol, Montreal Protocol and the Paris Agreement, applying the parameters used in chapter three. The rationale behind using these Protocols was to establish a foundational basis for the evaluation of the Paris Agreement. The chapter also conducts a detailed examination of the Paris Agreement using these parameters.

Chapter Five seeks to answer three key questions: whether the UNFCCC collaborates with EU, ECOWAS, Middle East and North Africa (MENA) and ASEAN to achieve climate change mitigation and adaptation/ emissions reductions and how it does this. The second question was whether regional organisations enable the transposition of the UNFCCC and the Paris

[63] Katharyn Duffy and others "How Close Are We to the Temperature Tipping Point of the Terrestrial Biosphere?" (2021) 7 Science Advances 3 at 3.

Agreement objectives at the national level and how it does this. The final question was whether there were direct interactions between the selected case studies and the UNFCCC.

The chapter sets out to answer the question by broadly examining interactions among the UNFCCC, regional or intergovernmental environmental organisations (REOs) such as the EU Commission and the ECOWAS Commission and ASEAN. The chapter finds that while some regions have no formal REOs, some of the case studies do not belong to the existing REO's, for example, Norway and China. A narrower examination of regional interactions was utilised to draw out influences for climate action that could arise from these alliances. Finally, for countries that did not fit into neat pockets of regional organisations such as Norway, China, India and Morocco, a brief examination of their interactions at all levels was discussed. Notably, the key 'effectiveness' parameters outlined in chapter three, such as design, implementation, enforcement, and compliance, were used to determine whether influence from the REOs was stronger than direct interactions with the UNFCCC regime.

Chapter Six discusses the climate change mitigation and adaptation actions in Denmark, Sweden, Norway, Finland, China, India, Nigeria and Morocco. The chapter buttresses Young's strand of argument in the expanded regime theory that the level of a regime's effectiveness incorporates the willingness or desire of the majority of its members to pursue a desired environmental outcome and their ability to put pressure on dissenting members within a corporate setting. Further, that strand of argument includes ascribing influence to the degree to which independent states are willing to comply with and implement the regime's shared objectives. The chapter examines historical interactions between the selected countries and the UNFCCC but focuses on accelerated climate actions following the Paris Agreement's signing in 2015. In addition to the parameters used in the second and third chapters of the thesis, new parameters are utilised given the peculiarity of the Paris Agreement and the fact that country commitments to the Paris Agreement are still underway. The parameters include political will, NDC fulfilment, climate change litigation and non-state actor participation, particularly NGOs and business enterprises. The research also investigates emerging trends in non-state actors climate action.

Chapter Seven summarises discussions in the previous chapters and offers recommendations to improve the facilitation and implementation of the Paris Agreement objectives. If adopted by the UNFCCC regime, these recommendations could improve their influence on countries' emissions reduction efforts.

CHAPTER TWO
THEORETICAL FRAMEWORK

I. Introduction

The previous chapter contextualised the thesis and introduced the UNFCCC and the Paris Agreement as the globally recognised IER. The chapter offered an overview of the global climate regime and highlighted the hybrid approach of the IER that encouraged state and non-state actors to take proactive steps to mitigate and adapt to climate change. Against this backdrop, the chapter explained the rationale for choosing the selected case studies based on the behavioural changes of some of the selected countries, prior to and after their adoption and ratification of the Paris Agreement and the reasons behind the participation of the remaining selected countries who have supported international climate action, participated and committed to emissions reductions from the inception of the climate change debate.

This chapter examines the regime theory as a foundational basis for the relevance of the IER. The regime theory is an excellent foundation as it is a culmination of scholarly perceptions about an effective regime resulting in the various parameters now used for examining an effective IER. The chapter also discusses green political theory, a more recent school of political thinking. The green political theory is essential to the thesis' focus as it advocates for a collective responsibility to protect the environment, similar to the objectives of the UNFCCC and the Paris Agreement.

This chapter explores two legal concepts that are also beneficial for the thesis argument: climate justice and sustainable development. Soltau opines that environmental problems cannot be solved without addressing justice contemplations, especially in technology transfer, finance, and capacity transfer when confronting climate change impacts.[64] When applied to climate change, it means that justice concerns surrounding the Paris Agreement implementation must be tackled to combat climate change. Other scholars, however, argued that climate justice is left out of the realm of international climate policy and climate justice arguments be left out of the regime altogether.[65] This chapter will explore the most relevant strands of climate justice to the objective of the thesis. Sustainable development is another crucial concept to be explored further along in the chapter. As the concept of sustainable development is broad, the term will

[64] Friedrich Soltau *Fairness in International Climate Change Law and Policy* (Cambridge University Press, 2009).
[65] Eric A Posner and David Weisbach *Climate Change Justice* (Princeton University Press, 2010).

be limited to environmental sustainability, which would include the sustainable development goals and how countries are tracking, particularly for the goals closely linked to climate change concerns.

II. Regime Theory

Conceptually, a regime presents a distinctive value for examining international relationships in its emphasis on the importance of specific attributes of international, multilateral and non-governmental groups, sets of behavioural or epistemic practices and processes of learning.[66] A regime is defined as "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors expectations converge in a given area of international relations".[67] Keohane also defined a regime as institutions agreed to by governments that prescribe explicit rules that pertain to sets of issues in international relations.[68] These institutions are understood as "persistent and connected sets of rules (formal and informal) that prescribe behavioural roles, constrain activity, and shape expectations".[69] Hasenclever and others expand this definition to add that regimes are partial international orders, deliberately constructed and intended to remove specific issue-areas of international politics from the sphere of self-help behaviour.[70] They deliver a range of support, specification, enforcement, coherence, and legitimation to the governance of an issue area by contributing to the development and continuity of habits, expectations, laws, and codes of conduct.[71]

Climate change affects the global commons, and no single country can address this challenge due to its global and transboundary nature. Countries must therefore cooperate to mitigate and adapt to climate change impacts. To ensure coordinated actions, a global framework that allows for consultations and negotiations is needed. The UNFCCC, for example, is the umbrella framework for climate change and related issues and functions as a platform for countries to deliberate, negotiate and proffer solutions for emissions reduction and global warming. By its

[66] Marc A. Levy and others "The Study of International Regimes" (1995)1 European Journal of International Relations 3, pps 267–330.
[67] Stephen D. Krasner "Structural Causes and Regime Consequences: Regimes as Intervening Variables" (1982) 36 *International Organization* 2, 185–205.
[68] Nik Hynek "Regime Theory as IR Theory: Reflections on Three Waves of 'Isms'" (2017) 11 Central European Journal of International and Security Studies 1 at 13.
[69] Ibid at 1.
[70] Andreas Hasenclever and others "Integrating Theories of International Regimes" (2000) 26 Review of International Studies at 3.
[71] See Andreas Hasenclever and others *Theories of International Regimes*. (Cambridge: Cambridge University Press, 1997).

nature, the UNFCCC embodies authoritative conventions, rules, and ideas that govern a set of environmental regulation activities and, to this end, regarded as an IER.

Regimes can help states (and other actors) cooperate to reap joint gains in the form of additional welfare or security. The regime does this by creating shared expectations about appropriate behaviour regarding an issue and aims to upgrade transparency on the issue area within its framework.[72] Therefore to evaluate the performance of any regime, the utilisation of the regime theory is essential.

From the mid-1980s onwards, the regime theory took shape, particularly in the study of urban politics. As some scholars systematically studied what caused regimes to flourish or wither, they began to ask questions about the political significance of international regimes, such as whether the norms and rules collectively agreed and which define the regime are effective? Are regimes reliable predictors for actors' behaviour, or do actors that prioritise self-interest ignore regime injunctions whenever they become inconvenient? Do regimes assume independence or a life of their own separate from the conditions that led to their creation, and finally, what makes some regimes more effective than others?[73] Answers to these questions will depend on the nature of the issue that gave rise to the regime, and the thesis does not engage with them. Now we will turn to the earliest conceptualisations of the regime theory.

Within the context of urban politics, Stoker opines that the theory's emphasis on the interdependence of governmental and non-governmental forces in meeting economic and social challenges focuses attention on cooperation and coordination challenges between governmental and non-governmental actors.[74] Stoker's emphasis is offered within a country's context and not between sovereign nations and a supranational architecture that the UNFCCC represents. To accommodate the regime analysis in the context of collective states, Wijen and Ansari describe the regime theory as "*focusing on how actors, generally at the state level, overcome the collective action problem and realise collaboration in areas serving their common interests, despite the absence of a supranational authority."*[75]

[72] See Andreas Hasenclever and others above n70 at 3.
[73] Ibid at 4.
[74] Gerry Stoker "Regime Theory and Urban Politics" in David Judge and others (eds) *Theories of Urban Politics* (Sage Publications, London & Delhi, 1995) at 54.
[75] Frank Wijen and Shazad Ansari "Overcoming Inaction through Collective Institutional Entrepreneurship: Insights from the Regime Theory" (2006) 28 Organisation Studies 7 at 1080.

The regime theory is multi-faceted and draws its strengths from branches of international relations and international political economy. Regime theorists emphasise different variables in assessing the regime's performance, which creates divergence in their reception of the regime concept.[76] Many modern advocates of the regime concept rely on three broad interpretations from Krasner's regime definition for regime analysis.[77] The first version is the realist and structuralist approach that focuses on balancing power and relative gains. More clearly put, the interpretation presents a situation where a dominant actor (referred to as a hegemon) exerts its influence by coercing others to agree to constitutive contract terms that set forth that regime's basic features.[78] The realists view the regime as an embodiment of formal agreements between states and provisional arrangements that emerge under favourable conditions.[79] Realists also focus on the conflict that necessitates a regime's existence but minimise the prospect for international cooperation beyond the conflict.[80] Finally, realists suggest that the regime derives its stability from the hegemonic states that created it, hegemonic competition, or hegemonic coalitions. However, Keohane suggests that hegemony may not necessarily be a condition precedent for stable international regimes under all circumstances.[81] Denemark and Marlin- Bennett insist that the realist interpretation of regimes is weak because it only links the regime's effectiveness to hegemonic power.

The second interpretation, the structural or neoliberal perspective, bases its analysis on constellations of interests.[82] Supporters of this interpretation argue that states' rational self-interest in absolute gains is the reason for regimes' emergence.[83] The neoliberal perspective agrees with the realist interpretation of the anarchic international system but differs in other respects. For example, they acknowledge that regimes assist states by providing quasi-stable institutions for the maximisation of self-interest. Neoliberals also suggest that regimes help self-interested states to avoid suboptimal outcomes by coordinating their behaviours. Neoliberals assert that because regimes are challenging to create, states will hesitate to put the

[76] See Robert A. Denemark and Renée Marlin-Bennett *Regime Theory* (Wiley Blackwell,2017).
[77] Oran Young and Marc A. Levy "The Effectiveness of IERs" in O.R. Young (ed.*) The Effectiveness of IERs: Causal Connections and Behavioral Mechanisms*. (MIT Press, Boston, 1999) pp. 1–32.
[78] Oran Young "Regime Theory: Past, Present and Future" in Oran Young (ed) *Governance in World Affairs* Cornell University Press, 1999) at 191.
[79] Robert A. Denemark and Renée Marlin-Bennett above n76.
[80] Arthur A. Stein "Neoliberal Institutionalism" in Christian Reus-Smit and Duncan Snidal (eds) *The Oxford Handbook on International Relations* (Oxford University Press, 2008) at 204.
[81] Robert Keohane "The Demand for International Regimes (1982) 36 International Regimes 2 at 355
[82] Andreas Hasenclever and others above n70 at 5.
[83] See Robert O. Keohane, 'The Demand for International Regimes', in Krasner (ed.), International Regimes, pp. 141-71; Arthur A. Stein, "Coordination and Collaboration: Regimes in an Anarchic World" (1982) 36 International Organisation 2.

regime at risk; even opportunistic states for fear of exclusion from a potentially beneficial regime will continue cooperating with other members.

The third and final interpretation, the cognitivist or later constructivist approach, is suggested to be the broadest, incorporating several schools of thought.[84] Cognitivists have criticised both neoliberals and realists for trivialising a significant source of variation in international behaviour, such as actors' preferences and options. In general, early cognitivists argue that regimes are shaped by social or behavioural dynamics and not by self-interest or security concerns.[85]

Other strands of the cognitivist approach while examining the emergence of behavioural norms suggest that decision-makers encounter uncertainty in many issue areas. This uncertainty drives decision-makers to demand reliable issue-specific knowledge that can become a source of political influence for those who can supply it.[86] This interpretation of regime analysis falls short when applied to the UNFCCC regarding scientific information on climate change. The IPCC provides scientific, technical and socio-economic information on climate change for UNFCCC. It is composed of various international scientists contributing to the IPCC's work voluntarily as authors, contributors and reviewers. Consequently, the IPCC maintains a level of autonomy and cannot be politically influenced by countries. A fair amount of the IPCCC funding comes from the UNFCCC, and so, although it is an independent organisation, it is not external or extrinsic to the UNFCCC. This example highlights the ever-evolving nature of regimes and the importance of applying flexibility in regime analysis.

Hynek and others highlight the constructivist approach's utility, stating that ontologically, it transcends the dichotomy of the juxtaposition of state-centred and transnational analytic frameworks.[87] When used for regime analysis, the approach can examine complexities within the regime that consists of a mix of actors, networks, and artefacts: both material and ideational, and their co-productions and hybrids.[88] Denemark and Marlin-Bennett suggest that for cognitivists, regimes are essential to any organisation, including states and offers "the most

[84] Robert A. Denemark and Renée Marlin-Bennett above n76.
[85] Robert A. Denemark and Renée Marlin-Bennett above n76.
[86] Andreas Hasenclever and Others above n70 pp. 136-9, 154-7.
[87] Nik Hynek "Evolutionary and Disciplinary Characteristics of Regime Theorisation" in Nik Hynek and others (eds) *Regulating Global Security: Insights from Conventional and Unconventional Regimes* (Palgrave McMillian, 2019) at 20.
[88] Ibid.

variable picture of regime formation because no regime can be treated as an isomorphic institution or as the result of interchangeable interests or desires."[89]

The regime theory has been criticised as strong in analysing and explaining cooperation but weak in analysing and explaining institutions.[90] Again, mainstream regime theory was opined to emphasise the realistic aspects of institutionalised cooperation on the assumption that state actors consistently act to maximise their parochial interests.[91]This position has undoubtedly evolved in subsequent years as scholars such as Young and Levy have attempted to expand the regime theory to accommodate institutional analysis and effectiveness. The thesis also argues that even though mixed motives abound for states to perform optimally in the environmental space, their actions go beyond the maximisation of parochial interests and do not arise from being boxed in a corner to comply with the regime's objectives.

It was useful to explore the earliest strands of the regime theory developed for specific issue areas. With each issue, the concept of regimes metamorphosed and while some key elements remain within all three stands of regime theory interpretations, later strands of interpretation incorporated additional parameters for regime analysis. Some of these additions include an appreciation of state behaviour, regimes' contributions to states instead of the hegemonic argument, and the regime's inherent influence.

Going back to Young's analysis of regimes, his conceptualisation of regimes transcends issue-specific problems attached to a singular regime and can be applied to other international regimes in different fields. Young also expands on four themes from the perspective shifts of mainstream regime theory: the nature of actors, institutional bargaining, problem structure, and regime formation stages. He expands the nature of actors theme to include non-state actors who often become essential players in regime formation. This expansion resonates with the UNFCCC hybrid approach that recognises that climate change requires efforts at all levels: regional, state and local. Klauss proposition of the importance of non-state actors and their inclusion in the global environmental order also supports this expansion.

In terms of institutional bargaining, Young differs from the notion that institutional bargaining is for the benefit of forming a narrow 'winning' coalition. Instead, he highlights that the participants of the bargaining process are more disposed to getting a broader coalition and

[89] Robert A. Denemark and Renée Marlin-Bennett above n76.
[90] Thomas Gehring *Dynamic International Regimes* (Peter Lang, GmbH, 1994) at 15.
[91] Ibid.

places a premium on ‘persuading all relevant group members to accept a constitutive contract's provisions. The thesis agrees with this reasoning as applicable to the UNFCCC in the context of climate change negotiations as the UNFCCC intends to gain members consensus to the Convention. Young adds that the exogenous shocks that the neoliberals and realists argue can upset a regime may ironically make a difference in energising the regime processes. When applied to the UNFCCC, the IPCC's dire reports of global climate change impact could have toppled the UNFCCC, particularly after the Montreal Protocol's previous success, but it did not. Again, even though the Kyoto Protocol was not as widely accepted as the Montreal Protocol-pointing to an exogenous shock, the Paris Agreement was widely accepted. Such examples signal the ability of the regime to adapt to exogenous shocks. The role of leadership in a regime should not also be overlooked as it can be an essential determinant of success, particularly in inducing major players to accept international agreements and transform the regime's objectives from paper to practice.[92]

Regarding regime problem-structure concerns, Young asserts that some collective action problems are harder to solve than others.[93] He cites climate change as harder to solve than the depletion of the stratospheric ozone.[94] This begs the question as to whether regime analysis should engage with problem structure as a parameter for the regime’s success. Some difficulties may be presented in constructing a rubric on what constitutes a more complex problem than another does. The last concern on stages of regime formation does not majorly contribute to the regime theory's relevance. However, what can be taken away is that the separate stages of a regime have individual political dynamics that cannot be captured in a single model of regime formation.[95]

The previous chapter emphasised that ‘influence’ rather than effectiveness would be used to ascertain the relevance of the UNFCCC in getting countries to reduce GHG emissions. Young highlights that a regime’s effectiveness can be determined by the extent to which it can solve the problem that led to its formation. However, Young discountenances extreme positions that approach the issue of effectiveness in an all or nothing terms.[96] He adds that there is a possibility of exaggerating a regime’s effectiveness using spurious correlations or, conversely,

[92] Oran Young above n78 at 194.
[93] Ibid.
[94] Ibid.
[95] Ibid at 195.
[96] Ibid at 196.

underestimating the regime's effectiveness based on lagged or masked impacts.[97] This reasoning applies to climate change, and critics may erroneously judge the UNFCCC's performance based on either standard. Young attempts to steer the focus away from 'effectiveness' based on outcome to effectiveness based on the process. This approach serves the thesis purpose. During this thesis writing, countries have yet to fulfil their emissions reductions targets based on their commitment period timeframe- some 2030 and others 2050.

Again, there is some benefit in examining the pathways by which regimes influence actors' behaviour that are subject to the regime's rules, how these actors are involved in the decision-making procedures, and how they benefit from the programs. Therefore, it is gainful to holistically analyse the UNFCCC regime by intricately examining the UNFCCC 'activities' captured from the negotiations to the institutions within the Convention and the interaction between the members and these institutions.

The second important theme is institutional interplay. Regimes have been erroneously viewed as self-contained or standalone arrangements. Young's theme discusses the horizontal and vertical interplay of different individual regimes. Horizontal interplay could involve two separate environmental regimes tackling the same issue area or two separate regimes that intersect, such as trade and the environment. Young offers an example of the interplay between the environmental regime legal arrangements that contain provisions relating to trade such as the regime on ozone layer depletion or the regime regulating trade in endangered species and the General Agreement on Tariffs and Trade (GATT)/ World Trade Organisation (WTO) system that regulates international trade in goods and services. On the other hand, the vertical interplay concerns international regime interactions with domestic arrangements where both parties deal with similar issue areas. Applying this vertical interplay to modern-day environmental regimes, the UNFCCC presents a good outlook. The UNFCCC is an overarching framework for several institutions to connect and the members of the Convention have direct interactions with the various institutions within the regime. Analysis in the third and fourth chapters will highlight these interactions.

It is essential to reiterate the importance of the regime theory to the applicability of the thesis. The regime theory is an elastic concept and helps analyse, with promising results, a vast range of issues that include climate change. Thus, it is a proper foundation for emphasising the vital role of the IER and its institutions as contributors to climate outcomes in the international

[97] Oran Young n78 at 196.

society. The utilisation also supports Young's prediction that regime analysis will not decline, and understanding these institutions' roles in international environmental affairs remains a necessity. The increased research into the impact of the Paris Agreement, implications of non-compliance to the Agreement and increased global awareness on climate change and public expectations of the UNFCCC attests to this prediction of regime analysis continuity.

III. Green Political Theory

Attempting to resolve global commons' issues at any level: national, regional and international, requires politicking. The previous section briefly uncovered some politicking in the emergence of regimes. Similarly, the emergence of green political theory is marked with politicking, especially regarding governments' perception and treatment of the environment. New social movements with interrelated concerns such as the environment, anti-nuclear, and peace, gave rise to the emergence of the 'green' social and political theory in the late 1980s.[98] These movements are responsible for shaping green politics and spearheading the formation of green parties, primarily within Europe, based on four pillars. These pillars are ecological responsibility, social justice, non-violence and grassroots democracy. It is significant to note that these pillars contributed to establishing green parties in Africa, Asia and Latin America, however, this thesis engages with ecological responsibility and social justice which incorporates climate justice.

With the emergence of these green parties and policies, there was a demand for a 'green' theory to explain the underlying political issues failing to address the occurring environmental crisis to obtain a lasting solution. The term 'green' mainly refers to the ecology and environment. In this sense, green political theory was recognised as a new political tradition of enquiry to challenge the two political traditions that majorly influenced twentieth-century politics-liberalism and socialism.[99] These political traditions focused on man's enrichment in exploiting and utilising resources, often without recourse to the strain on the environment.

[98] Robyn Eckersley *Green Theory* (University of Melbourne, 2007) at 250.
[99] Hugh Dyer "Green Theory" in Stephen McGlinchey & Ors 'International Relations Theory" (2018) E-International Relations pp 84 https://www.e-ir.info/2018/01/07/green-theory-in-international-relations/ .

Green political theory is a recent school of political thinking that helped bring environmental issues to the international relations scene.[100] It is also a branch of the critical theory tradition that evokes questions about relations among others and ourselves in the context of community and collective decision-making as it affects environmental issues.[101] Like the regime theory, green political theory has metamorphosed over the years. One of the earliest propositions of the green theorists is perceived to separate anything ecological from the states.[102] Put differently, green politics, for one part, made politics irrelevant in issues of ecological survival and, for the other part, maintained that the real cause of the ecological crisis was beyond politics and concerned 'deeper' dynamics of the ecologically destructive consciousness and ignorance of humanity. Either way, the State was not regarded as a critical player in ecological management. Subsequent attempts have been made to push green political theory beyond the 'for/against' approach and now explore the ways states have been reconstructed and can be further reconstructed to respond better to ecological concerns. The fundamental mission of green political theory is to reduce ecological risks across the board and prevent their unfair externalisation and displacement through space and time and onto innocent third parties.[103]

Barry, listing some of the features of green political theory, stated that the treatment of the environment is not just a technical or economic issue but also a moral issue.[104] This means that environmental protection responsibilities do not rest on institutions alone but also on the individuals. This branch of thinking aligns with the thesis' broad proposition that the IER, countries and individuals all have a role to play in environmental protection. Further, when the international environmental institutions have developed environmental objectives for member states to implement, the moral obligation, as expounded in the green political theory, rests on states to implement and enforce such objectives. Thus, Barry proposes a 'collective ecological management' that integrates transformed state structures and innovative forms of action as "the most appropriate institutional structure for green politics".[105]

[100] John Barry "Green Political Theory" in V. Geoghegan and R. Wilford (eds) *Political Ideologies: An Introduction* (4th ed, Routledge, London,2014) at 154.
[101] Hugh Dyer above n99 above.
[102] Matthew Paterson "Green Theory" in Colin Hay (ed) *The State: Theories and Issues* (Red Globe Press, 2006) at 135.
[103] Robyn Eckersley n98 above.
[104] John Barry Rethinking Green Politics: Nature, Virtue and Progress, (Sage Politics Text Series, London, 1999).
[105] Ibid at 136.

Green political theory also prescribes a restructuring of social, economic and political institutions to produce a more sustainable world.[106] Recent green discourses that include environmental justice, ecological security and sustainable development have influenced national and international policy debates. These discourses have also altered state-economic actors and citizens' roles from territorial overlords to environmental stewards.

Green political theory incorporates future generations' concerns, particularly intergenerational justice. The thesis aligns with Barry's two core principles of green politics - distributive justice and ecological sustainability. Distributive justice considers intergenerational justice and future generations, and this applies to climate justice concerns. Ecological or environmental sustainability also underscores a moral duty to protect and maintain the environment for future generations. These two core principles are fundamental for examining the influence of IERs, particularly the UNFCCC.

The UNFCCC expressly provides for the promotion of sustainable development by members. Article 3 (4) of the Convention *provides "the Parties have a right to, and should, promote sustainable development.* Article 4 (d) also provides that Parties to the Convention are to commit to "…*promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems.."*

Furthermore, the Paris Agreement highlights the concept of climate justice in its preamble: "*Noting the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognised by some cultures as Mother Earth, and noting the importance for some of the concept of "climate justice", when taking action to address climate change,…"*[107]. Other sections of the Paris Agreement encourage Parties to promote and consider sustainable development in environmental, economic and social policy design and implementation.[108]

The dynamic nature of green political theory raises questions of justice, rights, democracy, the state and the environment on the normative angle whilst underscoring the relationship between the state, economy and the environment on the political-economy angle. The theory helps re-

[106] John Barry and Gene E. Frankland "Green Political Theory" In John Barry, & Gene E. Frankland (eds.), *International Encyclopaedia of Environmental Politics* (1st edn, Routledge, London, 2002).
[107] The Paris Agreement above n35, the Preamble.
[108] The Paris Agreement above n35, art 2, 4, 6, 7, 8 and 10.

examine the relationship between the state, the economy and the environment raising questions of countries' moral position in environmental exploitation for economic gains. Conversely, avenues for reflection open in determining what propels some countries to prioritise environmental concerns over economic gains. For example, countries such as the United Kingdom and France advocate for leaving fossils in the ground. The thesis's scope precludes an investigation into the motivations behind certain countries' resolve to leave fossils in the ground. However, the thesis will examine the political will behind emissions reductions and mitigation actions or inactions within the selected case studies. More specifically, its scope extends to specific contemporary issues such as the political and economic implications of climate change, resource competition and conflicts, global and national inequalities. For climate change, which is transboundary, the questions encountered using green political theory are what level of the political community can provide a solution for climate change impacts?

Green political theory supports the engagement of all actors, state and non-state, in emissions reductions and climate change mitigation and adaptation. In addition to recognising the distinct role that IERs/agreements play in managing environmental problems, green political theory extends its beam to the national environmental regime. The theory advocates, for one part, that political leaders take on added responsibility and, for the other part, that citizens overcome the tendency to separate 'society' and 'environment' by treating the latter as intrinsic to the former. As observed in the background study, state actors' political will majorly determine how successful they are in implementing IER objectives. In Sweden, for example, the Green Party, which is pro-environment, imposed more strict environmental fines in municipalities where they had the majority ruling.[109]

In summary, green political theory radically challenges existing political, social and economic structures, especially mainstream liberal, political and economic assumptions of sovereign states. Moreover, it takes on a moralistic perspective that human material development should be curtailed to preserve non-human nature. This moral element is a common feature of the green political theory and sustainable development principles, firmly entrenched in international environmental agreements. This moral value should reflect in the actions of environmental stakeholders, the state and its individuals, and far beyond the wordings or objectives of the IER or IEA.

[109] Eric Sjöberg "An Empirical Study Of Federal Law Versus Local Environmental Enforcement" (2016) 76 Journal of Environmental Economics and Management at 29.

IV. Climate Justice

Climate justice is a concept that ascribes ethical implications on climate change impacts and mitigation and adaptation efforts and considers their relationship with broader justice concerns.[110] It is based on principles of social justice, accountability and participation, and ecological sustainability.[111] Historically, climate justice had three different articulations- those within academia, grassroots movements and elite NGOs.[112] The concept of climate justice gained its roots from early environmental justice movements in the late 1980s following North Carolina's toxic dumping. This movement merged the environmental and civil rights movement, the politicisation of which paved the way for a national movement.[113] The climate justice movement was focused on removing the causal factors of climate change in terms of addressing inequitable impacts of the oil industry and fostering a 'just transition to a post-carbon economy with adequate assistance to vulnerable communities. According to the grassroots articulation, CorpWatch, a small NGO, helped organise the first known Climate Justice Summit around COP6 in The Hague in 2000.[114] However, within academia, the term was first used by Weiss in 1989.[115]

Historically the thought-strands behind climate justice traverse distributive justice arguments, where significant contributors to climate change impacts ought to bear more responsibility in reversing the trend, to include inter-generational equities concerns, where humans hold the natural and cultural environment of the earth together with other generations, past and future.[116] The Stockholm Declaration of 1972 buttresses an imperative goal for future generations to

[110] Achieving Justice and Human Rights in an Era of Climate Disruption (Climate Change Justice and Human Rights Task Force, International Bar Association, 2014).
[111] Paul Chatterton and Others "Articulating Climate Justice in Copenhagen: Antagonism, the Commons, and Solidarity" (2013) 45 Antipode 602–620.
[112] David Scholsberg and Lisette B. Collins "From Environmental to Climate Justice: Climate Change and the Discourse of Environmental Justice" (2014) 5 Wires Climate Change 363 at 359.
[113] Charles Lee "Toxic Waste and Race in the United States" in Bunyan Bryant, Paul Mohai (eds) *Race and the Incidence of Environmental Hazards: A Time for Discourse*. (Boulder, CO Westview Press, 1992)
[114] David Scholsberg and Lisette B. Collins above n112.
[115] See Edith Brown Weiss *In Fairness to Future Generations: Inter-national Law, Common Patrimony and Intergenerational Equity* (Transnational Publishers, NY, 1989).
[116] See Edith Brown Weiss "Intergenerational Equity: A Legal Framework for Global Environmental Change" in *Environmental Change and international Law: New Challenges and Dimensions* (United Nations University Press, Tokyo, 1992).

defend and improve the environment for present and future generations.[117] This objective led to creating the United Nations Environment Program (UNEP) that constituted an international regime on the environment, economy and development.

The current justice issues of climate change include the relativity of the time to the problem structure of solving climate change. The arc of climate change is long with complex variabilities, and the models of its patterns can neither be fully captured nor demonstrated clearly.[118] In contrast to the long arc of climate change, the time arc to climate change impacts is limited, necessitating solutions toward achieving concrete mitigation actions and moving on to a just world at the same time. The thesis agrees with Carlane and others that the Paris Agreement embodies a progression by providing a framework that enhances the possibility of cooperative change.[119]

The Paris Agreement adopted the CBDR-RC principle to quell contestations of inequity that have stalled climate negotiations over the years. Dimitrov, for instance, describes the Paris Agreement as a "laissez-faire accord among nations that leaves the content of domestic policy to governments but creates international legal obligations to develop, implement, and regularly strengthen actions."[120] The Paris Agreement has also been criticised for not dedicating more provisions to climate justice considerations as the only mention of 'climate justice' in the text is a brief statement in the preamble, the text reads:

> "*Noting the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth, and* ***noting the importance for some of the concept of 'climate justice',*** *when taking action to address climate change.*"[121] (emphasis added)

Again, the UNFCCC is criticised as unable to impose or encourage the application of one or a limited set of justice principles. Tavoni and others argue that this continues to be a recurrent constraint on the regime's effectiveness and a challenge when transforming justice concerns

[117] UN General Assembly, United Nations Conference on the Human Environment, 15 December 1972, A/RES/2994.
[118] Cinnamon P. Carlarne and J.D. Colavecchio "Balancing Equity and Effectiveness: The Paris Agreement & the Future of International Climate Change Law" (2019) 27 N.Y.U. ENVTL. L.J. 107 at 110.
[119] Ibid.
[120] Radoslav S. Dimitrov above n42 at 2.
[121] UNFCCC. Decision 1/CP.21 (As Contained in the Report of the Conference of the Parties on its Twenty-First Session, FCCC/CP/2015/10/Add.1).Bonn: United Nations Framework Convention on Climate Change; 2015

into practical action.[122] Tavoni's criticism underlies the earliest and far-left assessments of a regime's effectiveness in terms of the outcomes. Here Tavoni and others equate the UNFCCC's effectiveness with translating justice concerns to practice. Young's approach, alongside Carlane and others, view the UNFCCC's progress in terms of its negotiation process that encourages Parties' cooperation.

The nature of climate change inflicts climate injustice in how its impacts are distributed disproportionately. Layers of inequity become transparent with the intensity of climate change patterns in some regions and institutions' failing efforts to combat climate change due to capacity. In fact, the term climate justice has become an elusive concept in the international environmental space. Consequently, Parties within global climate negotiations try to avoid the term and prefer to use the language of fairness and equity.

Whether couched as justice, equity or fairness, the resounding question is whether the Paris Agreement has made meaningful progress or presents the potential for more concerted equitable efforts going forward.[123] Potentially an unsatisfactory answer to some critics, Carlane and others suggest that the proposal of the Paris Agreement "*to create a more inclusive, transparent, bottom-up, facilitative model for climate action, as well as a more inclusive set of cooperative mechanisms for effectively implementing NDCs"* demonstrates its quest toward equity.[124] The NDCs allow countries to pace their emissions reductions targets with their current capabilities and development considerations. Article 6 of the Paris Agreement is also significant as it aims to promote integrated, holistic and balanced approaches that will assist governments in implementing their NDCs through voluntary international cooperation. This cooperation mechanism, if properly designed, should make it easier to achieve reduction targets and raise ambition.[125] It is significant to note that Article 6 is currently evolving but, when placed in tandem with the NDCs, advance a more inclusive and transparent approach to addressing climate change.[126] However, such inclusivity and transparency do not automatically amount to equity and fairness.

[122] Massimo Tavoni and Others Safe vs. Fair: A Formidable Trade-Off in Tackling Climate Change" (2012) 4 Sustainability, pps 210–226.
[123] Cinnamon P. Carlarne and J.D. Colavecchio above n118 at 180.
[124] Ibid.
[125] ICC "Article 6: What is it and Why is it so Important" https://iccwbo.org/media-wall/news-speeches/article-6-important/
[126] Cinnamon P. Carlarne J.D. Colavecchio above n118 at 181.

The rationale for using the climate justice concept is to help investigate justice concerns in implementing the IER objectives at the regional and state levels. Although climate justice may be elusive on the international front, it may be achievable on the domestic front. Since the UNFCCC and the Paris Agreement have adopted a hybrid approach where countries bear the primary responsibility to deliver emissions reduction outcomes, climate justice can be observed from the lens of country implementation. It could take the form of inclusivity in the policymaking process and access to justice or creating adequate climate change mitigation and adaptation programmes and policies. Some scholars have also included climate justice as a parameter for an 'effective' environmental regime.

V. Sustainable Development

Some scholars suggest that an 'effective' regime should be capable of being tested for sustainability in addition to justice and equity assessments.[127] This concept should also apply when assessing an influential IER. The concept of sustainable development spans several disciplines, ranging from economics to engineering, politics, and even law. As a result, attributing a specific meaning or definition to the term causes considerable confusion across several fields of endeavour.[128] Sustainable development is also considered a challenge for governments and international organisations such as the United Nations.[129] The World Commission on Environment and Development issued a report entitled 'Our Common Future' defining sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[130] The report built momentum that was sustained at the heavily-attended 1992 Earth Summit in Rio de Janeiro. A significant outcome of the Summit was the Agenda 21 document that detailed sustainability issues, the actors involved, and the means for achieving sustainable development at the beginning of the 21st century.[131] About ten years later, another attempt to reinvigorate the global commitment to a North-South coalition on sustainable development was made at the UN World Summit on Sustainable Development in Johannesburg.

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[127] Oran R. Young "Evaluating the Success of IERs: Where are We Now?" (2002) 12 Global Environmental Change at 73.

[128] Herman E Daly "Sustainable Development: From Concept and Theory to Operational Principles" (1990) 16 Population and Development Review at 26.

[129] Jennifer Elliott *An Introduction to Sustainable Development* (Routledge, London and New York, 4th edn, 2013).

[130] World Commission on Environment and Development *Our Common Future* (Oxford University Press, 1987) at 43.

[131] Jennifer Elliott above n129 at 9.

The concept of sustainable development, similar to justice, fairness or equity concepts, has various interpretations. According to Redclift, sustainability, "*Like motherhood and God, is difficult not to approve of. At the same time, the idea of sustainable development is fraught with contradictions.*" [132] On the other extreme, Mawhinney comments that "*Sustainable development appears to be an overused, misunderstood phrase."* [133] Although a highly contested principle, as a matter of necessity, it has been included as an objective in international environmental agreements and states who are parties to the agreement would be bound by the objective. However, scholars have criticised that sustainable development considerations often remain at the rhetorical or discourse levels and are seldom measured, quantified, and incorporated in quantitative climate change decision-making frameworks, especially in developing countries.[134]

The UNGA adopted 17 sustainable development goals (SDGs) that merged agendas of development and the environment. Some of the key goals linked to the environment are climate action, peace, justice and strong institutions, affordable and clean energy, sustainable cities and communities. Closely linked to the thesis' focus on emissions reductions are SDG7 on affordable and clean energy, SDG 13 on climate action and SDG 9 on industry, innovation and infrastructure. Put differently, availability and utilisation of clean energy, urgent climate mitigation and adaptation actions, and resilient infrastructure and sustainable industrialisation process can aid emissions reductions. The overall goal of sustainable development is the long-term stability of the economy and the environment, which can be achieved through acknowledging and integrating holistically economic, environmental and social concerns throughout decision-making. Consequently, achieving these goals requires the partnership of governments, the private sector and civil society.

The thesis engages with sustainable development in two dimensions. The first dimension captured in the following chapter explores the UNFCCC's facilitation of the SDGs. Apart from incorporating the words in the Paris Agreement, presenting and adopting UNGA's goals, it would be beneficial to explore how the UNFCCC facilitates a consistent platform that can

[132] Michael R. Redclift "Sustainable Development: Needs, Values, Rights:" in Michael Redclift (eds) *Sustainability: Sustainable Development* (Taylor and Francis, 1993) at 191.
[133] See Mark Mawhinney *International Construction* (Wiley, 2001).
[134] Diana Ürge-Vorsatz and others "Measuring the Co-benefits of Climate Change Mitigation" (2014) 39 Annual Review of Environment and Resources, pps 549–582.

foster regional, state and business partnerships. The other dimension captures how sustainable development objectives are achieved at the domestic level within the selected case studies.

By applying the concept of sustainable development, the thesis attempts to use it as a parameter for measuring mitigation and adaptation outcomes in the selected countries. Broadly, mitigation and adaptation efforts emanating from the UNDP's directives, specific IEAs and principles and regional environmental directives have direct bearing on IER-influenced state action to achieve global environmental goals. Therefore, when used as a parameter indicating IER influence, actions geared toward producing sustainable development can be a good indicator for IER influence.

VI. Conclusion

This chapter laid out the theoretical framework upon which the thesis rests. The regime theory and green political theory were examined with the intertwined concepts of climate justice and sustainable development. The regime theory is fundamental to assess the UNFCCC as an IER and the Paris Agreement as an IEA. The regime theory is also foundationally crucial to examine the influence of the UNFCCC and the Paris Agreement in getting countries to reduce GHG emissions.

The chapter employed Young's expanded approach of interpreting the regime theory that holistically assesses the influence of a regime on the process and not just the outcomes. It highlighted and supported the modern green theorists' proposal for increased state and citizen accountability to communities and environments within and beyond their borders. The chapter also connected the hybrid approach adopted by the UNFCCC and the Paris Agreement and the green political theory's proposition for political leaders and citizens to take on responsibility for the environment.

The concepts of climate justice and sustainable development were also introduced, noting that these concepts can also be used as parameters for evaluating the influence of an IER. The UNFCCC and the Paris Agreement refer to these terms in the IEA text. As the overarching climate change framework, the UNFCCC provides the needed platform for climate change negotiations, during which justice concerns and sustainable development issues arise.

CHAPTER THREE

THE ROLE OF INTERNATIONAL ENVIRONMENTAL AGREEMENTS AND REGIMES

I. Introduction

The previous chapter introduced and examined the regime and green political theories and certain strands of these theories can be applied to the study of the UNFCCC and the Paris Agreement, more specifically to determine the IER's influence. For example, Young's perspective on the causal connections between an IER and environmental outcomes and behavioural mechanisms as an indicator of regime influence will be captured through various parameters highlighted further along in the chapter. It is important to reiterate that the regime theory was developed based on the analysis of different regimes and this is applicable to the study of the climate change regime. Common themes from the deductions of scholars from their study of other environmental regimes have been collated and contributes to the analysis of the nature, structure and functions of the IER in this thesis.

This chapter offers a broad view of the role of IERs and IEAs, particularly in influencing state and non-state actors' emissions reductions and climate change mitigation and adaptation outcomes. This, however, cannot be understood without adequate comprehension of the regime's nature, structure, and functions and agreements. This understanding is gleaned from various scholarly perceptions of what constitutes the nature, structure and functions of an environmental regime and its agreement. Because different scholars or commentators have varied views on IERs and IEAs, their opinions are subjective regarding whether an IER or IEA is effective. Nevertheless, these scholars have identified valuable parameters that can be used to evaluate the IER and IEA effectiveness. Further, there are some common parameters that many environmental scholars agree on as crucial to a regime's effectiveness. The chapter focuses on establishing common themes from the various parameters and uses the themes as a foundation for evaluating the UNFCCC's and Paris Agreement's influence on state and non-state actors.

The common themes from the various perceptions include: legitimacy or the legal nature of the agreement, implementation - comprising compliance, monitoring and enforcement mechanisms, the inclusion of sustainability and climate justice concerns, and the receptivity and attitudinal approach by the members of a regime toward IER and IEA objectives. Scholars have primarily explored attitudinal approaches and receptivity by state and non-state actors

towards international environmental objectives, however, this chapter presents a more holistic assessment, including a glimpse into the monist and dualist approach to international environmental objectives. A holistic assessment engaging with monist and dualist perspectives may help rebut criticisms that there will always be countries that engage in pro-environmental actions without the influence of the IEA and IER.

Going back to the attitudinal approach 'dimension', it is essential to examine member states' actions before and following the ratification of the UNFCCC Protocols because it aids the assessment of the influence of the Paris Agreement and the UNFCCC. It is important to signal that other scholarly work highlights goal attainment or significant behavioural changes while tackling an environmental problem such as climate change. These works also emphasise the significance of examining how well an institution has contributed to resolving the environmental problem that motivated its establishment.[135] Parameters drawn from the scholarly work on goal attainment will not be utilised in the thesis because climate change action results will not be visible for many decades. Further, the Paris Agreement objective that calls for global warming to reduce to well below 2 degrees or preferably 1.5 degrees does not set a definite date for countries to realise these goals. It is, therefore, more appropriate to examine the implementation of NDC targets by the selected countries to gauge the influence of the Paris Agreement. This chapter also breaks down behavioural changes as a blanket parameter to include climate litigation.

II. Nature, Structure and Functions of the IER

A regime is described as the principles, norms, rules, and decision-making procedures around which individual actors' (typically governments) expectations converge in a given issue area.[136] This definition aligns with the regime theory that regards states as principal actors in world politics. Young defines regimes as "social institutions consisting of agreed-upon principles, norms, rules, procedures and programs that govern the interactions of actors in specific issue areas."[137] Crawford and Nevill define a regime as "a more or less institutionalised system of dealing with a particular field of behaviour, often associated with the governance of territory,

[135] Stephen D. Krasner *International Regimes* (Cornell University Press, Ithaca) at 1.
[136] Stephen D. Krasner "Structural Causes and Regime Consequences: Regimes as Intervening Variables" (1982) 36 International Organization 2 at 185.
[137] Oran Young and Marc A. Levy above n77 at 1.

which claims a substantial measure of comprehensiveness and exclusivity."[138] Young's definition highlights governments' agreement to be bound by the explicit rules of such institutions.[139] It follows then that without the agreement and cooperation of governments, there would be no regime.

Historically, the need for an IER to foster treaties or agreements stemmed from several factors. These included an accumulation of previous environmental misdeeds that needed redress, increase in the scale of human activities with bearing on the environment, increase in income of industrialised nations, preferential variations and a more fragmented geopolitical landscape that turned intra-national environmental conflicts to transnational issues that necessitated a demand for remedies from an international treaty.[140]

Between 1988 and 1992, governments had begun to play a more significant role and converged to deliberate on these issues.[141] Consequently, for the past four decades, international environmental cooperation has witnessed a dramatic increase. Governments and their agents have responded to the growing array of national and transboundary ecological problems by negotiating, concluding, and amending international treaties and other types of agreements, and establishing and reforming international organizations.[142] At the centre of this multilateral order is the UN, which is described as the embodiment of the international community, the focus of international expectations and the locus of collective action.[143]

An IER also carries out its various objectives as a determinant of collective outcomes.[144] Although referred to as a global solution to environmental problems, an environmental regime is designed to solve one specific environmental problem at a time- in other words, it is problem

[138] James Crawford and Penelope Nevill "Relations Between International Courts and Tribunals: The Regime Problem "in Margaret Young (Ed) *Regime Interaction in International Law: Facing Fragmentation* (Cambridge University Press, 2012) at 259.
[139] Ibid.
[140] Scott Barrett "International Environmental Agreements in Scott Barrett (eds) Environment and Statecraft: *The Strategy of Environmental Treaty-Making* (Oxford University Press, 2005) 5.
[141] Daniel Bodansky "The History of the Global Climate Change Regime" in Luterbacher and others (eds) *International Relations and Global Climate Change (*MIT Press, 2001) at 28.
[142] Haas, Keohane, and Levy estimate that more than half of the 140 multilateral environmental treaties adopted since 1921 were concluded after the 1972 United Nations Conference on the Human Environment. See also Institutions for the Earth at 6.
[143] Ramesh Thakur "The United Nations in Global Governance: Rebalancing Organized Multilateralism for Current and Future Challenges" (GA Thematic Debate on UN, 2011) http://www.un.org/en/ga/president/65/initiatives/GlobalGovernance/Thakur_GA_Thematic_Debate_on_UN_in_GG.pdf .
[144] Marc A. Levy and Oran Young "The Study of International Regimes" (1995) 1 European Journal of International Relations 1 at 278.

specific. According to Hisschemoller and Gupta, different environmental problems require different types of environmental regimes and the role that the environmental regime would play would depend on the nature of the environmental problem.[145] Four types of environmental problems were captured by Hisschemoller and Gupta, the first being structured problems where all parties agree on the knowledge (science) and values at stake, requiring coordination efforts of the IER.[146] The second is the moderately structured problem (horizontal) where countries agree on the problem (safeguarding the collective good/commons for example) but have the domestic-interest hurdle to tackle.[147] The third is the vertical angle of the moderately structured problem where there is a conflict of values contrary to a conflict of material interests. These value differences could include national interests, rights, entitlements and even cultures.[148] The fourth and final is the unstructured problem where there is no consensus on the problem, no agreement or certainty among negotiators and no clear agenda on who tackles what.[149] It is important to note here that an environmental problem may fall into any of these categories or may metamorphose from unstructured to structured and vice versa. This would determine how an IER will tackle environmental problems and no single approach can be used for various environmental problems.

Depending on the environmental problem, an IER may undertake procedural functions due to its procedural character, for example, establishing annual phase-out schedules for ozone-depleting substances, in the case of the Montreal Protocol.[150] The IER has a procedural character where its decision making processes are governed by rules of procedure. These rules of procedure govern the functioning of the institutional bodies of the IER and delineates scope of functions and powers of the IER's Agreements amongst others. Procedures in addition to the rules or guidelines of any IER contribute to the effective collaboration amongst Parties.[151] Procedures within the IER can help Parties achieve the regime's objectives. The IER can design procedures that aid members' reporting commitments, settlement of disputes, participation and voting in meetings. Some examples of the procedural functions of the IER includes regular

[145] Matthijs Hisschemoller and Joyeeta Gupta "Environmental Agreements: The Issue of Regime Effectiveness" (1999) 20 Int. Pol. Sci. Rev 2, 151 at 152.
[146] Ibid at 165.
[147] Ibid at 166.
[148] Ibid at 166.
[149] Ibid
[150] Oran R. Young "Effectiveness of International Environmental Regimes: Existing Knowledge, Cutting- Edge Themes, and Research Strategies" (2011) 108 PNAS 50, 19853 at 19855.
[151] Christopher C. Joyner "Rethinking International Environmental Regimes: What Role for Partnership Coalitions" 1 Journal of International Law and International Relations 1-2 at 117.

review of commitments considering the best available science, procedures for identifying and responding to non-compliance, and procedures for facilitating the implementation of the IER's goal.

In addressing environmental problems, IER Agreements and Protocols usually have obligations for Parties to carry out set out in their provisions. These obligations are a mix of substantive and procedural, although the climate regime has more procedural than substantive obligations. For example to tackle climate change and keep global temperature to well below 2^{o}C, Parties to the Paris Agreement are required to submit some specific information at appointed times or at regular intervals in accordance with the Agreements rules. These rules are usually contained in the Annex to the Decision of the Agreement's governing bodies, in this case, the Conference of the Parties Serving as the Meeting of the Parties to the Agreement (CMA).[152]

The IER can also take a managerial approach by overseeing programmatic activities that attempt to manage an environmental problem, for example, even though the Clean Development Mechanism (CDM)[153] executive board supervises the Kyoto Protocol's CDM, the board functions under the authority and guidance and is fully accountable to the Conference of the Parties Serving as the Meeting of the Parties (CMP).[154] The IER's managerial approach to solving environmental problems involves utilising its institutional capacities to overcome social constellations that prevent effective problem solving.[155] The IER managerial approach for solving problems is based on transparency, a clear articulation of the collective goal, attention to and sometimes provision of the state of the science relating to the environmental problem, periodic revisitation of collective problems, creation of opportunities for sharing information, and interacting and allowing for flexibilities to adjust to changing circumstances and the science.[156]

The IER has to juxtapose the fulfilment of its environmental objectives with the participation of its members by engaging with cooperative measures. The UNFCCC, its Kyoto Protocol and the Paris Agreement have clear goals to accomplish in terms of temperature targets. The basis

[152] Decision 3/CMA.1

[153] Article 12 of the Kyoto Protocol defines the CDM through its purpose which is to assist non-Annex 1 parties to achieve sustainable development to contribute to the ultimate objective of the UNFCCC and to assist Annex 1 Parties to comply with their commitments to limiting their quantified emission.

[154] UNFCCC "What is the CDM Executive Board?" https://cdm.unfccc.int/EB/index.html

[155] Helmut Breitmeier *The Legitimacy of International Regimes* (Routledge, London, 1st edn, 2016) at 140

[156] Meinhard Doelle "Assessment of Strengths and Weaknesses" in Daniel Klein and others (eds) *The Paris Agreement on Climate Change: Analysis and Commentary* (Oxford University Press, 2017) at 376.

of the desired temperature is based on science provided by the IPCC's climate science experts and the science is revisited to provide members of the climate regime with the current state of play in terms of global warming, risks associated with it, and proffering information on adaptation and mitigation to limit global warming and encourage sustainability. The UNFCCC through the COP and Meetings of the Parties to its Agreements (CMA) creates the opportunity to share information and Parties can interact with each other to mutually achieve the objectives of the IER. The IER also functions as a coordinator by integrating its values through environmental principles and enhances institutional learning by providing knowledge of the science- in the case of climate change, the IPCC provided climate change data and forecasts. The IER provides a transparent framework where Parties can submit their information which is entered into the IER's database that all countries can access, thereby encouraging accountability and collaboration. Further compliance and implementation measures are built into the fabric of the IER. In some instances, the compliance measures have been a mix of punitive and rewarding and its implementation measures, facilitative in nature. These mechanisms will be discussed in detail in the following chapter.

An IER is also described as a utility modifier because it modifies what sovereign states will ordinarily maximally utilise. The IER can modify utilities where it presents incentives for its members to alter their behaviour by adjusting the cost-benefit ratio. For example, the IER, through the Montreal Protocol, was able to modify utilities by getting countries to stop the production and import of ozone-depleting substances and reduce their concentration in the atmosphere to help protect the earth's ozone layer. The IER provided a stable framework that allowed industries to plan long-term research and innovation, projecting that transitioning to newer, reasonably priced formulations with lower - or no-ozone depleting potential benefited the environment and industry and finally restricted trading chlorofluorocarbons (CFC) to only signatories to the Protocol.

To better include developing countries and make its proposed objective appealing to them, the regime provided incremental funding to help them meet their compliance target and also provided institutional support to help these countries build capacity within their governments to implement phase-out activities and establish regional networks to share learning experiences amongst themselves.[157]

[157] The Conversation "Saving the Ozone Layer: Why the Montreal Protocol Worked?" September 10, 2012 http://theconversation.com/saving-the-ozone-layer-why-the-montreal-protocol-worked-9249 .

The IER can also enmesh states through the launching of programmes capable of promoting her objectives. These programmes may appear uncontroversial and straightforward at the time of their inception. Countries may subscribe to such programmes, but as the regime evolves and these programmes gain traction, Parties will find it difficult to extricate themselves from the mesh and institutionalised activities that they have been woven into.

The IERs are also described as enhancers of cooperation.[158] They are mechanisms that allow participants to achieve positive collective outcomes by alleviating the problems along the way. Gehring, for example, suggests that the primary function of IER systems is to make collectively binding decisions and organise, develop, and stabilise cooperation among their member constituents. [159] Interestingly, these collective outcomes materialise over years and several meetings. For instance, at the inception of tackling climate change concerns, one of the critical issues to deliberate upon was allocating and distributing responsibilities toward emissions reductions. For example, when the Kyoto Protocol was negotiated, it focused exclusively on developed country emissions reductions. This caused dissension as some developed countries felt it was unjust, and developing countries, on the other hand, felt neglected from the entire deliberations. To remedy these tensions, the UNFCCC's COP negotiated another climate agreement- the Paris Agreement, that blurred the lines of differentiation and enhanced cooperation by including developing countries in the mix of climate obligations.

As role definers, IERs define specific roles and allocate them among participants. As negotiations progress, participants may take up more responsibilities as the dynamics of the environmental issue unfolds. Again, in both the Kyoto and Montreal Protocols, Parties all had to fulfil specific obligations deemed outcomes during the negotiations. The IER is also described as a learning facilitator. [160] For example, the IPCC, working closely with the UNFCCC, presents concise information gathered from various climate scientists to UNFCCC Parties. The majority of the UNFCCC members are policymakers who can be educated by these reports to help them make better climate change decisions.

IERs also act as agents of internal realignments. An IER does not only create relations between the various states and the regime as an institution, it also helps to realign the relationships amongst the states to achieve the regime's objectives. Thus, the regime can affect behaviours

[158] Oran Young and Marc A. Levy above n77 at 23.
[159] Thomas Gehring *IERs as Decision Machines* (2nd Ed, Handbook of Global Environmental Politics, Cheltenham, 2012) at 51.
[160] Oran Young and Marc A. Levy above n77 at 24.

by shifting the balance among factions or subgroups within a state which are vying for influence. For example, where a state falls short of IER objectives contained in an IEA, other states can team up within that regime to pressure the erring state to perform. Beyond that, subgroups such as non-governmental agencies, municipalities, and even corporations can pressurise the state to act with the regime's impetus. With the latter, there is a subtle shift in power, where these smaller groups are empowered and contribute to the realisation of the regime's objectives.

In France, for instance, the constitutional court's upholding of a hydraulic fracturing ban was linked to the pressure from environmentalists and opposition socialists.[161] The National Assembly and Senate also passed Law 2011-835 which forbids "exploration and exploitation of liquid or gaseous hydrocarbons through hydraulic fracturing" and enabled the government to discontinue research permits that included projects utilising hydraulic fracturing processes.[162] Although the fracking issue may be revisited in the future, it is vital to acknowledge these distinct groups' impact on influencing the government's decision on environmental objectives. It is also essential to note that the non-state actors present during COP15 and 16 negotiations deliberations took their climate activism to their countries. This was evident in the French environmental protests that became highly politicised and resulted in a legal enactment for climate protection.[163]

In contrast, the New Zealand legislature passed a law to restrict citizen protests relating to offshore oil exploration in April 2013, commonly referred to as the Anadarko Amendment. On the surface, the provisions of the Crown Minerals Act amendment that included a clause to make it illegal to damage or interfere with mining structures, appeared innocuous, however, environmentalists and legal scholars have questioned the Act's intendment and criticized it as undemocratic.[164] Further, in the case of *Greenpeace of New Zealand Inc v. Minister of Energy*

[161] Peggy Hollinger "France to Ban Fracking of Fossil Fuels" (Financial Times, May 12, 2011) https://www.ft.com/content/907fd72c-7c06-11e0-9b16-00144feabdc0 .

[162] Law No. 2011-835 of July 13, 2011 aiming to prohibit the exploration and exploitation of liquid or gaseous hydrocarbon mines by hydraulic fracturing and to repeal the exclusive research permits comprising projects using this technique; Boris Martor France: Evolutions in the Legal Framework for Shale Oil and Gas (March 12, 2014) Shale Gas Information Platform (SHIP) http://www.shale-gas-information-platform.org/de/categories/gesetzgebung/expertenartikel/france-evolutions-in-the-legal-framework-for-shale-oil-and-gas/ .

[163] LOI n° 2010-788 du 12 juillet 2010 portant engagement national pour l'environnement.

[164] Newshub "Govt's Anti-Oil Protest Bill Passes Final Hurdle" 16th April 2013 https://www.newshub.co.nz/politics/govts-antioil-protest-bill-passes-final-hurdle-2013041617

and Resources,[165] the Greenpeace environmentalist group and the indigenous iwi sought a judicial review on the decision of the Minister for Energy to grant Petrobras International a permit, under the Crowns Mineral Act 1991, to undertake petroleum exploration over an area of an offshore basin. The grounds for the review were that the Minister failed to consult adequately with the indigenous people before issuing the consenting right and failure to consider the environmental protection of the seabed and the ecology. The Court, however, held that adequate consultation was taken under the legal provisions from the facts of the case.

Commendably, the Court also highlighted the inadequacy of the environmental assessment and consent procedures for ocean mining activities, finding that an amendment of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 was necessary.[166] On the surface, it may seem that the reverse of what was achieved in France was evident in New Zealand, however upon closer inspection, it would seem that more robust and improved environmental legislation emerged as a result of this case. In this sense, non-state actors such as Greenpeace and the indigenous people influenced better environmental legislation.

Increased environmental awareness and popularity of IERs, mainly the United Nations, have provided green organisations in several countries with the impetus to project their environmental demands according to international environmental objectives. They can argue, for instance, that it would be politically expensive for a government to violate or ignore rules relating to environmental degradation through pollutants. Moreover, they can subtly hint at domestic opposition and warn the government of the dangers of tarnishing its reputation in the international community's eyes for failing to live up to its commitment.[167]

A. The UNFCCC and IPCC

The UNFCCC is a global framework for international cooperation and was mainly established to galvanise countries to combat climate change.[168] Accordingly, the governance architecture of the UNFCCC is more intergovernmental than supranational. Simply put, it operates a more traditional form of international cooperation, where participating states do not confer powers on it to act on its own, rather than a supranational status where some decision-making powers

[165] Greenpeace of New Zealand Inc v Minister of Energy and Resources [2012] NZHC 1422 (22 June 2012, per Gendall J)
[166] Kenneth Palmer "Environmental Management of Oil and Gas Activities in the Exclusive Economic Zone and Continental Shelf of New Zealand" (2013) 31 Journal of Energy and Resources Law 2 at 131.
[167] Oran Young and Marc A. Levy above n77 at 24.
[168] UNFCCC "History of the Convention" https://unfccc.int/process/the-convention/history-of-the-convention#eq-1

can be conferred solely upon it. It is a framework document which identifies two major areas of action on climate change: mitigation and adaptation.[169]

In terms of the UNFCCC's objective, Article 2 provides that the ultimate objective of the Convention and any other legal instruments that the Conference of Parties may adopt is to achieve stabilisation of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[170] While the achievement of this objective is not time-specific, Article 2 provides that the stabilised atmospheric levels should be achieved "within a time frame sufficient to allow ecosystems to adapt naturally to climate change…"[171] It is expected that the timeframe will be informed by timely IPCC reports that detail scientific findings on the current climate system that will feed into the urgency communicated to Parties to reduce emissions during the annual COP.

In order to achieve its ultimate objective Article 3 of the UNFCCC sets out some principles that guide Parties' actions to achieve the UNFCCC's objectives. The principles include: no harm principle to protect the climate system for the benefit of present and future generations,[172] polluter pays principle that urges developed countries to take the lead in climate action,[173] CBDR-RC principles that recognise the specific needs and special circumstances of developing country Parties, the precautionary principle that Parties are to take precautionary measures to anticipate, prevent and minimise the causes of climate change, highlighting that the absence of scientific consensus should not prevent Parties from taking precaution regarding the threats of harm,[174] the sustainable development principle that reinforces that Parties have a right to and should cooperate to promote sustainable development underscoring that any unilateral climate action should not unjustifiably or discriminatorily restrict international trade.[175]

These principles reflect the flexibility and equity considerations that the UNFCCC seeks to achieve. These principles allowed for greater participation amongst members in a non-threatening manner and may be a factor for the staying presence of the UNFCCC. Some of the principles have also been criticised as being an obstacle to firm negotiation outcomes and leaving Parties to determine by themselves, issues such as NDC content and scope, extent of

[169] The United Nations Framework Convention on Climate Change, above n7, See Art. 3 and 4
[170] The United Nations Framework Convention on Climate Change, above n7, Art 2.
[171] Ibid.
[172] The United Nations Framework Convention on Climate Change, above n7, Art 3(1).
[173] Ibid.
[174] The United Nations Framework Convention on Climate Change, above n7, Art 3(3).
[175] The United Nations Framework Convention on Climate Change, above n7, Art 3(4)(5).

financial commitments etc.[176] UNFCCC reports, however suggest that the UNFCCC has contributed to an increased uptake of mitigation policies and strategies and indicate that Parties are transitioning towards low emission, climate-resilient societies and economies, including through enhanced participatory processes.[177] Further, the UNFCCC principles have cemented its legitimation in the sense that the Parties consider them reasonable and acceptable. Although progress is slow, the willingness of Parties to fulfil their NDCs, with the support of a flexible and equitable foundation that the UNFCCC offers, is indicative of IER influence. This is supported by the strand of the expanded regime theory that states that the level of a regime's effectiveness incorporates the willingness or desire of the majority of its members to pursue a desired environmental outcome.

In terms of obligations, the Convention's language of shall is indicative of binding commitments. Article 4 sets out different obligations that apply to all Parties, developed country and Annex 1 Parties, developed country and Annex 2 Parties respectively. Article 4 (1) sets out Parties' commitments with due consideration for CBDR-RC their specific national and regional development priorities, objectives and circumstances. Set out in paragraphs a-j, Parties commit to furnish the COP with national inventories of all GHGs not covered by the Montreal Protocol, publish and update national and regional programmes containing measures to mitigate and facilitate adaptation to climate change, cooperate in the development and transfer of technologies to reduce or prevent GHGs, promote sustainable management and cooperate in preserving GHG sinks and reservoirs, cooperate in climate change adaptation preparation for climate change impacts, consider climate change in the development of social, economic and environmental policies, promote and cooperate in the open and full exchange of relevant scientific, technological, technical and legal information related to climate change and the socio-economic consequences of various response strategies, promote and cooperate in education and training to encourage the widest participation in climate action.[178]

Article 4(2) sets out some obligations for developed countries and Parties included in Annex 1 and these include: adopting national policies and taking measures to mitigate climate change, communicating these policies periodically- first within the first 6 months of the UNFCCC's entry into force and thereafter in accordance with Article 12 of the UNFCCC. For context,

[176] Lukas Hermwille and others "UNFCCC Before and After Paris- What's Necessary for an Effective Climate Regime?" (2017) 17 Climate Policy 2 at 158

[177] UNFCCC "Climate Action and Support Trends" (United Nations Climate Change Secretariat, 2019) https://unfccc.int/sites/default/files/resource/Climate_Action_Support_Trends_2019.pdf .

[178] The United Nations Framework Convention on Climate Change, n7 above, Art 4(1)(a-j)

Article 12 gives a detailed guide on what developed countries and Parties included in Annex 1 are to include in their national communications. Article 12 in accordance with the CBDR principle provides that Parties not listed as a developed country or an Annex 1 country shall deliver their initial communication within 3 years of the UNFCCC entry into force and the least developed countries have the discretion as to when they make their initial communication. When these initial and subsequent communications are made, Article 12(10) provides that the Secretariat shall make the communications publicly available. This provision enables transparency and allows Parties keep track of the progress other countries are making which could aid ambition and deter complacency.

Article 4(2)(c) also provides that best available scientific knowledge should be taken into consideration when calculating emissions by source and removals by sinks of GHG and the COP is to agree on the methodologies for the calculations of those emissions. Article 4(2)(e) obliges Parties to cooperate in coordinating as appropriate, relevant economic and administrative instruments that can achieve the ultimate objective of the Convention. Another important obligation in Article 4 is the financial obligation of developed country Parties toward developing country Parties to enable the latter comply with their obligations under Article 12 regarding national communications. Financial obligations include assisting developing countries that are particularly vulnerable to climate change and financial resources including technology transfer.[179] Articles 5 and 6 also oblige Parties to support and develop programmes aimed at developing research, promoting education, training and public awareness to fulfil their commitments under Article 4.

These articles primarily constitute the combined purpose and objectives of the UNFCCC as well as obligations of conduct for the Parties. The framing of the UNFCCC objective has now become a consensual objective globally and guides action on climate change beyond the state level. The mix of commitments/contributions required of Parties in the UNFCCC document are framed as obligations of result and/or as obligations of conduct and are guided by the principles outlined in Article 3. Read together, Article 3 and 4 of the UNFCCC seek to achieve optimal climate action through flexibility and equity. This is observed through the provisions that refer to national circumstances when Parties carry out their obligations, flexibility in reporting obligations and equity in recognising the circumstances of least developing countries,

[179] The United Nations Framework Convention on Climate Change, above n7, Art 4(3), (4).

small island countries and vulnerable countries and the need for support from developed countries.

The COP is the UNFCCC's supreme decision-making body and has the authority to: examine the Convention's obligations and institutional arrangements, supervise its implementation, and develop amendments and Protocols.[180] In addition, it provides a permanent forum for discussion and negotiations amongst[181] Parties and permits environmental groups and industries to attend as observers to offer inputs and potentially exert pressure. However, the COP has no express regulatory powers, and even though it has decision-making authority that makes voting rules vital, this has not been utilised as countries have yet to reach an agreement on voting rules.

The Conference of Parties serving as the meeting of the Parties to the Paris Agreement (CMA) oversees the implementation of the Paris Agreement and takes decisions to promote its effective implementation.[182] Every country that is a party to the Paris Agreement is represented at the CMA and countries that are not Parties will participate as observers. The COP, CMP and CMA's work is supported by the Bureau which provides advice and guidance on the ongoing work of all three governing bodies and organises the sessions and the Secretariat's operations. The Bureau also holds its meetings on a regular basis during COPs and biannually at other times.[183]

The UNFCCC has a secretariat that provides general administrative and policy support to the COP and its subsidiary bodies, such as the Subsidiary Body for Scientific and Technological Advice (SBSTA) composed of government experts and the Subsidiary Body for Implementation (SBI).[184] As one of the two permanent subsidiary bodies to the Convention, SBSTA provides timely information and advice on scientific and technological matters relating to the three governing bodies. The advice covers impacts, vulnerability and adaptation to

[180] The United Nations Framework Convention on Climate Change, above n7, Art 7.
[181] Daniel Bodansky and Lavanya Rajamani "The Evolution and Governance Architecture of the Climate Change Regime" in D. Sprinz and U. Luterbacher (eds) *International Relations and Global Climate Change* (MIT Press, 2013) at 44.
[182] UNFCCC "What are Governing, Process Management, Subsidiary, Constituted and Concluded Bodies" https://unfccc.int/process-and-meetings/bodies/the-big-picture/what-are-governing-process-management-subsidiary-constituted-and-concluded-bodies
[183] UNFCCC "Bureau of the COP, CMP, and CMA" https://unfccc.int/process/bodies/supreme-bodies/bureau-of-the-cop-cmp-and-cma#eq-4
[184] Established by UNFCCC Art. 9 ; it provides assessments of scientific knowledge, reviews scientific/technical aspects of national reports and effects of implementation measures; Established by UNFCCC Art. 10; it reviews policy aspects of national reports; assists COP in assessing aggregated effect of implementation measures.

climate change, promoting the development and transfer of environmentally sound technologies, conducts technical work to improve guidelines for preparing and reviewing GHG emission inventories from Annex 1 Parties and promotes collaboration in the research and systematic observation of the climate system. SBI's agenda on the other hand is moulded around the key building blocks of the implementation of the UNFCCC's treaties and instruments, such as: transparency, finance, technology, mitigation, adaptation and capacity-building and targeted towards enhancing Parties' ambition in these aspects.[185]

In terms of emissions reductions targets, the SBI launched two processes: the international assessment and review process (IAR) which aims to promote effort comparability among all developed country Parties with regard to their quantified economy wide emission limitation and reduction targets and the international consultations and analysis (ICA) process that aims to increase the transparency of mitigation actions, their effects and capacity building needs in a manner that is non-intrusive, non-punitive and respectful of national sovereignty.[186] SBI is also strengthening the capacity of developing countries to assess their implementation of UNFCCC requirement by providing guidance to the consultative group of experts (CGE) on non-Annex 1 national communications which feeds back to capacity building sessions with non-Annex 1 countries. The SBI is involved in several activities in the area of mitigation and adaptation and capacity-building.[187]

The Secretariat also provides technical expertise and organisational support to the UNFCCC negotiations proper. It facilitates the flow of authoritative information on the implementation of the three governing bodies. It also assists in the analysis and review of party-reported climate change information and maintains the registry for the NDCs.[188] Through its website and other social media channels, the Secretariat strives to inform all stakeholders on the negotiating process and climate action globally. After UNFCCC's adoption, the Secretariat organised the UNFCCC and the Kyoto Protocol's review processes, serving as a clearinghouse for information.[189]

[185] UNFCCC "Subsidiary Body for Implementation (SBI)" https://unfccc.int/process/bodies/subsidiary-bodies/sbi
[186] Ibid
[187] Some of these activities include the Technical Examination Process (TEP) for adaptation and mitigation that aims to identify concrete opportunities for strengthening resilience, exploring high potential mitigation policies and technologies that have sustainable development benefits.
[188] UNFCCC "About the Secretariat" https://unfccc.int/about-us/about-the-secretariat
[189] Daniel Bodansky and Lavanya Rajamani n181 above at 45.

In terms of finances, the COP provides guidance to the GEF, an entity entrusted with the financial mechanism of the UNFCCC, on policies, programme priorities and eligibility criteria for funding.[190] In other words, it serves as an operating entity of the UNFCCC's financial mechanism and supports at the national level, self-assessment of countries' national capacity.[191] With the input of the GEF, countries are provided with the opportunity to articulate their capacity needs in terms of implementing the UNFCCC and its protocols and agreements. The GCF is also an operating entity of the financial mechanism of the UNFCCC and is accountable to and is guided by the COP. The Fund primarily supports climate change projects, programmes and policies and other activities of developing country Parties.[192] The GCF serves the Paris Agreement and alongside other operating entities of the UNFCCC's financial mechanism, should aim to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support for developing countries, particularly, LDCs and SIDS in the context of their national climate strategies and plans.[193]

The UNFCCC has other constituted bodies such as the Adaptation Committee (AC) that promotes the implementation of enhanced adaptation action in a coherent manner by providing technical support and guidance to the Parties, sharing relevant information, good practices and knowledge. The AC also serves the Paris Agreement.[194] The Climate Technology Centre and Network (CTCN) is another constituted body that promotes accelerated transfer of climate technologies for low carbon, GHG emissions reductions and climate resilience at the request of developing countries.[195] Similar to the CTCN, the Technology Executive Committee (TEC) facilitates the implementation of enhanced actions on technology and transfer to support climate change mitigation and adaptation and achieve implementation of the UNFCCC. Both the TEC and the CTCN are subsumed under the technology mechanism established by Decision1/CP.16.[196]

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[190] UNFCCC "Global Environment Facility" https://unfccc.int/topics/climate-finance/funds-entities-bodies/global-environment-facility#:~:text=The%20Global%20Environment%20Facility%20(GEF,contained%20in%20decision%2012%2FCP; This function is pursuant to The United Nations Framework Convention on Climate Change, above n7, Art 11.

[191] Oliver C. Ruppel "Intersections of Law and Cooperative Global Climate Governance- Challenges in the Anthropocene" in Oliver C. Ruppel (ed) *Climate Change: International Law and Global Governance: Volume II: Policy, Diplomacy and Governance in a Changing Environment* (Nomos 2013) at 50.

[192] UNFCCC "Green Climate Fund" https://unfccc.int/process/bodies/funds-and-financial-entities/green-climate-fund

[193] Ibid.

[194] UNFCCC "Adaptation Committee" https://unfccc.int/Adaptation-Committee

[195] UNCTCN "About the Climate Technology Centre and Network" https://www.ctc-n.org/about-ctcn

[196] UNFCCC Report of the Conference of the Parties on its Sixteenth Session, held in Cancun from 29 November to 10 December 2010" FCCC/CP/2010/7/Add.1

The Compliance Committee of the Kyoto Protocol and the Executive Board of the CDM (CDM EB) are also constituted bodies of the UNFCCC. The Consultative Group of Experts (CGE) is another significant constituted body which has its mandate extended to 2026 and supports the implementation of the Enhanced Transparency Framework (ETF) under Article 13 of the Paris Agreement.[197] The significance of the ETF will be discussed further along in the chapter. The CGE also assists developing countries prepare their biennial transparency reports by providing technical advice and support.[198] It is important to note that there are several subdivisions in the UNFCCC Secretariat that enables it to carry out its purpose but the scope of the thesis will not permit an exhaustive description of these subdivisions.[199]

The UNFCCC is also described as an umbrella treaty that contemplates future treaties to specify the means of emissions reduction.[200] While it does not specifically mention target areas, Article 17 of the UNFCCC provides that the COP may adopt protocols to the Convention at any ordinary session.[201] This gives room for the UNFCCC to potentially tackle future environmental issue areas that pertain to climate change. As the Convention does not specify voting rules for the adoption of protocols, the general voting rules of the COP apply.[202] This would mean that any future protocols that pertain to climate change mitigation and adaptation can be agreed on by consensus of Parties to the Convention. The flexibility provided by Article 17.2 allows for the ease of adopting Protocols related to the key areas, which the UNFCCC aims to address. The UNFCCC provides a framework comprising objectives, basic principles, obligations, procedures and institutions[203] that countries must achieve, according to the relevant provisions of the Convention.[204] It creates avenues to exchange best practices and approaches for working with local and indigenous knowledge. In addition, it facilitates the exchange of information on initiatives addressing climate change (national and international) between and among indigenous peoples of the world, Parties and other stakeholders. This aims to strengthen

[197] The CGE was formerly known as Consultation Group of Experts on National Communications from Parties not included in Annex 1 to the Convention.; UNFCCC "Consultative Group of Experts (CGE) https://unfccc.int/CGE
[198] Ibid.
[199] See generally UNFCC "Brief Overview of the UNFCCC Secretariat Structure, its Divisions and Subdivisions" https://unfccc.int/sites/default/files/resource/structure_overview_20200709.pdf
[200] Samara Spence "Three Structural Changes for a New System of International Climate Change Mitigation Agreements Based on the WTO Model" (2011) 44 V and J Transnat'l L 1415 at 1427.
[201] United Nations Framework Convention on Climate Change, above n7, art 17.
[202] UNFCCC "United Nations Framework Convention on Climate Change Handbook" (UNFCCC Secretariat, 2006) at 71.
[203] Nikhil Ullal "A Successor for the Kyoto Protocol – Challenges and Options" (2013) 17 NZ J Env L 81 at 86.
[204] United Nations Framework Convention on Climate Change, above n7, Art 2.

the linkages to knowledge, technologies, practices and efforts of local communities and indigenous peoples.[205]

The UNFCCC strengthens linkages by supporting national and regional efforts to build synergies between local and indigenous knowledge and the science that informs climate change decision-making. In the same way, it enables the integration of indigenous peoples' diverse knowledge systems, practices, innovations, experiences and perspectives into relevant climate change-related decisions and interventions, actions, programs and policies. The UNFCCC also helps build capacity to facilitate direct engagement and participation within the UNFCCC processes, including implementing the Paris Agreement to promote inclusivity, transparency of decision-making and actions. One can, however, question the continued expending of diplomatic energies on a multilateral climate change treaty without an agreement on a conceptual foundation for action and an alignment with a reframed issue and appropriate solution.[206] The above would only create an unlikelihood of reward and may cause a distraction at a stage when there is no time to waste.[207] Tomlinson disagrees with this notion and states that it would be wrong for the international community to give up on the UNFCCC to pursue action elsewhere.[208] Instead, he asserts that the UNFCCC should act as the overarching institution that provides the primary forum for climate change discussion.[209]

Although it is largely undisputed that the UNFCCC has successfully established a legal framework where negotiations on detailed commitments, financial and institutional arrangements are conducted within, different commentators either downplay or extol the regime as the regime develops.[210] Gardiner, for instance, alludes that countries have the primary responsibility for dealing with environmental problems but still emphasises that the UN is still beneficial.[211] Gardiner forewarns that despite the UN's shortcomings, it may be near impossible for governments to welcome or accede to another supranational organisation with

[205] UNFCCC "Open Multi-Stakeholder Dialogue on the Operationalization of the Local Communities and Indigenous People's Platforms" (16 May, 2017) file:///H:/Chapter%202/UNFCCC%20Functions.pdf
[206] Shirley V. Scott "Does the UNFCCC Fulfil the Functions Required of a Framework Convention? Why Abandoning the United Nations Framework Convention on Climate Change Might Constitute a Long Overdue Step Forward" (2015) 27 Journal of Environmental Law 69 at 89
[207] Ibid.
[208] Luke Tomlinson *Procedural Justice in the United Nations Framework Convention on Climate Change: Negotiating Fairness* (Springer, Switzerland, 2015) at 197.
[209] Ibid.
[210] Shirley V. Scott above n206 at 76.
[211] Richard N. Gardiner "The Role of the UN in Environmental Problems" (1972) 26 International Institutions and the Environmental Crisis 2 at 237.

legislative and enforcement actions.[212] Gardiner also points to the risk of the UN's role being undermined by member states' unwillingness to volunteer resources toward national and global environmental efforts, unwillingness to accept limitations to resource exploitation and finally, unwillingness and unpreparedness to accept the economic and political costs of self-denial that adhering to the regime presents.[213] Tomlinson is, however, optimistic that the UNFCCC represents the ideal form of cooperation and is likely to be the most effective and fairest.[214]

The IPCC, on the other hand, the IPCC is the most important source of scientific, technical and socioeconomic information on climate change for UNFCCC. It plays a central role in preparing regular assessment reports of published scientific information on climate change and in communicating these assessments to the Convention. It provides policymakers with regular scientific assessments on climate change, its implication and potential future risks.[215] The IPCC also presents mitigation and adaptation outcomes. The IPCC links science with policy but solely depends on the scientific community's research results as it does not undertake any independent research. A comprehensive report from the various scientific reports is prepared and delivered to the Meeting of Parties. These reports are produced cyclically within six and seven-year intervals. The IPCC provides the best scientific knowledge for decision making and helps the scientific community in many ways, helping the community produce easily comparable research results through its standardising scenarios contained in its Special Report on Emissions Scenario (SRES).[216] The IPCC also acts as an intermediary between the scientific community and the UNFCCC regime. It is respected and acknowledged as the ultimate authority for providing the best possible and relevant assessments of current scientific knowledge capable of influencing climate change policymaking.[217]

III. Nature, Structure and Functions of International Environmental Agreements

An IEA sometimes referred to as treaties, protocols, conventions or covenants, can be defined as an agreement that attempts to regulate sovereign states' behaviours towards global commons. In this sense, an IEA can also be referred to as an institution. IEAs cannot be studied in an

[212] Ibid at 238.
[213] Ibid.
[214] Luke Tomlinson above n208 at 199.
[215] IPCC "The Intergovernmental Panel on Climate Change" https://www.ipcc.ch/#:~:text=The%20IPCC%20was%20created%20to,of%20knowledge%20on%20climate%20change.
[216] Ibid.
[217] For more information on the interaction of the UNFCCC and the IPCCC see UNEP "Working Relationship between the United Nations Framework Convention On Climate Change And The Intergovernmental Panel on Climate Change" https://www.cbd.int/doc/meetings/cop/cop-11/information/cop-11-inf-14-en.doc

inflexible, restricted methodological context but must be placed in a broader social, political and economic context to be understood and analysed in a meaningful way.[218]

IEAs are also described as specific remedies to specific trans-border externalities.[219] In turn, the IEAs establish regimes that deal with specific environmental issues, such as whaling, conservation of biodiversity, and more specific to this research- climate change. IEAs are negotiated upon, translated to writing and bind only countries that have consented to be bound by them.[220] One of the essential features of an IEA, according to Barrett, is that it must be self-enforcing.[221] Parties must be willing to enter a global agreement as no country can be forced to sign an agreement and is free to withdraw from the agreement when they please subject to compliance with any exit process.

The ancestry of IEAs goes back a long way, for example, the water agreement was signed by Emperor Charlemagne in the year 805, with others following in the years 1812, 1818 and 1902. IEAs have grown since 1945, coinciding with modern multilateral institutions' emergence, the foremost being the UN. It is suggested that a host of multilateral environmental agreements (MEAs) derive from the UN, which kick-started the international process as the sole site of climate governance.[222]

It has never been an easy task to manage global commons through institutions such as IEAs.[223] This is because nations have to decide whether they want to adopt an IEA and the degree to which they want to participate if they adopt that agreement. The asymmetries of nations regarding political, economic, legal, and similar considerations can explain countries' hesitation to join IEAs and execute the agreements' objectives. Put differently, a developing country with economic struggles will naturally be averse to curtailing resource exploitation, as opposed to a developed country that has multiple means of economic revenue outside fossil fuels. To address such heterogeneity, an IEA must be flexible to accommodate its members' situations.

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[218] Gabriela Kutting *Society and International Relations : Towards More Effective International Agreements* (Routledge, New York, 2000) at 138.
[219] Scott Barrett above n140 at 47.
[220] Ibid at 2.
[221] Scott Barrett "Self-Enforcing International Environmental Agreements" (1994) 46 Oxford Economic Papers at 878.
[222] Finn Cahill-Webb "International Environmental Governance and the Paris Agreement on Climate Change: The Adoption of the 'Pledge and Review' Governance Approach" (Working Paper, Institute for International Political Economy Berlin, Berlin School of Economics and Law, No. 99/2018) at 23.
[223] Yulia Pavlova and Aart De Zeeuw "Asymmetries in International Environmental Agreements" (2012) 18 Environmental and Development Economics at 51.

IEAs are formal in nature and can only obtain the force of law through formal procedures such as adoption and ratification.[224] They are also an excellent example of institutionalised inter-governmental cooperation to address specific environmental issues.[225] As a problem-specific institutional arrangement, an IEA is expected to 'wind up' when its desired objectives are met. For climate change issues, IEAs constitute more of a process comprising various mechanisms that require members' consensus, for one part, and the governments' political will to drive the process, for the other part.[226]

Sometimes, IEAs tell Parties precisely what they are supposed to do and when to do it, and at other times finer details that are to be decided later are discussed at regularly scheduled meetings, commonly referred to as the CMP/CMA or the general COP.[227] It is important to note that IEAs may either be hard or soft or a mix of both. An IEA becomes hard, especially when it is ratified, as Parties to the agreement become bound by the agreement's objectives and provisions. It is soft where the obligations recommend rather than mandate the Parties to fulfil their obligations and allow Parties to exercise discretionary measures to meet a specific environmental goal.[228] This feature is what scholars refer to as binding or non-binding agreements. IEAs are neither standalone nor imbued with supranational authority and require states' efforts, which are Parties to the agreement and other actors that include NGOs, the media, environmental scholars, and pundits.[229]

With the increasing complexity and interconnectivity of global environmental challenges, the structure of IEAs have undergone several changes between 1857 to date.[230] These agreements were majorly non-related, fragmented and had no common themes. However, in 1972, countries converged to identify and address global environmental issues at the first international intergovernmental conference organised by the UN Conference of the Human Environment (UNCHR), the outcome of which was the Stockholm Declaration. Not only did the Stockholm Declaration set the stage for further development of principles of international law, but the Conference also heralded the emergence of NGOs, and private sector engagement,

[224] Scott Barrett n140 above at 22.
[225] Bharat H. Desai *Multilateral Environmental Agreements : Legal Status of the Secretariats* (Cambridge University Press, New York, 2010) at 60.
[226] Scott Barrett above n140 at 29.
[227] Ibid
[228] Scott Barrett above n140 at 70.
[229] Ibid at 96.
[230] Rakhyun E. Kim "The Emergent Network Structure of the Multilateral Environmental Agreement System" (2015) 23 Global Environmental Change 5 at 988.

as concerned participants in the discussion of international environmental issues.[231] This is notable because of the tendency to disassociate non-state actors from IEA emergence or structure.

The Declaration also laid the foundation for the subsequent acceptance of the concept of sustainable development that governments confirmed to be an overarching policy at the Rio Conference on Environment and Development twenty years later.[232] Within the 20 years leading to 1992, there were over 1100 IEAs. Separate agreements addressed specific problems, and each had its separate system of monitoring and reporting, secretariat, and often, its financing facility to assist countries in implementing the IEA. By 1993, it was observed that there was "treaty congestion", and the system needed to become more efficient.[233]

At this time, the United Nations Environment Program (UNEP) was intended and had since its creation in 1972, been the leading environmental authority in the United Nations System".[234] UNEP had attempted to combine robust environmental standards and practices while guaranteeing compliance with them, but it encountered challenges,[235] mainly due to its organisational structure and lack of proper funding,[236] which led to several restructuring attempts.

With the evolution of modern environmental law, scholars suggest that several multilateral agreements went through the process of defragmentation.[237] The concept of a framework agreement emerged that was supplemented by one or more Protocols to address specific problems, such that if a state opted to become party to the framework agreement, it was strongly encouraged to join one or more of the Protocols attached to it.[238] Since 1992, significant international environmental law and policy developments have emphasised the strengthening of IEA provisions and their implementation and compliance mechanisms. Also, few

[231] Stockholm Declaration of the United Nations Conference on the Human Environment, Report of the United Nations Conference on the Human Environment, U.N. Doc. A/ CONF.48/14/Rev.1 (1973), p. 3; U.N. Doc. A/CONF.48/14 (1972), pp. 2-65. and Corr. 1.
[232] Edith B. Weiss "The Evolution of International Environmental Law" (2011) 54 Japanese Y.B. Intl. L at 5.
[233] Edith B. Weiss "International Environmental Law: Contemporary Issues and the Emergence of a New World Order" (1993) 81 Georgetown Law Journal 3 at 675-710.
[234] UNEP "United Nations Environmental Program" https://www.un.org/youthenvoy/2013/08/unep-united-nations-environment-programme/ .
[235] See Bharat Desai *International Environmental Governance: Towards UNEPO* (Brill, 2014) International Environmental Law series.
[236] Bharat H Desai "UNEP: A Global Environmental Authority?" (2006) 36 Env. Policy and Law 3 at 140.
[237] See Daniel Bodansky and Others "International Environmental Law: Mapping The Field" In Daniel Bodansky and Others (eds) *The Oxford Handbook of International Environmental Law* (Oxford University Press, New York, 2007).
[238] Edith B. Weiss above n232 at 7.

multilateral agreements were concluded at the time, and there was a significant delay in IEA negotiation and adoption processes between 2002 and 2005, a trend attributed to 'negotiation fatigue'.[239]

In terms of the IEA structure, scholars such as Kim have stated that the network structure of a multilateral environmental agreement is suggestive of a multifaceted, adaptive and polycentric system of law and governance.[240] Kim adds that the architecture reveals a complex system consisting of a network of norms and institutions with a hierarchical and modular organisation that renders it neither a fragmented system nor a completely connected unity.[241] Liu and Middleton, however, argue that IEAs have been fragmented, causing implementation challenges due to disconnects and inconsistencies between regimes, creating inefficiencies, duplications and overlapping norms.[242]

Some scholars assess the nature, structure and functions of an IEA through the lens of fragmentation. While some scholars believe that fragmentation affects an IEA's effectiveness, others do not. For example, Liu and Middleton believe that the fragmentation of four related agreements, namely: the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, the Stockholm Convention on Persistent Organic Pollutants (POPs), and the Montreal Protocol on Substances that Deplete the Ozone Layer, may have failed to achieve their objectives. Trachtman offers a contrary view stating that fragmentation is not necessarily a problem, where coordination among related regimes is not required. Even where coordination is required, Trachtman suggests that fragmentation occurs mainly at the inception stage. However, as the frequency, intensity, and accumulation of instances of cooperation increase, it is expected that economies of scale and scope, and network externalities, arising from several sources would enable coherence.[243]

A standard IEA's content structure contains a preamble where necessary references are made to previous and related agreements. It also encapsulates the expressed concerns of the Parties.

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[239] Donald K Anton "Treaty Congestion in Contemporary International Environmental Law" In Shawkat Alam and others (eds) (Routledge Handbook of International Environmental Law, Routledge, London,2012).
[240] Rakhyun E. Kim above n230 at 988.
[241] Ibid.
[242] Ning Liu and Carl Middleton "Regional Clustering of Chemicals and Waste Multilateral Environmental Agreements to Improve Enforcement" (2017) 17 Int. Environ Agreements at 899.
[243] Joel P. Trachtman "Fragmentation and Coherence in International Law" (August 12 2011) 2 https://ssrn.com/abstract=1908862 .

The following section usually contains a definition of technical terms followed by the agreement's objectives specifying the obligations or basic provisions that Parties 'must' satisfy, in hard agreements or 'encouraged' to fulfil, in soft agreements. The treaty's depository is usually described in the Agreement alongside prescription of rules and procedures for amendments and reservations, requirements for signature, ratification, entry into force and withdrawal.

Within many IEAs, the dates for termination, renewal and conference of parties meeting are indicated. In addition, provisions relating to monitoring, reporting, evaluation and verification of data and compliance are contained in many IEAs. Although several IEAs lack enforcement mechanisms, a few arguably contain provisions catering to technical or financial assistance.[244] The concluding part of an IEA usually indicates the place and time the agreement was adopted.

The following section outlines the various parameters used to evaluate the effectiveness of IEAs and IERs. These parameters will be used to assess the Paris Agreement's influence in varying actors' behaviour toward climate action.

IV. Parameters for Evaluating the Influence of an IEA

It is challenging to arrive at any simple conclusions about the hierarchical importance of the determinants of collective environmental outcomes in specific situations because of the nature of their complex, interactive relationships among institutions, ideas and material conditions.[245] Put differently, because various scholars have different views of an effective IEA, it is challenging to establish a hierarchy of importance amongst these perceptions. There have also been very few regimes that succeeded in providing a quick and decisive solution to the problem that motivated its creation. The more complex the environmental problem is, the longer it takes to solve it, and quite often, an environmental problem is never solved completely. The parameters for an effective regime discussed below are not laid out in order of importance.

A. Problem Structure and Institutional Design

According to Underdal, an institution's performance depends on its problem structure and design.[246] Some environmental problems are more challenging to solve than others, for

[244] Christina Voigt 'The Compliance and Implementation Mechanism of the Paris Agreement' (2016) 25 RECIEL 2 at 163.
[245] Marc A. Levy and Oran Young above n144 at 251.
[246] See Arild Underdal 'One Question, Two Answers' Edward L. Miles and Others (eds) *Environmental Regime Effectiveness: Confronting Theory with Evidence* (MIT Press, Cambridge, 2006).

example, climate change issues. Tackling climate change through emissions reductions may prove particularly daunting. Underdal elucidates, stating that complex environmental problems: (i) are "long-term policy problems with time lags between policy measures … and effects," (ii) "are embedded in very complex systems" clouded by uncertainties, and (iii) "involve global collective goods" not subject to single best effort solutions.[247]

A regime's influence may depend on interactions between institutional design elements and problem structure variables that serve as conditioning factors.[248] The way an IER or IEA presents or describes an environmental problem, its institutional capacity in terms of the strategies and approaches it presents to its members can determine how the regime's members will respond to the environmental problem. Mitchell puts it more succinctly, "the nature of problems and the ways states perceive and define them, influence what behavioural and environmental goals they establish in international institutions".[249] While the preceding opinions have merit, it is submitted that the problem structure goes beyond the problem itself and extends to how the environmental regime has structured that problem and presented it to its members. It is the presentation that potentially determines how members of that regime respond.

The institutional design, on the other hand, speaks to the choice of rules for collective decision-making, strategies and mechanisms the regime has incorporated to alter members' behaviour toward addressing an environmental problem. The institutional design comprises mechanisms, structures and programmes that can enable members maximum cooperation. The design of a regime's agreement includes its wordings, strength of goal and objectives, and how it addresses its members' diversity.

An IER's design structure is ineffective where it cannot record, detect or measure significant improvement in the time allocated to resolving the environmental problem. Regarding climate change, for example, it may be challenging to measure significant improvement in the environment even with aggressive emissions reduction efforts, particularly within the five-year

[247] Arild Underdal "Complexity and Challenges of Long-Term Environmental Governance" (2010) 20 Global Environmental Change pps 386-393
[248] Ronald B. Mitchell 'Problem Structure, Institutional Design, and the Relative Effectiveness of International Environmental Agreements' (2006) 3 Global Env Politics 3 at 73.
[249] Ibid at 78.

commitment period assessments. Also, scientists opine that the results of emissions reductions may not be visible for the next century.[250]

It is important to consider the Monitoring, Reporting and Verification (MRV) system of the IER. The MRV of the climate regime is crucial for measuring countries' actual performance through the implementation of NDCs, for example. Through the data, the MRV system can compare implementation efforts and results across countries. The system can also compare different states' policy designs and instruments, aggregating the sum of countries' progress towards global climate protection objectives, facilitating cross country connections (in terms of carbon trade mechanisms), and fostering adaptive updating of policies and MRV methods over time.[251]

Where an IEA contains provisions for independent expert supervision, designed in such a way that it is neither invasive nor overbearing, it has the potential of fostering participation and influencing states' climate action. States may also become motivated to perform better because of the IERs independent MRV system that monitors countries and verifies members emissions reduction reports and implementation efforts. It can be argued that such mechanisms infringe on state sovereignty, however, where such MRV systems are unobtrusive and collaborative, states will be willing to cooperate.

The problem structure of a regime and its institutional design are closely associated. The interactions between institutional design elements and variables of the problem structure determine an environmental regime's influence on its members. There is also scholarly consensus that the design of an IER determines the level of cooperation.[252] Therefore, an IERs design is vital to the functions and outcomes it produces in any given issue area.[253]

B. Legality and Legal Bindingness

The international law principle - 'pacta sunt servanda' that agreements must be kept presupposes that treaties are binding on Parties and must be performed by them in good faith.

[250] Thomas Lukas Frolicher and others "Continued Global Warming after CO2 Emissions Stoppage" (2014) 4 Nature Climate Change 44; see also Thomas L. Frölicher and Fortunat Joos "Reversible and Irreversible Impacts of Greenhouse Gas Emissions in Multi-Century Projections with The NCAR Global Coupled Carbon Cycle-Climate Model" (2010) 35 Climate Dynamics 7-8 at 1457.

[251] Jonathan B. Weiner "Towards an Effective System of Monitoring, Reporting and Verification" in Scott Barrett and Others (eds) *Towards a Workable and Effective Climate Regime* (CEPR Press, UK, 2015) pps 187-190.

[252] Arild Underdal above n246 at 35; Ronald B. Mitchell "Regime Design Matters: Intentional Oil Pollution and Treaty Compliance" (1994) 48 International Organisation 3 at 1 .

[253] Amanda M. Rosen "The Wrong Solution at the Right Time: The Failure of the Kyoto Protocol on Climate Change" 43 Politics and Policy 1 at 33.

Based on this principle, states acknowledge that an agreement's legal character is significant.[254] Speth, for instance, suggested that the problem with IEAs is not weak enforcement or compliance but that the treaties are weak in themselves in terms of binding countries to act.[255] He argued that irrespective of IEA's ambitious goals, lack of clear requirements, targets, and timetables make it easy for governments to slight these agreements.[256] So, where an IEA does not expressly compel a state to perform or refrain from specific actions, it can be perceived to lack the influence required to induce members' compliance with the IEA objectives.

It is, however, common to find within IEAs, provisions that do not necessarily create a legal obligation. Generally, there is a combination of hard, soft and non-law in the provisions of an agreement.[257] Therefore, it is essential to distinguish an instrument's legal form from its provisions capable of creating legal obligations. The former entails examining the instrument and whether it is governed by international law, whereas the latter examines the strength of the instrument's language, for example, "shall" or "should".

When considering the legal form of IEAs, Kim and Bosselman agree with Kelsen's monist theory perspective that there is a grundnorm or overarching authority from which all other laws derive and flow.[258] They argue that IEAs are not subjected to an overarching authority that can unify numerous treaties and organisations.[259] Because there is no overarching authority, there is an absence of functional checks and balances that can oversee a potential alignment. These scholars reason that if a grundnorm for regulating related treaties exist, countries cannot cherry-pick which treaty they will adopt or ignore. This argument is inapplicable to the climate change regime because although the UNFCCC is the overarching framework, members of the regime can adopt whatever subsidiary Protocol or Agreement they choose.

There is a general conception that agreements that are legally binding foster compliance.[260] However, other scholars argue that even though legal bindingness promotes compliance, the

[254] Daniel Bodansky "Legally Binding versus Non-Legally Binding Instruments" in Scott Barrett and Others (eds) *Towards a Workable and Effective Climate Regime* (CEPR Press, UK, 2015) at 158.
[255] James Gustave Speth *Red Sky at Morning* (Yale University Press, New Haven, United States, 2005) at 97.
[256] Ibid.
[257] Brian J. Preston "The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part 1) (2020) 33 Journal of Environmental Law at 4.
[258] Rakhyun E Kim and Klaus Bosselmann "International Environmental Law in the Anthropocene: Towards a Purposive System of Multilateral Environmental Agreements (2013) 2 Transnational Environmental Law 2 at 303.
[259] Ibid at 303.
[260] Edith B. Weiss "International Compliance with Non-Binding Accords" (1997) 29 Studies in Transnational Legal Policy at 1.

positive effects of compliance are significantly overshadowed by the adverse effects of non-participation or ambition.[261] This argument dispels the myth that binding agreements are always preferable to non-binding agreements and that countries comply with binding agreements better than non-binding ones. For example, with climate change, it is argued that states are more amenable to negotiating soft law instruments which provide flexibility and are more adaptive to changing conditions.[262]

The bindingness parameter is beneficial for assessing the Paris Agreement's influence with the understanding that the Agreement is a mix of soft and hard law. It is also essential to signal that legal bindingness is different from enforcement. Legal bindingness speaks more to compliance and participation, and it is within these considerations that the Paris Agreement's influence should be examined.

C. Implementation

Implementation of international agreements refers to states' domestic actions that give effect to the agreement.[263] These actions are evidenced by the adoption and ratification of specific international agreements. It can also include judicial pronouncements based on specific provisions in the agreement, where the provisions are at par with domestic law. In the environment context, implementation includes creating rules and regulations to deter actions that constitute environmental harm. States have environmental regulatory agencies that create rules, regulate the utilisation of environmental resources and manage environmental behaviours through sanctions. However, environmental regulatory failures are not uncommon.[264]

The domestic implementation of an IEA may point to IER influence. Where a state implements IEA objectives, there is an inference that the IER has influenced the state's actions. However, it should not be assumed that an enacted domestic law that mirrors IEA objectives means that that the IER influenced the enactment as it could be merely coincidental. Such coincidences are, however, rare, especially in the environmental space. It is rare because the IER institutional

[261] Daniel Bodansky n254 above at 160.
[262] Edith B Weiss "Understanding Compliance with International Environmental Agreements: The Bakers Dozen Myths" (1998) 32 University of Richmond Law Review at 1568.
[263] Alistair Rieu-Clarke and Josefin Gooch "Implementing Water Agreements" in Paul Martin and Amanda Kennedy (eds) Implementing Environmental Law (Edward Elgar Publishing, Cheltenham, 2015) at 159.
[264] Grant Pink and Robyn Bartel "Regulators Networks: Collaborative Agency Approaches to the Implementation and Enforcement of International Law" in Paul Martin and Amanda Kennedy (eds) *Implementing Environmental Law* (Edward Elgar Publishing, Cheltenham, 2015) at 330.

design enables negotiations and deliberations about the environment that often catalyse domestic responses. In other words, members of the IER are usually influenced by the negotiations, deliberations and subtle pressures put on them by the international community, particularly for wicked problems such as climate change.

Rieu-Clarke and Gooch expound on implementation to include states' legal and administrative capacities and the political system in which the environmental regime can thrive as crucial features of implementation. They argue that irrespective of how excellent and well-designed an environmental treaty is, there cannot be implementation when all the above mentioned factors are not present.[265] Nevertheless, although arguable, it is convincing to propose that several countries are influenced by IEAs when enacting their national legislation.

The previous paragraphs have highlighted the indirect influence of the IER based on state implementation of IER objectives, however, the IER can be directly influential where it has inbuilt implementation mechanisms that facilitate its objectives. Where IERs and IEAs have these mechanisms that foster compliance and encourage cooperation from Parties, they may be highly influential.

D. Compliance

Compliance in this sense refers to the full effectuation, in practice by states, of commitments they pledged to,[266] stemming from international environmental objectives. Compliance should be distinguished from the distinct concept of "effectiveness" of an agreement, which refers to whether the Parties have achieved the Agreement's purposes.[267] When an IEA is implemented domestically, it is indicative of conscious steps toward compliance.[268] However, despite implementation being often included in the concept of compliance, the latter's scope is generally broader. For example, a state may already be in compliance where its existing domestic environmental laws already mirror the IEA's objectives that have just entered into force. In this case, that state may not need to fulfil the implementation requirements of ratification. Thus, it is essential to distinguish compliance and implementation as they are sometimes misconstrued to be the same thing.

[265] Alistair Rieu-Clarke and Josefin Gooch n263 above at 167.
[266] Rudiger Wolfrum "Means of Ensuring Compliance with and Enforcement of International Environmental Law" (1998) 9 Recueil des Cours 272 at 29.
[267] Markus Ehrmann "Procedures of Compliance Control in International Environmental Treaties" (2002) 13 Colo. J. Int'l Envtl Law and Policy 377-8.
[268] Alistair Rieu-Clarke and Josefin Gooch above n263 at 159.

Scholars that link the IER's influence to compliance suggest that where states comply with IEA objectives by ratifying, implementing, and fulfilling their national obligations, the IEA has influenced states' actions.[269] However, like implementation, where the IER has neither established compliance structures nor provided mechanisms to foster compliance, countries may become slack and demotivated. As a result, issues of non-compliance may arise, diminishing the IER's influence. Wettestad buttresses this by stating that environmental regimes were more effective when they had adequate compliance and verification mechanisms evidenced by well-functioning reporting systems, compliance-supporting financial mechanisms and related implementation review bodies.[270]

Rose categorises compliance mechanisms under four headings: Performance Review Information, Multilateral Non-Compliance Procedures, Non-Compliance Response Measures and Dispute Resolution.[271] Regarding performance review information, many IEAs require Parties to exchange information as part of their obligations, such as environmental technologies, industrial developments or sensitive trade transactions, and national performance in IEA implementation, enabling the regime to monitor member operations. Some IEAs also make provisions for third parties to monitor or verify Parties' performances. These could be the Secretariat, an NGO or a combination of both. However, it may be disadvantageous to rely on Parties to exchange information without an independent monitoring body. It also subtracts from the IER's responsibility to implement its independent monitoring mechanisms to assess compliance.

Regarding multilateral non-compliance procedures, IEAs make provisions for a formal global non-compliance procedure that the implementation or compliance committee undertakes by making a recommendation on any matter and sending it to the COP for final decision. The third component provides measures for responses to non-compliance. These responses are tailored to the peculiarities of the case. For example, they can be incentives in the form of technical and financial assistance to support and improve implementation or disincentives in the form of penalties such as stricter requirements around performance review information. Some of the renowned incentives include the GEF, established by the World Bank in 1991, which funds

[269] See Ronald B Mitchell 'Compliance Theory' in Daniel Bodansky and Others (eds) *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2007) at 893.
[270] JØrgen Wettestad "Designing Effective Environmental Regimes" (2001) 7 Global Governance at 320.
[271] Gregory Rose "Interlinkages between Multi-Lateral Environmental Agreements: International Compliance Cooperation" in LeRoy Paddock and Others (eds) *Compliance and Enforcement in Environmental Law: Toward More Effective Implementation* (Edward Elgar Publishing Limited,2011) at 5.

projects related to biodiversity, international waters, ozone layer depletion and climate change and the GCF established to provide funding and capacity assistance to developing countries.

Additionally, the incentives have recently included public and private sources of climate finance. For example, during the COP21, Parties agreed that US$100 billion would be earmarked as the minimum for climate finance, which developed countries will provide annually to developing countries post-2025.[272] Donor countries and multilateral development banks (MDBs) have consequently announced ambitious commitments to expand their support for climate finance activities. For example, 43 state governments, including 9 representing developing countries, have pledged US$10.3 billion to the GCF.[273]

It is important to note that there are varied dimensions to compliance, particularly for climate change. For instance, where obligations are either of conduct (attitudinal change) or result (emissions reductions), compliance outcomes will not be uniform.[274] Further, compliance can encapsulate different aspects of conformity such as substantive compliance, procedural compliance and compliance with the spirit of the agreement.[275] So, a party to an IEA may comply with procedural obligations but not substantive obligations. The outcome from procedural compliance will also be distinct from compliance with the spirit of the agreement, the latter, which entails doing everything reasonable to carry out the intendment of the agreement's objectives by desisting from negativing actions irrespective of lack of express statements to the effect, in the agreement.

Previous studies have not explored compliance by non-state actors such as private citizens, business enterprises, and corporations to indicate IER influence. The studies have not considered situations where non-state actors are equally as active as member states in complying with international obligations. Sometimes their compliance links directly to IER objectives rather than national environmental legislation. For example, concerning emissions reduction, a company may exercise precautionary measures in its business operations to reduce

[272] Decision 1/CP.21, FCCC/CP/2015/10/Add.1 para 53.
[273] Green Climate Fund, 'Status of Pledges and Contributions made to the Green Climate Fund' (May 2018) https://www.greenclimate.fund/documents/20182/24868/Status_of_Pledges.pdf/eef538d3-2987-4659-8c7c-5566ed6afd19 .
[274] Oran Young and Marc A. Levy above n77 at 4.
[275] Harold Jacobson and Edith B. Weiss "Compliance with International Environmental Accords: Achievement and Strategies' in M. Rolen et al (eds) *International Governance on Environmental Issues*(Kluwer Academic Publishers, 1997) at 83.

its carbon footprints in line with an IEA's objectives even when domestic legislation does not compel such compliance.

E. Enforcement and Monitoring

Enforcement typically involves the application of sanctions to induce compliance. Part II of the UNEP Guidelines define enforcement as "the range of procedures and actions employed by a state, its competent authorities and agencies to ensure that organisations or persons, potentially failing to comply with environmental laws or regulations implementing multilateral environmental agreements, can be brought or returned into compliance and/or punished through civil administrative or criminal action".[276] In other words, it is the compelling of obedience to the law.[277] Enforcement can be achieved at the state level through sanctions in domestic legislation, where the executive or judiciary enforces the law by imposing those sanctions on offenders. O'Connell sweepingly suggests that domestic rather than international enforcement mechanisms should enforce international environmental law.[278] Enforcement of environmental objectives can also be achieved at the regional level, where countries in a region adopt IEA objectives into their regional treaties or arrangements, especially where regional institutions can enforce the treaties. A prime example is the EU, where the EC and the ECJ can enforce environmental objectives.

The legal system of an IER differs from domestic legal systems as the former does not have a fully developed judiciary and executive to enforce its environmental objectives.[279] In addition, there is usually no central agency, treaty-making and enforcement body to oversee multilateral treaties dealing with climate change issues and sustainable development.[280] Therefore, it is important to signal that various environmental regimes have had different enforcement mechanisms over time that yielded different compliance outcomes. Three of these regimes will be discussed in the following chapter.

[276] UNEP Guidelines on Compliance with and Enforcement of Multilateral Environment Agreements (Nairobi 2002) Part I, p. 9.
[277] Black's Law Dictionary 1990 at 528.
[278] Mary Ellen O'Connell "Enforcement and the Success of International Environmental Law' (1995) 3 Ind.J. Global Legal Stud. at 47.
[279] Ibid at 48.
[280] Lawrence Susskind "Strengthening the Global Environmental Treaty System" (Issues in Science and Technology, Arizona State University, 2008) .

Currently, no designated international court presides over international environmental lawsuits.[281] As the UN's principal judicial organ, the ICJ has adjudicated only a few environment-related disputes, in comparison to domestic or regional courts.[282] Given the structural hybrid framework of the UNFCCC that encourages dual commitment to environmental action at domestic and international levels, criticisms about IER enforcement should not speak to the 'failure' of the international court to preside over the bulk of environmental disputes. The absence of a specialised international court for climate change issues, while regrettable, has enabled states and individuals to seek remedies domestically and regionally.

Although the UNFCCC does not have its specialised court that can enforce environmental sanctions, UNEP, has assisted in equipping environmental judges in several countries to better adjudicate on environmental matters. Some scholars have attempted to establish linkages between the IER and increase in environmental courts. Prings, for example, notes the continuing increase in environmental courts to be driven by four factors that include the development of new international and national environmental laws and principles.[283] To put this in context, Principle 10 of the 1992 of the Rio Declaration set out the fundamental right of access to justice as a pillar of sound environmental governance. Although the UNFCCC was birthed from the UN Conference on Environment and Development where the Rio principles were agreed on, it continually provides a basis for ongoing international discussions on environmental concerns. These concerns, for example, access to justice, can be properly adjudicated in environmental courts or tribunals.

Recent studies have indicated that there are now more than 1,500 specialised national courts and tribunals that enforce national environmental laws. Further, the UN Environment, IUCN World Commission on Environmental Law (IUCNWCEL), and Organisation of American States (OAS) have established the Global Judicial Institute on the Environment (GJIE) to

[281] Christina Voigt 'International Courts and the Environment: The Quest for Legitimacy' in Christina Voigt (ed) *International Judicial Practice on the Environment: Questions of Legitimacy* (Oxford University Press, 2019) at 5.
[282] Duncan Brack "International Environmental Disputed: International Forums for Non-Compliance and Dispute Settlement in Environment-Related Cases" (The Royal Institute of International Affairs, 2001) at 4.
[283] George Pring and Catherine Pring "Environmental Courts& Tribunals: A Guide for Policymakers" (UN Environment Programme , 2016) at 13.

facilitate the exchange of best practices in responding to environmental crises and also to share interpretations of the principles of environmental law across legal systems.[284]

To some extent, enforcing environmental obligations depends on the effectiveness of domestic laws, administrative resources and systems that supervise their proper application. However, it would be incorrect to dismiss the actual and potential influence that international legal principles, agreements and mechanisms can impress on states to recognise and adhere to international environmental obligations.[285] In this sense, the weight of importance that countries attach to IEAs or the IER can influence their compliance.

Regarding climate litigation as a precursor to enforcement, the thesis highlights the increase in climate litigation and reference to the Paris Agreement by litigants and the courts' judgment as an indicator of the Paris Agreement's influence. The IER has arguably provided the catalyst for domestic courts to recognise the justiciability of climate litigation. The climate justice parameter is subsumed under enforcement as it links to domestic enforcement of international obligations through the courts.

To better understand the influence, the IER through the Paris Agreement outlined core obligations for countries to follow to hold global average temperature increase to well below 2°C above pre-industrial levels. To do this, countries must prepare, communicate and maintain NDCs which in line with the Agreement's goal.[286] This is discussed in detail in the following chapter. What is important to note is that as the selected countries are Parties to the Paris Agreement, they are bound by these obligations of conduct, which establish the legal, policy and scientific framework for domestic laws and policies[287] that litigants rely on when holding the government or corporations accountable for globally agreed climate action. An example of such obligation is to pursue domestic mitigation measures, with the aim of achieving the objectives of their NDCs.[288] Litigants can base their arguments on this premise, particularly where a country has ratified the Paris Agreement and courts can enforce the fulfilment of those obligations that have been domesticated. In this way the IER influences domestic climate action through the courts. Some scholars have suggested that if a party fails to comply with its

[284] IUCN "Global Judicial Institute on the Environment" https://www.iucn.org/commissions/world-commission-environmental-law/wcel-resources/global-judicial-institute-environment .
[285] See Martin Hedemann-Robinson "Environment and Sanctions" in Principles of Environmental Law, Elgar Encyclopaedia of Environmental Law, Vol VI, pp. 673-697.
[286] The Paris Agreement above n35, art 4(1)
[287] Brian Preston "The Influence of the Paris Agreement on Climate Litigation: Legal Obligations and Norms (Part I)" (2021) 33 Journal of Environmental Law 1 at 3.
[288] The Paris Agreement above n35, art 4(2).

obligations to prepare, communicate and maintain successive NDCs, proceedings could potentially be brought in the International Court of Justice (ICJ), assuming the party has accepted its jurisdiction.[289] However, this could be only where that party has exhausted all the facilitative avenues provided within the Paris Agreement compliance and implementation mechanisms and subject to the modalities, procedures and guidelines of the relevant committee. In addition the proceedings will be limited to procedural obligations and not any failure to achieve or communicate a 'more ambitious' NDC.[290] Thus, using the enforcement mechanisms within the regime to measure influence can be beneficial, despite the inclination to rely on domestic enforcement evidence as substantiation for IEA influence.

Apart from enforcement, the IER ought to adequately monitor its members' environmental actions and provide a feedback mechanism to encourage compliance with the regime's objective. Monitoring is critical for several purposes: to determine whether environmental standards are being complied with, ascertain whether additional measures or programmes are necessary and assess which measures have been most effective.[291] The IER's independent monitoring mechanisms can spur countries' efforts to fulfil climate obligations. However, some countries may perceive independent monitoring mechanisms as a subtle threat to their national sovereignty, so IER mechanisms need to be as unobtrusive as possible.

F. Economic Structures

Kutting posits that considerations of economic structures in an agreement strongly determines IEA effectiveness.[292] In other words, where an environmental agreement provides economic structures that incorporate social organisation concerns for profit maximisation and environmental concerns, the agreement is effective. Kutting envisages an agreement that offers economic incentives to deter harmful actions to the environment. Kutting departs from the regime theory considerations that focus on the actors and institutions without recourse to the dynamics between social organisation and economic structures that may help tackle environmental concerns.

[289] Brian Preston above n287 at 3.
[290] Ibid.
[291] Barbara A. Beijen and others "The Importance of Monitoring for the Effectiveness of Environmental Directives: A Comparison of Monitoring Obligations in European Environmental Directives" (2014) 10 Utrecht Law Review 2 at 126.
[292] Gabriela Kutting *Environment, Society, and International Relations Towards More Effective International Environmental Agreements* (Routledge, New York, 2000) at 39.

Relying partly on Cox's writings on social forces, Kutting attempts to apply it to the 'economic structures' determinant. Cox states that "production creates the material basis for all forms of social existence, and the ways in which human efforts are combined in productive processes affect all other aspects of social life, including the polity".[293] Cox adds that "the global economy, activated by profit maximisation, has not been constrained to moderate its destructive ecological effects" and that so far there have only been interventions through interstate systems, that were able to achieve agreement to avoid specific harmful practices.[294]

Kutting applies Cox's ideology to her argument stating that "the temporal organisation of society is dominated by the consideration of production".[295] She argues that the focus should not centre on negotiating parties but on how the mutual constitution of power and production can remedy environmental harm. Kutting's position is agreeable only to the extent that the IER and IEAs main focus should be the solution to the environmental problems that gave rise to them. The interplay of a regime's actors and institutions are also significant when tackling environmental issues. Again, Rajkumar's[296] criticism that Kutting's omission of the global dimension of an environmental challenge in her IEA analysis, for example, climate change and ozone layer depletion, weakens her argument, resonates. To conclude, due provision of economic structures within an IEA and IER enables Parties to pursue collective environmental objectives and speaks to the IERs and IEAs likely influence.

G. Time and Regulatory Structures

Kutting posits that IEA time frames need to reflect the urgency and irreversibility of the environmental problem that needs regulation.[297] Such time frames include the administrative process from the formation of the agreement to its implementation. Kutting notes that the concept of time has been neglected as an indicator of IER institutional effectiveness analysts.[298] She argues that regulatory structures also determine IEA effectiveness. At the time of writing, she argued that policymakers, mainly consisting of governments, do not have a clear picture of their work scope, the process it takes, where the work is leading, and its impact. She criticized policymakers for representing social interests rather than environmental ones. In linking the

[293] See Robert W. Cox *Production Power and World Order* (Columbia University Press, 1987).
[294] Robert W. Cox "Multilateralism and World Order" (1992) 18 Review of International Studies 2 at 178.
[295] Gabriela Kutting above n292 at 39.
[296] Rajkumar Deepak Singh "Book Reviews: Issues of Environmental Effectiveness in Gabriella Kutting *Environment, Society and International Relations: Towards More Effective International Agreements* (London Routledge, 2000) pps 314-5.
[297] Gabriela Kutting above n218 at 136.
[298] Ibid at 137.

issues embodied in time and regulatory structures, she notes that environmental rhythms have to be subordinate to administrative feasibilities as policy-making operates within administrative time frames. This means that while policymakers proclaim global environmental objectives implementation through the states' bureaucratic rigmarole, subject to its institutional feasibility, the lengthy processes subject the environment to more damage.

Kutting's findings on time and regulatory structures as significant parameters for measuring IER and IEA effectiveness can benefit environmental problems with definite remedial time frames. Conflicting studies regarding an environmental challenge may render it impossible for an IEA to provide definite timeframes to solve an environmental challenge. For example, different scholars and scientists offer conflicting opinions on the futuristic impact of climate change, the timeframe for emissions to cease altogether, and the timeframe for complete environmental restoration and climate change resolution. Such confusions weaken the application of the timeframe parameter to climate change. However, even though the duration of an environmental threat is imprecise, an IEA that stipulates definite time frames to address environmental issues, instead of using terms such as 'immediately' or 'as soon as possible', is preferable. The above should not be confused with IEA stipulations for countries to submit detailed reports of their mitigation and adaptation actions at specific times as the regulatory structure may also benefit from these specific time frames.

H. Political Will

Efforts that address climate change depend on various factors that include getting the numbers right, identifying the most appropriate instruments and promoting new policies that foster eco-innovation.[299] However, all these factors are contingent on a significant element – political will.[300] Here, political will refers to the demonstration of willingness or motivation to expend energy and resources to pursue political goals.[301] Political will has also been defined as the determination of an individual political actor to do and say things that will produce a desired outcome.[302] Climate change is increasingly viewed as both an environmental and political issue, and political will is needed to tackle the challenges climate change poses. This thesis sets

[299] OECD "Climate Change: A Matter of Political Will" (June 3, 2008) <https://www.oecd.org/env/tools-evaluation/climatechangeamatterofpoliticalwill.htm >.
[300] Angel Gurria "Climate Change: A Matter of Political Will" OECD International Conference Centre Paris, 3 June, 2008.
[301] Darren C. Treadway and others "Political Will, Political Skill, and Political Behaviour" (2005) 26 J. Organiz. Behav. at 231.
[302] Gov. UK "Political Will" https://assets.publishing.service.gov.uk/media/57a08cbfed915d622c001551/R8236Appendix3.pdf .

out political will as a parameter for measuring IER influence. While regime theorists note that the IER actors' attitudinal changes infer IER influence, regime scholars have not identified shifts in Parties' political will as a vital parameter for measuring IER influence. Political will has also been referenced in predicting the future of the Paris Agreement engagement and that Parties' ambition and engagement will rise or fall depending on the Parties' level of political will.[303]

Where a party to an IER changes from a negative or complacent environmental behaviour to a positive and proactive environmental behaviour, that change is linked to political will. It is important to note that political will, for the benefit of the thesis argument, refers solely to state actors. While a shift in political will from negative to positive may be interpreted as compliance, this is not always the case. For example, when a state cannot 'summon' the political will or financial resources to tackle environmental problems but wants to remain relevant in the global environmental discourse, they might set minimal targets and comply with them as those targets demand minimal efforts.[304] When this happens, the achieved targets are not enough to be qualified as compliant, especially when juxtaposed with the IEA's targets. Can such compliance, however minimal, speak to the IER or IEAs influence? It certainly does, as the IER's ability to cause Parties to reconsider staunch political positions that elevate economic benefits over environmental benefits ought not to be ignored. To reiterate, although the political will parameter closely resembles the parameters of behavioural effects and participation and cooperation, the distinguishing factor is in whether it applies to state actors or non-state actors.

I. Participation and Cooperation

Scholars suggest that one of the conditions an IEA must fulfil to be effective is that most countries linked to the environmental problem must participate or be parties to the IEA.[305] Regime theorists such as Young have suggested that participation or cooperation constitutes a vital parameter in evaluating an environmental regime's influence on state and non-state actors.[306] Participation is, however, voluntary and IERs need to structure agreements in a manner that encourages participation. The IEA can propose less ambitious targets for solving

[303] Leslie Hook "Climate Change: How China Moved from Leader to Laggard" Financial Times, November 25, 2019 < https://www.ft.com/content/be1250c6-0c4d-11ea-b2d6-9bf4d1957a67>.
[304] George W. Downs "Constructing Effective Environmental Regimes" (2000) 3 Annu. Rev. Polit. Sci at 32.
[305] Jon Hovi and Tora Skodvin "Why the United States Supports International Enforcement for Some Treaties but not for Others" (2017) 5 Politics and Governance 2 at 79.
[306] Oran R. Young above n150 at 19855.

an environmental challenge that appeals to the majority of its members.[307] The drawback of this strategy is that the agreement is shallow and weak. For these reasons, participation is disparaged as a parameter for measuring IER influence. However, there have been IEAs that initially stipulated less ambitious targets to garner participation and cooperation, but as time progressed, the regime succeeded in eliciting deeper commitments from the Parties. An example is the regime for the protection of the stratospheric ozone layer that will be discussed in the following chapter.

Crucially, it is not guaranteed that this evolutionary process will occur in all cases, however, participation remains a fundamental step toward achieving any global environmental obligation, followed closely by cooperation. When countries cooperate, the regime is one step closer to fulfilling its objectives. While Parties have a role in cooperating to gain a desired environmental outcome, IERs must also provide mechanisms to facilitate cooperation. Consequently, where a robust IER mechanism facilitates Parties' cooperation leading to favourable environmental action, it can be argued that the IER has influenced these outcomes.

J. Behavioural Effects

When thinking about IER's as causal agents, inference can be drawn from the regime's influence on the behaviour of actors. As an arrangement, the regime can engender social practices that shape the identities of participating actors and supply a platform for common discourses that address environmental problems, drawing participants into routinised activities.[308] Therefore, where actors within a regime change their behaviour toward an environmental problem, especially positively, the regime's influence can be inferred. In other words, influence has been achieved where there has been a substantial redirection of behaviour toward solving an environmental problem by those whose actions gave rise to the environmental problem.[309] Breitmer and others purported, for example, that in "fifty-two of the eighty instances where states met or exceeded [regime] requirements, the regime had a large causal impact on state behaviour".[310] Another indicator for regime influence using the behavioural effects parameter is discernible from the level of the regime's involvement in contributing to the development of unofficial communities and empowerment of non-state

[307] See Arild Underdal above n246 at pps 3–45.
[308] Oran R. Young "The Behavioural Effects of Environmental Regimes: Collective-Action vs. Social-Practice Models" (2001) 1 Int. Env Agreements: Politics, Law and Economics at 11.
[309] Marc A. Levy and Oran Young above n144 at 255.
[310] Helmut Breitmeier and others "The Effectiveness of IERs: Comparing and Contrasting Findings from Quantitative Research" (2011) 13 Int. Studies Review at 584.

actors, such as a mix of experts and policymakers. These actors can function as watchdogs in the day-to-day operation of the regime and act as pressure groups or sources of institutional innovations that influence behaviour.[311]

Potential behavioural effects can be detected if causal connections can be established. Detection of causal connections can pinpoint which changes captured in pre and post-assessments can be directly attributed to the regime's operation. For example, if a country has enacted domestic environmental legislation that coincided with the entry into force of an international environmental treaty, it may be inferred that the IER influenced the state's legislative action. However, this assumption can be debunked if such a state had previously or customarily enacted pro-environmental legislation before the regime's inception. However, where a country ratifies an IEA expressly, enacts legislation that coincides with a global IEA adoption, changes from being adverse to enacting pro-environmental domestic legislation and openly disapproving an IEA, it can be argued that such changes can be linked to the operation of the regime. In other words, the regime has influenced the behaviour of that country.

While using this parameter can reveal causal connections between regimes' operation and the collective outcomes, it does not specifically indicate how these regimes work to produce measurable outcomes in problem-solving. An examination of the IER or IEA's institutional framework and the programmes, mechanisms, and structures that the IER facilitates can be beneficial in revealing how the IER works. The trade mechanism is an example of how an IER can alter Parties' behaviour to comply with the regime's objectives. An IEA can expressly set standards or requirements that members must comply with to conduct any transactions within the regime. Similarly, the IER may not offer any incentives to alter Parties' behaviour, but it can ensure that it eliminates any opportunities for Parties to violate regulative prescriptions.[312]

The behavioural effects parameter is extensive and incorporates participation, cooperation, compliance, implementation, and enforcement elements. These elements have been discussed and will be applied separately. The thesis will apply this parameter broadly, highlighting the changes in actors' behaviour before and after the IEA and IER's creation.

K. Fragmentation

Kim and Bosselman have criticised the current self-organised mode of institutional cooperation and coordination of international environmental law as ineffective, primarily due to its inability

[311] Marc A. Levy and Oran Young above n144 at 255.
[312] Ibid.

to treat interconnected environmental concerns in a comprehensive and joined-up manner rather than on a sectoral basis.[313] Others view fragmentation as leading to inefficiencies, a lack of synergy, a proliferation of institutions, complicating or preventing coherence and inconsistent or contradictory standards.[314] Other scholars note that fragmentation can jeopardise "the credibility, reliability and consequently, the authority of international law.[315] Because of this danger, some scholars suggested that an overarching global institution such as a strengthened UNEP or a novel 'world environmental organisation' may be needed to manage fragmentation.[316]

It is expected that with diverse environmental agreements, global responses may become fragmented, results may differ, or contradictory positions across or within various treaty bodies may be adopted. Even where there is no direct conflict between treaty obligations, the creation of divergent standards or the development of different managerial approaches to environmental problems can potentially undermine the effectiveness of all the regimes concerned.[317] However, where an IER has established governance mechanisms that cater to integration and institutional cooperation, it can potentially manage and exploit the overlaps and synergies existing between IEA's and other institutions to better protect the environment.

It is submitted that fragmentation, if properly managed, is not undesirable and may not undermine IER influence. Proper management includes governance mechanisms such as institutional cooperation and integration that can exploit overlaps and synergies between IEAs and other environmental institutions to improve the influence of the IER.

Climate change is a complex challenge that one institution cannot solve, therefore, it requires a highly fragmented approach. The UNFCCC and the Paris Agreement have adopted a hybrid approach that proposes collective responsibility. This approach requires decentralised processes that can encourage participation and cooperation. The approach also mandates non-

[313] Rakhyun E Kim and Klaus Bosselmann above n258 at 287.
[314] Phillipe Roche and Franz Zaver Perrez "International Environmental Governance: The Strive Towards a Comprehensive, Coherent, Effective and Efficient Environmental Regime" 16 (2005) Colorado Journal of International Environmental Law and Policy 1 - 25 at 15 – 16.
[315] Gerhard Hafner "Pros and Cons Ensuing from Fragmentation of International Law" 25 (2003 – 2004) Michigan Journal of International Law 849 – 863 at 856.
[316] Frank Bierman and others "Environmental Policy Integration and the Architecture of Global Environmental Governance" (2009) 9 International Environmental Agreements 351 – 369.
[317] Karen N. Scott "Conflation of, and Conflict between, Regulatory Mandates: Managing The Fragmentation Of International Environmental Law In A Globalised World" (26 – 28 August 2010, International Law in the New Era of Globalization).

state actors such as corporations and individual actors to employ bottom-up approaches as a natural response to climate change.

The hybrid approach is not without risk, as it may be difficult for the UNFCCC to keep track of all the actors, state and non-state. Also, while interacting with trade regimes such as the WTO and GATT, the UNFCCC will need to work with governments to balance investor, economic and environmental interests. The next chapter will explore the extent to which the UNFCCC and the Paris Agreement have balanced these interests.

L. Sustainable Development and Climate Justice

Incorporation and promotion of sustainable development in an IEAs decision-making process and wordings of its document can speak to the influence of an IER. Where Parties to the IER incorporate sustainability and climate change concerns in policymaking, stakeholder meetings, laws, regulations and programmes based on the IER's example, influence can be attributed to that IER. Sustainable development, subject to several interpretations, has been popularly defined as development that meets the needs of future generations without compromising the ability of future generations to meet their own needs."[318] This definition is vague in terms of the 'needs' of future generations and is open to many interpretations.[319]

The climate change regime has referred to sustainable development in several documents, however, the words appear compromised and ambiguous.[320] Some refer to it as a compromise legal principle, sometimes having contradictory sub-principles and scarcely cohesive. The thesis, however, engages with environmental sustainability from the lens of the UN SDGs. Environmental sustainability is comprehensively defined as "a condition of balance, resilience, and interconnectedness that allows human society to satisfy its needs while neither exceeding the capacity of its supporting ecosystems to continue to regenerate the services necessary to meet those needs nor by our actions diminishing biological diversity".[321] Therefore, there must be responsible interaction with the environment to avoid natural resources degradation and depletion and allow for long term environmental quality. To ensure environmental sustainability, global life support systems such as energy, sink capacities, water, air and food

[318] The Brundtland Report, WCED 1987 at page 43

[319] Christopher Amacker "The Concept of Sustainable Development" E-International Relations Students July 27, 2011 https://www.e-ir.info/2011/07/27/the-concept-of-sustainable-development/

[320] Klaus Bosselman "The Environmental Jurisprudence of International Tribunals: Does Sustainability Make a Difference" in LeRoy Paddock and Others (eds) *Compliance and Enforcement in Environmental Law: Toward More Effective Implementation* (Edward Elgar Publishing Limited,2011) at 79.

[321] John Morelli "Environmental Sustainability: A Definition for Environmental Professionals" (2011) 1 Journal of Environmental Sustainability 2 at 5.

must be maintained.[322] Linking environmental sustainability to the UN SDGs, the most related goals are: Goal 2 - Zero Hunger, Goal 6 - Clean Water and Sanitation, Goal 7 - Affordable and Clean Energy, Goal 13 - Climate Action, Goal 16 - Peace, Justice and Strong Institutions.[323]

The UN has attempted to address sustainability concerns by incorporating environmental sustainability into many of its goals. These goals have been promoted at several COPs, and the UN Department of Economic and Social Affairs engages stakeholders around the world in implementing, evaluating and monitoring SDG processes.[324] I argue that the cohesive and institutionalised framework of the UN SDGs can influence countries to incorporate sustainable development in local legislation.

As highlighted in chapter two, climate justice doubles as a concept and a parameter for IER and IEA influence, particularly in tackling climate change impacts. Different countries experience climate change impacts differently, raising justice concerns. Justice concerns include emissions responsibility arguments, climate finance contribution and distribution concerns, to mention a few. IERs and IEAs should be structured to respond to these concerns. Responses could be contained in the agreement's provisions and the IER's institutionalised mechanisms. Where Parties perceive an IEA to be fair, reflecting issues of climate justice, inter and intergenerational equities, they may be more willing to carry out the agreement's objectives. Where Parties fulfil these objectives, IER and IEA influence can be inferred.

M. Incentivised Environmental Programmes

Environmental programs can help incentivise and assist countries to produce a desired environmental outcome. To be influential, an IER must examine the suitability and feasibility of a proposed environmental program and also be able to monitor it by collaborating with regional and national institutions or setting up independent mechanisms to track its progress. The IER should also coordinate the programs or create a blueprint that countries can use and develop. UNEP has been previously criticised for failing to accomplish its mission of coordinating environmental programs.[325] If states formulate environmental policies and design programs based on the blueprint of the IER, influence can be inferred. Using climate change

[322] Robert Goodland "The Concept of Environmental Sustainability" (1995) 26 Ann. Rev. Eco. Syst 1 at 6.
[323] United Nations "About the Sustainable Development Goals" https://www.un.org/sustainabledevelopment/sustainable-development-goals/ .
[324] United Nations "Support Sustainable Development and Climate Action" https://www.un.org/en/our-work/support-sustainable-development-and-climate-action#:~:text=UN%20Department%20of%20Economic%20and,monitoring%20process%20of%20the%20SDGs.
[325] Achim Steiner and others 'Global Governance for the Environment and the Role of Multilateral Environmental Agreements in Conservation' (2003) 37 Oryx 2 at pps 227-37.

as an example, where countries design mitigation and adaptation programs tailored after the UNFCCC objectives and UNEPs blueprint, it can be deduced that states have been influenced to act based on the support that these programs offer.

Part IV has outlined several useful parameters for testing an IER or IEA's influence over actors within that regime. These parameters have an extensive scholarly consensus and can be applied to any IER or IEA. Holistically speaking, where a regime has influenced its members, there is an evident attitudinal change reflected in how the members handle an environmental challenge. It is crucial to signal here that attitudinal change can also be examined through the lens of monist and dualist legal theories. While these theories do not negate the value of the parameters outlined above, in this context, they speak to the reception of international law by regime actors and the rationale for implementation or dismissal of international environmental laws, treaties or agreements.

V. Regime Actors' Climate Behaviour from the Monist and Dualist Legal Theory Lens

Countries' perception of the status of international law over their domestic law may affect their reception of the international law, which is particularly true for international environmental law. Often, an environmental treaty or agreement may require a country to stop using a hazardous item or discontinue an exploitative action on the environment, which may interfere with the economic benefit of that country. Consequently, the country may be unenthusiastic about adopting such a treaty, much more ratifying it. The monist and dualist theories carved out from the positivist theory illuminate why one country adopts and ratifies a treaty and another may not. These theories also speak to the supremacy of either international or domestic law.

The dualist theorists accentuate the distinction between international agreements and domestic legislation, stating that neither legal order can create or amend the rules of the other.[326] In other words, international law rules and systems exist separately from municipal law and can neither affect nor overrule the other.[327] According to the theory, when a state permits the exercise of international rules, it does this out of pure tolerance rather than any influence wielded by international law within the internal sphere, reaffirming the supremacy of a state within its

[326] Giorgio Gaja "Dualism - A Review" in Janne E. Nijman & André NollKaemper (eds) *New Perspectives on the Divide Between National and International Law* (Oxford University Press, 2007) at 52.
[327] Malcolm N. Shaw *International Law* (8th edn, Cambridge University Press, 2017) at 97.

domestic jurisdiction.[328] Other proponents of dualism assert that where there is a conflict between international and domestic laws, the latter prevails, or at the least, the national system decides which law is to prevail.[329]

It is crucial to understand how the dualist legal theory relates to regime formation and interaction. It is assumed that the consent and participation of a regime's founding members are crucial to forming an environmental regime or agreement. It is unnecessary to get the consent of all the countries at once, as we have seen in the Kyoto and Montreal Protocols, but once critical players have signed up to the regime or agreement, they can persuade other countries with lower bargaining power to join. Interestingly, the dualist theory cannot affect the adoption of an IER or IEA by a country with lower bargaining power, but it may apply to the ratification. This is because countries may be pressured to join a treaty, but if the treaty is not binding or has no enforcement mechanisms, they may not be persuaded to ratify it. Dualist theorists hitherto suggested that the state had a life and will of its own and could subsequently dominate international law, however, the steady growth of international agreements, regulations and customs has blurred this theory.

Monist theorists crystallise domestic and international laws as belonging to one legal order or at least several interlocking orders presumed to be coherent and consistent. The theorists suggest that international law can be applied within domestic laws seamlessly.[330] Different monist theorists view monism differently. Kelsen, for example, states that law is a hierarchical system whereby all laws, national and international, derive their validity from the *Grundnorm*.[331] Fitzmaurice suggests that there should be no question of supremacy between international laws and national laws as both belong to a separate sphere, and each is supreme in its field.[332] There is merit to both views - Kelsen's suggestion speaks to evolutionary merit, while Fitzmaurice's suggestion rests on the spherical separation of both laws. However, both interpretations are too narrow to apply to climate change's transboundary nature, requiring decisiveness and a prevalent international legal order.

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[328] Rosalyn Higgins and others *Oppenheim's International Law United Nations* (Oxford University Press, 2017) 53 as cited by Malcolm N Shaw International Law (8th edn, Cambridge University Press, 2017) at 98.
[329] James Crawford *Brownlie's Principles of Public International Law* (8th edn, Oxford University Press, 2012) at 48.
[330] Ibid.
[331] Hans Kelsen *General Theory of Law and State* (1st Ed, Routledge 2005) 559 at 580.
[332] Gerald Fitzmaurice "General Principles of International Law Considered from the Standpoint of the Rule of Law" (1957) 92 Hague *Recueil* 1 at 68.

Strikingly, monists rely on a fundamental principle - 'pacta sunt servanda' meaning that agreement must be honoured. This principle can be transposed to international law, where agreements entered into by countries must be adhered to irrespective of conflicting domestic inclinations. In contrast, dualists rely on domestic consent, where countries have the final say on whether to ratify a treaty or not. Based on the preceding, there are monist and dualist countries with some in-between. On the surface, monist countries have a system to automatically ratify treaties that they have agreed to adopt, while dualist countries need the second step process of ratification. In turn, the pace of ratification may impact how a country implements a treaty's obligations. Many European jurisdictions approach customary international law from a monist perspective and attach constitutional standing to that law.[333]

Whether monist, dualist or in-between, some leaders play dual-level politics - one level contends with international adversaries and the other domestic constituencies.[334] For example, where a country leader has environmental interests at heart, that leader may subscribe to an IEA but may also need to convince the government to ratify that treaty. Diehl and others suggest that even a sincere leader may be unable to enact domestic legal reforms based on international laws where there is domestic opposition.[335] On the other hand, an insincere leader may openly support IER and IEA creation but do all within his powers to block the necessary changes in their state's legal system for domestic political purposes.[336]

To cross this hurdle, countries such as the Netherlands, France and Russia often involve their legislature in international treaty creation and decision-making before signature and ratification. As the legislature is involved in the entire process, the treaty is not domestically contended and is easily absorbed into the state legislation and given utmost priority. This could be why European countries are receptive to international environmental laws and more proactive about enforcing them.

The US presents a curious example in the way it ratifies its treaties. Although the US Constitution provides that 'treaties' require Senate's advice and consent, many international agreements are adopted as executive agreements where Congress approves or, in some cases,

[333] James Crawford above n329 at 88.
[334] Peter B. Evans and others *Double-Edged Diplomacy: International Bargaining and Domestic Politics* (University of California Press, Berkeley, 1993).
[335] Paul F. Diehl and others "The Dynamics of International Law: The Interaction of Normative and Operating Systems" (2003) 57 International Organisation 1 at 61.
[336] Ibid.

by the President acting alone.[337] Because of the tricky process of the US treaty ratification, US delegates at COP21 had to ensure that the Paris Agreement did not contain legally binding provisions, such as new financial commitments or a legally binding emissions target that might elicit a need for legislative approval. This was done to boycott any eventuality of non-approval by Congress or the Senate. Also, because a US president acting alone can approve or reject a treaty, another government can easily discard climate change obligations undertaken by one government. This has played out in the Obama, Trump and Biden administrations.

Going back to the monist and dualist theories, interactions within a regime or its actors' persuasiveness can influence a country outside the regime to adopt the regime and its agreements, however, the regime may not influence domestic ratification of such treaty. The regime may indirectly influence ratification through its non-state actors, such as NGOs, corporations and individuals that can act as pressure groups in the countries they reside. Non-state actors continue to play an essential role in environmental regimes. For many decades only state actors played a role in global environmental negotiations, but now non-state actors such as various private or public/private alliances, sub-national, regional and global partnerships, green environment groups play an active role.

It is significant to note that positive environmental outcomes can arise from a dualist state that refuses to ratify an environmental treaty based on domestic reservations. It goes against the grain to assume it is a possibility, but it is the reality. An example is the US, even though she withdrew from the Paris Agreement, a coalition of US governors forming the U.S Alliance on Climate Change, with renewed urgency, announced eight new initiatives around RE, carbon capture and storage and clean transportation.[338] Also, municipalities and corporations may maintain their commitment to safeguarding the environment irrespective of the country's position on environmental protection.

VI. Conclusion

Part I to Part IV of the chapter engaged extensively with the perception of the role of the IER in solving particular environmental problems. The IER has gained relevance as a utility modifier and an enhancer of cooperation. This perception is especially true where the IER facilitates mechanisms that can support members to balance environmental and economic

[337] Daniel Bodansky "Legal Options for U.S. Acceptance of a New Climate Agreement" (2015) 14 Center for Climate and Energy Solutions at http://www.c2es.org/docUploads/legal-options-us-acceptance-new-climatechange-agreement.pdf .

[338] United States Climate Alliance "States United for Climate Alliance" https://www.usclimatealliance.org/press/ .

interests. Thirteen parameters were drawn out of the various perceptions and can be applied to any IER. Interestingly where some scholars perceived fragmentation to be a weakness, others did not. The thesis position acknowledges the peculiarity and complexity of climate change that requires action at all levels. These actions may not be organised as expected, but it is not essentially detrimental to emissions reductions. Therefore, chapters five and six will not engage with fragmentation as a parameter as chapter four engages with it in the Kyoto and Montreal Protocols and the Paris Agreement overview.

Distinctively, Part V of the chapter discussed the monist and dualist theories, exploring why certain countries are apparently more receptive to international treaties and others are not. The perception that monist countries are more likely to ratify an international treaty than dualist countries may not matter in global concerns such as climate change, where there is an urgency for countries to commit to emissions reductions. Further, where the IER has a solid institutional design with a robust economic and regulatory structure, it may persuade an inherently dualist state to ratify its IEA.

In summary, this chapter has demonstrated that IERs and IEAs have a significant role to play in environmental protection. It would be erroneous to disregard them as ineffective or uninfluential because an environmental issue has not been fully resolved. It has been scientifically established that wicked environmental problems such as climate change will take many years to resolve, and it is beneficial to draw out influence from the resolution process rather than the resolution itself.

CHAPTER FOUR

EVALUATING THE ROLE OF THE CLIMATE CHANGE REGIME: AN EXAMINATION OF THE KYOTO PROTOCOL, MONTREAL PROTOCOL AND THE PARIS AGREEMENT

I. Introduction

The previous chapter explored scholarly perceptions of an 'effective' environmental regime. Parameters for assessing an environmental regime and agreements were gleaned from these perceptions and will be applied to the Montreal and Kyoto Protocol and the Paris Agreement. Both the Montreal and Kyoto protocols were designed to tackle climate change issues, although the Montreal Protocol focused on reversing the ozone layer's depletion by stopping the production and importation of ozone depleting substances (ODS). To clarify, ODS are GHGs that damage the stratospheric ozone layer when released into the atmosphere, contributing to the radiative forcing of climate change.[339] Examining these protocols using these parameters is a good foundation that can aid the analysis of the Paris Agreement's influence on countries to reduce emissions. Unlike the Paris Agreement, which is only six years old, the Montreal and Kyoto Protocols have been in force for many years. Several deductions are drawn when examining the Kyoto and Montreal Protocol against the parameters highlighted in Chapter 3.

The chapter adopts a comparative approach where the Kyoto and Montreal protocols and the Paris Agreement are compared utilising the parameters in the third chapter. The motive behind this exercise is to glean the strengths and weakness of the earlier IEAs and compare it with the Paris Agreement to determine whether the Paris Agreement has more robust and formidable provisions and mechanisms that facilitate implementation, cooperation and participation toward achieving its objectives.

A more detailed analysis of the Paris Agreement through a review of its key provisions is offered in this chapter which will feed into the examination of the selected countries' engagement with the IER in chapter five and six.

[339] Guus J.M. Velders "The Importance of the Montreal Protocol in Protecting Climate" (2007) 104 PNAS 12 at 4814.

II. The Kyoto Protocol: Outlived its Legacy?

The Kyoto Protocol's adoption in December 1997 as a legally binding instrument for reducing GHG emissions was regarded as an international achievement and a remarkable legal instrument. These accolades were given despite the meagre 5 per cent reductions mandated by the Protocol compared with the 60 to 80 per cent reduction that the IPCC pronounced necessary to achieve the UNFCCC objective of stabilising GHG concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[340] The Kyoto Protocol had two commitment periods for its implementation: the first begun in 2008 and ended in 2012 and on 8 December 2012 during the adoption of the Doha Amendment, another commitment period was added for Annex 1 Parties from 1 January 2013 to 31 December 2020. For the first commitment period, the signatories to the Kyoto Protocol met their targets by cutting their collective emissions by around 16 per cent.[341] It has been argued that compliance did not arise from deliberate efforts of states to comply but from inadvertent developments such as the collapse of GHG producing industries and secondary effects of existing national policies.[342] The UN climate change secretariat is yet to publish its results for the review and compliance assessment of the second period of the Protocol which strengthened quantified emission limitation or reduction commitments (QELRC) for developed countries and set a goal to reduce emissions by 18 per cent compared to 1990 levels.[343]

Some scholars argued that the Protocol was seemingly weak because of the lack of political will from significant GHG emitters.[344] The lack of political will was captured in the US, China, and India's contradictory attitudes during the Kyoto Protocol's ratification process and the lead-up to the Copenhagen Accord. The US was opposed to the Kyoto Protocol, citing that it exempted eighty per cent of the world, including significant populations such as India and China, from compliance and that could seriously impact the US economy.[345] India and China had also argued that despite their recent economic successes, there was still more to do before

[340] Farhana Yamin "The Kyoto Protocol: Origins, Assessment and Future Challenges" (1998) 7 RECIEL 2 at 113.
[341] Quirin Schiermeier "The Kyoto Protocol: Hot Air" (2012) 491 Nature 656 https://www.nature.com/articles/491656a.pdf
[342] Peter Christoff "Post-Kyoto? Post-Bush? Towards an Effective 'Climate Coalition of the Willing' (2006) 82 Int. Affairs 5, 834.
[343] UNFCCC "Kyoto's Second Phase Emission Reductions Achievable but Greater Ambition Needed" June 17, 2020 https://unfccc.int/news/kyoto-s-second-phase-emission-reductions-achievable-but-greater-ambition-needed
[344] Brian Spak "The Success of the Copenhagen Accord and The Failure of the Copenhagen Conference" (Research Paper, American University, 2010) at 47.
[345] Jon Hovi and others "Why the United States Did Not Become A Party to the Kyoto Protocol: German, Norwegian and US Perspectives" (2010) 18 European Journal of International Relations 1 at 130.

they could eradicate high poverty levels; because of this, their aggregate and per capita emissions would need to continue to rise.[346] These three significant emitters had relied on these arguments to extricate themselves from the Kyoto Protocol's binding commitments. Nevertheless, the Protocol was also forecasted to be a "ground-breaking agreement in the realm of international law" with a structure that opens a vista of possibilities and participants to achieve global reductions in GHG emissions.[347]

A detailed commentary in 2012 described the Kyoto Protocol as neither a complete failure nor a resounding success but could be summarised as a good 'first step' having the potential of having its goals achieved.[348] A mid-term analysis of the Protocol between 2008 and 2010 showed that the EU-12 (primarily Eastern Europe) had successfully achieved their Kyoto commitments by reducing emissions by 25.4 per cent, however, the EU-15 (primarily Spain and Portugal) were unable to fulfil their commitments and offset the total amount of the EU reduction by achieving only 4.3 per cent as opposed to their 8 per cent target. Other Annex 1 countries such as Russia and Japan demonstrated considerable effort by improving their CO_2 index between 1990 and 2007.[349] On the other hand, the refusal of the United States, the largest emitter among developed nations since 2001, to ratify the Kyoto Protocol[350] was arguably a precursor to the Protocol's replacement several years later. As of 2007, China and India had replaced and overtook the US and Russia as the largest emitters, given their rapid increment in GHG emissions. This emphasised a real issue with the architecture of the Kyoto Protocol in omitting developing countries from emissions reduction obligations.

The Kyoto Protocol's problem structure and institutional design were initially criticised as lacking in quantitative limits for emissions reductions, and the lack of such restrictions allowed strong resistance, particularly from the US.[351] The Kyoto Protocol subsequently set firm quantitative limits on GHG emissions, and specified reductions were listed for and limited to

[346] Andrew Hurrell and Sandeep Sengupta "Emerging Powers, North South Relations and Global Climate Politics" (2012) 88 International Affairs 3 at 470.
[347] Peggy Rodgers Kalas and Alexia Herwig "Dispute Resolution under the Kyoto Protocol" (2000) 27 Ecology Law Quarterly 1, 53 at 133.
[348] Lee Chung Lau and Others "Global Warming Mitigation and Renewable Energy Policy Development from the Kyoto Protocol to the Copenhagen Accord—A Comment" (2012) 16 Renewable and Sustainable Energy Reviews 5281.
[349] International Energy Agency "How the Energy Sector can Deliver on a Climate Agreement in Copenhagen" (IEA, 2009) www.iea.org/weo/docs/weo2009/ climate_change_excerpt.pdf .
[350] Jon Hovi "Why the United States Did Not Become a Party to the Kyoto Protocol: German, Norwegian and US Perspectives" (2010) 18 European Journal of Intn'l Relations 1, 129 at 131
[351] Cass R. Sunstein, "Montreal versus Kyoto: A Tale of Two Protocols" (John M. Olin Program in Law and Economics Working Paper No. 302, 2006) at 20.

"Annex 1" nations— those bound by the Kyoto Protocol but excluding developing nations. Other criticisms questioned the suitability of the Kyoto Protocol's design to address the climate change dilemma. Rosen, for example, argued that the Kyoto Protocol subjected the world to an ineffective path-dependent model for solving climate change and was an institutional design failure, one with a lasting and potentially catastrophic impact on the world.[352] Rosen further contended that its inadequacy in scope and attendant high opportunity costs derailed global efforts at achieving the initial objectives at the UNFCCC.[353] The Kyoto Protocol also adopted a top-down approach that did not leave much room for collaboration. As a result, countries debated the justice in allocating responsibilities, and governments were reluctant to support the Protocol.

Turning now to the legality or legal bindingness of the Kyoto Protocol, the language used in the Protocol's text is indicative of its binding nature, even though countries were not compelled to adopt or ratify it. Further, because the Kyoto Protocol excluded binding commitments for non-industrialised nations, it was considered soft law.[354] Conversely, the Kyoto Protocol was relatively considered hard law for the Annex 1 countries bound by the emissions reduction commitment. This is not an undermining factor, as international agreements usually contain both hard and soft elements.[355] An initially soft agreement may, over time, earn high legitimacy to be turned into hard law.[356] Overall, the Kyoto Protocol's "hardness" may have negatively influenced key Parties, such as the US, Canada and Australia, who either pulled out of the Agreement or reneged on their commitment.[357] Japan, Russia and New Zealand[358] have also refused to adopt any targets under the second commitment period- complicating the Protocol's legal existence, especially with the small targets its members have subscribed.[359] Although the

[352] Amanda M. Rosen above n253 at 32.
[353] Ibid.
[354] Jana von Stein "The International Law and Politics of Climate Change: Ratification of the United Nations Framework Convention and the Kyoto Protocol (2008) 52 Journal of Conflict Resolution 2 at 246.
[355] Richard Bilder "Beyond Compliance: Helping Nations Cooperate", in Diana Shelton (ed.), *Commitment and Compliance : The Role of Non-binding Norms in the International Legal System* (Oxford: Oxford University Press, 2000) 65-73.
[356] Dinah Shelton, "Introduction: Law, Non-law and the Problem of 'Soft Law", in Shelton (ed) *Commitment and Compliance : The Role of Non-binding Norms in the International Legal System* (Oxford: Oxford University Press, 2000) at 11.
[357] Mike Roarty "The Kyoto Protocol-Issues and Developments through to Conference of the Parties (COP7) September 13, 2002, Parliament of Australia https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/Publications_Archive/archive/kyoto .
[358] Vernon Small "Government Turns its Back on Kyoto Commitment" November 9, 2012 https://www.stuff.co.nz/national/politics/7929764/Government-turns-its-back-on-Kyoto-commitment
[359] Michael Grubb "Full Legal Compliance with the Kyoto Protocol's First Commitment period – Some Lessons (2016) 16 Climate Policy 6 at 679.

Kyoto Protocol's legally binding nature was supposed to induce compliance among the Annex 1 Parties, the reverse was the case. Based on the above, it is surmised that the Kyoto Protocol did not sufficiently influence Parties to continue reducing GHG emissions.

Moving on to consider the compliance parameter, the Kyoto Protocol's compliance mechanisms were founded on four layers of rules developed in various steps.[360] First, Article 18 of the Protocol, an enabling clause, mandated the COP to approve effective and appropriate procedures and mechanisms to address and determine cases of non-compliance. Second, the Parties approved and adopted the procedures and mechanisms, and the Compliance Committee, established by the Compliance Procedures, developed further rules of procedures. Lastly, the Committee developed the working arrangements to complement and give effect to the Rules of Procedure.

The Kyoto Protocol's compliance mechanism was described as self-defeating and deterred future participation due to its penalties, one of which was an automatic deduction from subsequent period commitments.[361] Conversely, an advantage of the Kyoto Protocol was that it stimulated global engagement, especially with the CDM initiative. However, stimulated global engagement does not always amount to compliance.

Compliance is double-pronged, one part focuses on the inbuilt compliance mechanism of the IER and IEA, and the other part focuses on the compliance of the Parties to the regime or the agreement. In other words, compliance is assessed by the measures and design the IER or IEA has established to promote compliance on the one hand and the Parties' willingness and ambition to participate and deliver on these outcomes in response to the IER/IEA compliance mechanisms on the other.

Article 18 provides for the compliance structure of the Kyoto Protocol, which directs the COP/MOP to establish a non-compliance procedure that includes "the development of an indicative list of consequences, taking into account the cause, type, degree, and frequency of non-compliance.[362] It also provides that any subsequent, binding compliance instrument must involve the amendment, re-ratification, and subsequent entry into force of the Protocol. This

[360] René Lefeber and Sebastian Oberthür "Key features of the Kyoto Protocol's Compliance System" in Jutta Brunnée, et al *Promoting Compliance in an Evolving Climate Regime* (Cambridge University Press, 2011) at 78.
[361] Michael Grubb above n359 at 674 .
[362] Article 18 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997 2303 U.N.T.S. 148.

procedure, albeit time-consuming, identifies compliance difficulties and facilitates better compliance in a non-adversarial manner that prevents the undermining of the regime.

As of today, the Kyoto Protocol has not attained the level of compliance it benefited from in the first commitment phase. This regression could be because of the withdrawal of countries discussed previously or because of the Paris Agreement's emergence. Presently, only a handful of countries have ratified their second-period commitments. Therefore, it is difficult to envisage the outcome where the Kyoto Protocol legally exists but has only a few targets.[363] IERs and IEAs must therefore have varied compliance strategies suited for the needs of each country and the several actors within it.[364]

In terms of the implementation mechanisms used by the Kyoto Protocol to influence Parties' implementation, the Protocol introduced three market-based mechanisms, essentially creating what is now known as the carbon market.[365] These market mechanisms are the CDM, Joint Implementation (JI) and the Emissions Trading Scheme (ETS). These mechanisms were designed to help Parties to the Kyoto Protocol meet their emissions reduction target, stimulate sustainable development through technology transfer and investment, and encourage developing countries and the private sector to contribute to efforts toward emission reductions.[366]

The CDM, the most complex of the three, permits industrialised countries to meet part of their caps using credits from emission-reduction projects in developing countries that are Parties to the Kyoto Protocol but do not have emission caps under it, subject to international lapses, to ensure that the projects represent real and additional emission saving.[367] This mechanism allowed industrialised nations to flexibly meet their emissions reduction target by investing in emission reduction projects in developing countries to earn certified emission reduction (CER) credits, which were useful for trade between industrialised countries.[368] The CDM also spurred the extraordinary surge in Asian RE industries and was a major success in that regard.[369] Companies and countries implemented the CDM, showing a considerable reduction in

[363] Michael Grubb above n359 at 679.
[364] Edith B. Weiss above n262 at 1589.
[365] UNFCCC "Mechanisms under the Kyoto Protocol" https://unfccc.int/process/the-kyoto-protocol/mechanisms .
[366] Ibid.
[367] Michael Grubb and Others "Global Carbon Mechanisms: Lessons and Implications" (2011) 104 Climactic Change 3-4 at 541.
[368] UNFCCC "What is the CDM" https://cdm.unfccc.int/about/index.html .
[369] Michael Grubb and Others above n367 at 562.

industrial GHG emissions projects, notably hydrofluorocarbon-23 (HFC-23) and nitrous oxide (N2O). By 2007, the share of RE projects had rapidly grown and by 2009, over 1,800 CDM projects were registered at the CDM Executive Board and were entitled to generate CERs that could save around 1.6 billion tonnes CO2e cumulative to 2012, the end of the Kyoto Protocol's first compliance period.

The JI allowed industrialised countries having caps under the Protocol to pay for emissions reductions projects in similar industrialised countries to meet part of their required emissions reduction targets. This was allowed, provided that there was a corresponding matching transfer of the negotiated overall emission caps. However, the JI mechanism was not as successful as the CDM because new countries joining the EU were overwhelmed by the plethora of EU legislation that they had to become part of and respond to as a requirement for accession. Many countries did not present JI projects, and only about 4 per cent of submitted JI projects were approved. These JI projects within the EU majorly focus on RE, mainly small hydro, wind and biomass, though overall emission reductions are dominated by a few large N_2O projects in Western Europe.

The ETS allowed the direct exchange of emissions caps between industrialised countries such that countries who were doing better at reducing emissions could trade their excess emission units to underperforming countries.[370] The ETS also recorded some success in the EU with the launch of the EU ETS in 2005. The instrument set a significant price on carbon emissions.

The Kyoto Protocol also provided another trading option, the Green Investment Scheme (GIS), to promote the environmental efficacy of transactions that involve surplus allowances.[371] This mechanism linked sales of Assigned Amount Units (AAU) to investments that reduce GHG emissions by allocating proceeds from AAU sales to implement projects and programs focusing on GHG emissions reduction and climate change adaptation. Unlike the other mechanisms, the GIS was flexible as it included energy efficiency and waste reduction projects. The GIS also provided up-front finance, unlike the CDM and JI that are financed against future emission credits.

Overall, among the 36 countries that fully participated in the first commitment period of the Kyoto Protocol (CP1), only eight countries emitted higher levels of GHGs than initially

[370] Michael Grubb and Others above n367 at 541.

[371] William Blyth and Richard Baron "Green Investment Schemes: Options and Issues" (OECD Environment Directorate and International Energy Agency, 2003) https://www.oecd.org/environment/cc/19842798.pdf .

committed.[372] These countries represented 20 per cent of emissions of Annex B-2012 countries during the CP1. The USA and Canada also had higher emissions than their target. To summarise, the Kyoto Protocol's implementation mechanisms, especially the CDM and the ETS, influenced countries' emissions reductions.

Considering the Kyoto Protocol's enforcement mechanisms, Parties to the Protocol were required to annually submit their emission reports to be reviewed for compliance by a panel nominated by Parties. However, because the Parties themselves presented these reports, the credibility of the reports was questionable.[373] The Protocol's monitoring mechanisms was also far from ideal that it potentially created avenues for cheating.[374] The Kyoto Protocol was similar to the Montreal Protocol when sanctioning non-compliance. Rather than tough sanctions, the Kyoto Protocol proposed measures to assist Parties to reach targets. The Kyoto Protocol provided two sanctions that could exclude Parties from the ETS and impose a further 30 per cent of already assigned emissions reductions. Also, the time-lapse between the Protocol's violation and the sanctions significantly reduces the threat potential, and successive governments may refuse to be accountable for a previous administration's abatement efforts.

The Protocol also allowed Parties to opt-out after three years. Therefore, it was counterproductive for the Protocol to delay punishment for detractors when they can easily opt-out after three years. The sanctions have also been regarded as weak, with no option established to enforce compliance, especially where free-riders do not accept the weak punishment option.[375] Despite its worrying enforcement deficiencies, the Kyoto Protocol is commended as the first treaty that goes beyond the simple establishment of a dispute settlement regime and proposes at least two measures, representative of a punishment architecture that seeks to punish violation of treaty obligations.

Turning now to the economic structure of the Kyoto Protocol, it was designed to provide emissions reductions at a lower cost than could be achieved by domestic actions or regulations alone. The CDM, one of the economic structures of the Protocol, was criticised for its funding of industrial gas projects, mainly where the costs of destruction of the gas were lesser than the

[372] Romain Morel and Igor Shishlov "Ex-Post Evaluation of The Kyoto Protocol: Four Key Lessons for the 2015 Paris Agreement" (No 44 Climate Report,2014) http://www.cdcclimat.com/IMG/pdf/14-05_climate_report_no44_-_analysis_of_the_kp-2.pdf .
[373] Christoph Bohringer and Michael Finus "The Kyoto Protocol: Success or Failure" in Dieter Helm (ed) *Climate Change Policy* (Oxford University Press, 2005) at 271.
[374] Ibid at 272.
[375] Ibid at 276.

price of carbon credits.[376] Others maintain that the CDM merely did what it was designed for but conceded that additional capacity would be needed at the Executive Board level and across the whole process for any future expanded CDM. In terms of the domestic cost-benefit ratio, many countries (in eastern Europe) had more to gain than lose (especially those who had acquired valuable emissions licenses) except the US that argued that the costs of the Kyoto Protocol were much higher, by about US$313 billion than the costs of the Montreal Protocol and the benefits of Kyoto was much lower by about US$3,562 billion than the Montreal Protocol.[377] In summary, the influence of the Kyoto Protocol using the economic structure parameter offers mixed results and seems more influential in Europe than elsewhere.

Considering the time and regulatory structure for the influence of an agreement, Rosen argues that the time frame of the Kyoto Protocol and its choice to establish a five-year commitment period commencing ten years after the signature was flawed judgment.[378] She reasoned that the world might have missed its window to solve climate change as the year 1997 presented the best time to create sound processes that would have allowed flexibility for new actors, ideas, and linkages in the climate space. Bohringer and Finus disagree with this view, stating that the five-year commitment period provided a flexible approach that allows policymakers to adjust their decisions according to better information obtained in the future.[379]

Submitting that there is a real-time limit on actions surrounding climate change, Rosen states that countries are leaning more toward adapting to climate change as it may be futile to solely focus on mitigation efforts as experts have warned that avoiding a 2^{o}C rise in average global temperatures may now be unavoidable.[380] Rosen, Bohringer and Finus have valid points, but Rosen's argument that time is of the essence when responding to climate change concerns is convincing. Furthermore, the time structure and flexible institutional mechanisms are not mutually exclusive, therefore, the Kyoto Protocol could have benefited from pushing for commitment periods to begin immediately after the Protocol was signed.

[376] Michael Wara "Measuring The Clean Development Mechanism's Performance And Potential Program On Energy And Sustainable Development" (Working paper 56, July 2006); Michael Wara and David G. Victor "A Realistic Policy On International Carbon Offsets, Program On Energy And Sustainable Development" (Working paper 74, April 2008).
[377] Cass R. Sunstein above n351 at 27.
[378] Amanda M. Rosen above n253 at 46.
[379] Christoph Bohringer and Michael Finus above n373 at 281.
[380] Amanda M. Rosen above n253 at 46.

In terms of participation, there are 192 parties to the Kyoto Protocol to the UNFCCC.[381] Unlike the Paris Agreement and the Montreal Protocol, which took a significantly shorter time to be ratified, the Kyoto Protocol was not ratified until 2005, eight years after it was negotiated in 1997. Participation includes signing and ratifying a treaty, and countries sign and ratify treaties states for many reasons, but primarily if the treaty reflects the country's economic interest.[382] The Kyoto Protocol from its inception was divisive by setting a clear divide between Annex 1 and non-Annex 1 countries which affected Parties' support. Now, the Protocol intended to be just by allocating responsibility to developed countries who contributed the most to climate change but this approach seemed counterproductive as countries bickered over who should take responsibility. As it stands, the US has maintained its non-ratification status and Canada that renounced the Agreement in December 2012, has since not returned.[383]

The above lends credence to Von Stein's argument that even though hard agreements make shirking of commitments more difficult, states may become concerned about their ability to meet their targets and may subsequently refrain from committing altogether.[384] This was evident in Canada and Australia, the last of the Annex-1 countries that took almost nine years to ratify the Kyoto Protocol.[385] On the other hand, there was impressive participation by the EU and the United Kingdom. The EU pushed for a more ambitious treaty, was substantially involved in the bargaining process and ratified the Protocol quickly after the Marrakesh agreement.[386] Thus, to conclude, while the Kyoto Protocol lacked inclusivity, it was influential in bringing countries together to reconsider their current emissions trajectory, urging developed countries to reduce their emissions and contribute funds to developing countries to adapt to climate change.

Turning now to the Kyoto Protocol's impact on Parties' behaviour, it is observed that Parties had mixed reactions to the Protocol. However, the first commitment period was very successful as Parties' aggregate GHG emissions did not exceed the quantity of Kyoto Protocol units valid

[381] UNFCCC "The Kyoto Protocol - Status of Ratification" https://unfccc.int/process/the-kyoto-protocol/status-of-ratification .
[382] Jana von Stein above n354 at 263.
[383] CNN "Canada Quits Kyoto Climate Pact" December 13, 2011
[384] Jana von Stein above n354 at 262.
[385] Sophie Power "Paris Agreement: A Quick Guide" (Parliament of Australia, November 10, 2017) https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1718/Quick_Guides/ParisAgreement#:~:text=Australia%20signed%20the%20Kyoto%20Protocol,1990%20emissions%20levels%20by%202012.
[386] Elena V. Mclean and Randall W Stone "The Kyoto Protocol: Two-Level Bargaining and European Integration" (2012) 56 International Studies Quarterly 1 at 111.

for the commitment period in the retirement account. While this result may infer 100 per cent compliance indicating behavioural impact, the reality is different. Only thirty-six parties reported on their first commitment, indicative of minimal impact on behaviour.

The Kyoto Protocol's adoption and utilisation of policies and programs remarkably influenced Parties' actions. One example was the ETS, planned and operated in 56 jurisdictions, including 35 national and 21 subnational jurisdictions worldwide, that have put a price on carbon through an ETS.[387] The EU ETS, which is the largest carbon market, was borne out of the Kyoto Protocol's ETS initiative. China also announced the launch of its ETS in 2017, predicted to take over from the EU ETS as the world's largest ETS.[388] Despite setbacks, trials and delays, China has finally launched its ETS for the power sector. The market will initially cover only the thermal power industry that accounts for 40 per cent of China's emissions. Already, 2,225 entities and operators have been registered in China's carbon market.[389]

Other countries have also recorded remarkable changes in their ETS. Some examples are Quebec that has extended its cap trajectory until 2030, and the Regional Greenhouse Gas Initiative (RGGI) States that announced reforms and a cap trajectory for the 2020s. Others include: the granting of approval to link the Swedish ETS with the EU ETS, the restarting of Kazakh ETS operation in 2018, the agreement of the EU on the regulatory framework for the fourth phase (2021-2030) of the EU ETS and the Korean ETS beginning its second phase in 2018 with changes to the cap as well as the proposal to begin auctioning in 2019.[390] Overall, about 40 countries are currently imposing carbon taxes and have set up or are in phases of implementing emissions trading schemes.[391] The above examples indicate that the Kyoto Protocol's ETS programme has influenced members actions towards reducing GHG emissions. It is important to note that countries' continued momentum in establishing and remodelling

[387] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone" in Peter Salmon and David Grinlinton (eds) Environmental Law in New Zealand (2nd ed Thomson Reuters, Wellington, New Zealand, 2018) at 847.
[388] Jeff Swartz "China's National Emissions Trading System: Implications for Carbon Markets and Trade" (31 March 2016) International centre for Trade and Sustainable Development <www.ictsd.org> .
[389] Chloe Farand 'China Launches World's Largest Carbon Market for Power Sector" (Climate Home News, February 7, 2021) https://www.climatechangenews.com/2021/01/07/china-launches-worlds-largest-carbon-market-power-sector/ .
[390] International Carbon Action Partnership " Emissions Trading Worldwide: Status Report 2018" (Berlin, 2018) https://icapcarbonaction.com/en/?option=com_attach&task=download&id=528 .
[391] David Roberts "40 Countries Are Making Polluters Pay For Carbon Pollution. Guess Who's Not" (June 15, 2017) Vox https://www.vox.com/energy-and-environment/2017/6/15/15796202/map-carbon-pricing-across-the-globe ; see also World Bank Group "State and Trends of Carbon Pricing 2018" (Washington DC, May 2018) https://openknowledge.worldbank.org/bitstream/handle/10986/29687/9781464812927.pdf?sequence=5&isAllowed=y .

their ETS may also be attributed to the Paris Agreement, however, the Kyoto Protocol should receive foundational recognition for the initiative.

Now turning to environmental sustainability and climate justice, the Kyoto Protocol raised justice concerns based on its previous non-inclusive arrangement where non- Annex I countries were not assigned binding emissions caps. Ironically, these countries included China, one of the world's largest emitters.[392] Therefore, it was arguably unjust for the Protocol to allow either the US or China to avoid binding mitigation assignments altogether. In terms of fostering inter and intragenerational equities, the Protocol having lax targets did not secure the change needed to protect future generations. To this end the Kyoto Protocol had insignificant influence in terms of achieving climate justice or environmental sustainability.

Should the Kyoto Protocol be considered a failure because of the above? It is clear that the Protocol displayed more strength in some areas than others and should not be written off. Some scholars that examined the impact of the Protocol on countries with binding emissions found an overall reduction in CO_2 emissions that may not have been possible but for the binding reductions targets imposed by the Kyoto Protocol.[393] It is essential to note that scholars arrived at different conclusions regarding actual emissions reductions based on the Protocol. While some argue that there was a marked increase in the share of renewables in energy production by about 2-3 percentage points and a corresponding decrease by the same points in the use of fossil fuels, others argue that within the 15 Annex 1 countries examined, there was very little evidence of a significant emission reduction and no verifiable effect on the CO_2 emissions of ratifying Annex B countries.[394]

Based on the preceding, the thesis surmises that the Kyoto Protocol was beneficial as a predecessor to the Paris Agreement. However, as the first IEA designed to address climate change impacts, it had certain weaknesses associated with its exclusionary nature. Moreover, if developed and developing countries participated in the Kyoto Protocol, the outcome may have differed in terms of countries' ambitions and motivations. However, the Kyoto Protocol remains relevant to the development of the ETS, which is thriving today in many countries. It

[392] Steve Vanderheiden "Climate Justice Beyond International Burden Sharing" (2016) 40 Midwest Studies In Philosophy 1 at 3.
[393] Rahel Aichele and Gabriel Felbermayr "The Effect of the Kyoto Protocol on Carbon Emissions" (2013) 32 Journal of Policy Analysis and Management 4 at 753.
[394] Ibid at 753; Christian Almer and Ralph Winkler "Analysing the Effectiveness of International Environmental Policies: The Case of the Kyoto Protocol (2017) 82 Journal of Environmental Economics and Management at 139; Nicole Grunewald and Inmaculada Martinez-Zarzoso "Did the Kyoto Protocol Fail? An Evaluation of the Effect of the Kyoto Protocol on CO2 Emissions (2015) 21 Environment and Development Economics 1 at 14.

is fair to add that although the preceding discussions reveal that it has produced negligible effects in terms of actual emissions reductions, the Kyoto Protocol is not altogether irrelevant and offers vital reference points for the Paris Agreement to take some learnings from, especially in terms of its enforcement strategy and institutional design.

III. 95 per cent Ozone Layer Depletion Success: A Study of the Montreal Protocol:

The Montreal Protocol was designed to tackle the rapid stratospheric ozone layer depletion brought about by the release of chlorofluorocarbons (CFCs) found in refrigerants and aerosol spray cans. CFCs and their substitute fluorocarbon gases referred to as ozone depleting substances are also GHGs which contribute to the radiative forcing (RF) of climate change.[395] Similar to the impact of continued anthropogenic activities on the climate as in the current climate change dilemma, earlier studies recognised the impact of the continued growth in ODS emissions on the significant increase in direct RF or climate warming.[396] As the protection of the ozone layer has implications for climate change, it is useful to examine the Montreal Protocol. Similar to the assessment of the Kyoto Protocol, the Montreal Protocol is examined using the same set of parameters to highlight areas of strengths and weaknesses which can be compared with the Paris Agreement.

For some background context, work had started on the Montreal Protocol even though negotiations on the framework convention was still ongoing.[397] By September 1987, thirty-six countries were signatories to the Montreal Protocol, agreeing to reduce CFC consumption and production. The Protocol was, at this time, an extension of the Vienna Convention[398] that set explicit limits for the emissions of CFCs and other ozone depleters.[399] The Protocol entered into force two years later, with not less than 89 nations ratifying by 1990. The Protocol's restrictions applied to a basket of chemicals that were harmful to the ozone layer, providing countries with an incentive to reduce the substances in some products and discard those that were not essential to them, thus lowering the overall cost of ozone protection.[400] In a nutshell,

[395] See generally JC Farman, BG Gardiner and JD Shanklin "Large Losses of Total Ozone in Antarctica Reveal Seasonal ClO_x/NO_x Interaction (1985) 315 Nature 207-210; Mario J. Molina and F.S. Rowland "Stratospheric Sink for Chloluoromethanes: Chlorine Atom-Catalysed Destruction of Ozone" (1974) 249 Nature, 810-812.
[396] Ibid. See also V. Ramanathan "Greenhouse Effect Due to Chlorofluorocarbons: Climatic Implications" (1975) 190 Science 4209, 50-52
[397] Scott Barrett "The Montreal Protocol" in Scott Barrett (ed) *Environment and Statecraft: The Strategy of Environmental Treaty-Making* (Oxford University Press, 2005) at 223.
[398] Vienna Convention on the Law of Treaties 1155 U.N.T.S. 331 (opened for signature 23 May 1969, entered into force 27 January 1980).
[399] Kurt J. Beron and Others "Why Cooperate? Public Goods, Economic Power, and the Montreal Protocol" (2003) 85 The Review of Economics and Statistics 2 at 287.
[400] Scott Barrett above n397 at 226.

it required countries to reduce their production and consumption of CFCs by half, from their 1986 levels by 1999. It also required countries to stabilise the levels of production and consumption of halons used in fire protection that also contributed to ozone depletion.

Margaret Thatcher has been credited to have helped put global warming, acid rain and pollution onto the mainstream political map. As a chemist by training she supported predictions of scientists on the hole in the Ozone layer. In 1988 Thatcher expressed her concerns on the changes in atmospheric chemistry and the discovery by the British Antarctic Survey of a large hole in the ozone layer which protects life from ultra-violet radiation to the Royal Society.[401] In her speech to the United Nations General Assembly in 1989, she expressed the need for countries to follow the best advice available according to the science, that countries set higher targets and shorter deadlines, and the need for industrialised nations to help developing countries phase out CFCs, was well received.[402]

In addition, with her leadership, Indian Minister of Environment Monika Ghandi, and North American and Nordic negotiators, the Montreal Protocol created the Multilateral Fund (MLF) to pay the agreed incremental costs of transition for developing countries using less than 0.3 kilograms ODS/capita (as classified under Article 5 of the Protocol and thereafter known as Article 5 Parties). She urged that the world community draw up a convention by 1992 on global climate changes.[403] Described as a champion of reduced use of CFCs,[404] Thatcher also assembled representatives from 123 nations in London to discuss the extension of accelerated phaseout schedules to all signatories to the Treaty.[405] She is credited to have "done more than any other politician to secure international action to repair the damaged ozone layer".[406]

Different scholars attribute success to the Montreal Protocol based on different factors. Wettestad, for example, rated the success of the Montreal Protocol as high even though Russia and Eastern Europe's follow up commitments were not impressive.[407] Weiss referred to the

[401] Margaret Thatcher Foundation "Speech to the Royal Society" September 27, 1988 https://www.margaretthatcher.org/document/107346
[402]Margaret Thatcher Foundation "Speech to Ozone Layer Conference" June 27, 1990. https://www.margaretthatcher.org/document/108133 .
[403] Malcom W. Browne "Ozone Fading Fast, Thatcher Tells World Experts" (New York Times June 28, 1990) https://www.nytimes.com/1990/06/28/world/ozone-fading-fast-thatcher-tells-world-experts.html
[404] George Guise "Margaret Thatcher's Influence on British Science" (2014) 68 Notes Rec at 303.
[405] Pamela Wexler "Protecting the Global Atmosphere: Beyond the Montreal Protocol" (1990) 14 MD. Journal of International Trade at 15.
[406] Margaret Thatcher Foundation "Speeches, Interviews and Other Statements" https://www.margaretthatcher.org/speeches
[407] JØrgen Wettestad above n270 at 328.

Protocol as a path-breaking example of the willingness of countries to address a problem.[408] She further described the Protocol as an embodiment reflective of converging interests ranging from concerns of scientists who had warned about threats to the ozone layer from certain chemicals to governments who had perceived that reaching an agreement that protects the ozone layer may benefit their national interest.[409] Thus, the Protocol was a reflection of the merged interest of different actors such as NGOs, scientists, private industries and governments. The next part of this section applies the parameters outlined in chapter three to the Montreal Protocol.

The Montreal Protocol's institutional design was strategic in the way it gradually captured the acquiescence of members. It initially contained the minimum participation clause that required only eleven countries making up at least two-thirds of the global consumption of the controlled substances to ratify it. It is a possibility that the Protocol's negotiators may have had the foreknowledge that the Agreement may not attract global participation immediately if more countries were required to sign before becoming active. This strategy may have encouraged expedited membership by all countries. The Protocol also had a favourable cost-benefit ratio in its provisions, stating that the phase-out schedule for developing countries was to be delayed by ten years ''as long as their CFC consumption remained below .3 kg per capita."[410] This provision was viewed as the most notable and successful provision of the Protocol.

The design strategy took on a carrot and stick approach that used manipulative incentives to sustain full cooperation. The Protocol also adopted an anticipatory rather than reactionary approach, for example, to avoid trade discrimination suits under the GATT, the Protocol provided that any country that abided by Protocol provisions but had not signed the treaty would be considered a signatory in terms of trade.[411]

The Protocol also employed an adaptive approach to address the problem by providing an alternative for countries. To phase out CFCs, countries could shift to hydrofluorocarbons (HFCs) that were less dangerous to the ozone layer. The Protocol started modestly, learning by doing, and was reinforced gradually by adding additional controlled substances through

[408] Edith Brown Weiss "The Five International Treaties: A Living History" in Edith Brown Weiss and Harold K. Jacobson (eds) Engaging Countries: Strengthening Compliance with International Environmental Accords (The MIT Press, Cambridge, MA, 1998) at 135.
[409] Ibid at 137.
[410] Edward A. Parson *Protecting the Ozone Layer: Science and Strategy* (Oxford University Press Oxford, 2003) at 137.
[411] Brian J. Gareau "A Critical Review of the Successful CFC Phase-Out versus the Delayed Methyl Bromide Phase-Out in the Montreal Protocol (2010) 10 Int. Environ Agreements 217.

amendments and accelerating phase-outs of existing controlled substances through ‘‘adjustments’’ and other consensus-based decisions which, when approved by Parties, took effect automatically without the need for further ratification.[412] The Montreal Protocol was amended in 2016 to phase out HFCs gradually. The first reduction step was to be taken by the EU and other developed countries from 2019, while other developing countries will be required to begin their phase down from 2024.[413]

Turning to the legal nature of the Protocol, the Montreal Protocol had soft and hard elements. The Protocol set forth binding progressive phase-out obligations for the significant ozone-depleting substances for developed and developing countries but adopted a gentle approach with developing countries, allowing them ten years before beginning phase-out. The Montreal Protocol strengthened the legitimacy of ozone depletion protection by providing a body of regulations whose purpose was to control, reduce, and eventually eliminate the production and use of the growing list of ozone-depleting substances.[414] The Protocol has strengthened in the last 28 years through six amendments (London 1990, Copenhagen 1992, Vienna 1995, Montreal 1997, Beijing 1999, Kigali 2016), bringing forward phase-out schedules and adding new substances to the list.[415]

It is submitted that the flexible approach of the Montreal protocol coupled with its definitive targets, scientific and economic understanding of the environmental problem and binding obligations (without prejudice to the CBDR-RC) for states to comply with influenced state actors to comply. Therefore, it is a mix of all the factors above and not just the legal bindingness or rigidity of the Montreal Protocol that made it so influential.

The Montreal Protocol’s design also facilitated compliance. Some authors note a functional linkage between the compliance mechanism and the multilateral fund, which attracted widespread participation of developing countries.[416] The fund, contributed by industrialised nations, helped developing country Parties to meet the incremental costs of phasing out ODS.

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[412] Mario Molina and Others “Reducing Abrupt Climate Change Risk Using the Montreal Protocol and Other Regulatory Actions to Complement Cuts in CO2 Emissions” (2009) 106 PNAS 49, 20617-8.
[413] European Commission “EU Ratifies Kigali Amendment to the Montreal Protocol” 27th September 2018 https://ec.europa.eu/clima/news/eu-ratifies-kigali-amendment-montreal-protocol_en .
[414] Daniel G. McCabe “Comment, Resolving Conflicts Between Multilateral Environmental Agreements: The Case of the Montreal and Kyoto Protocols” (2007) 18 Fordham ENVTL. L. REV. pps 437-438.
[415] Australian Government Department of Environment and Energy “Montreal Protocol on Substances that Deplete the Ozone Layer” http://www.environment.gov.au/protection/ozone/montreal-protocol .
[416] Zhong Zhang, ‘Multilateral Trade Measures in a Post-2012 Climate Change Regime? What Can be Taken from the Montreal Protocol and the WTO’ (2009) 37 Energy Policy at 5105-6.

These funds were an adequate incentive for the developing countries to be part of the Protocol ruling out the need for punitive measures of trade-related sanctions.[417]

The Protocol's design allowed Parties to activate non-compliance procedures against each other either at the instance of the Secretariat or by the party. Unfortunately, proposals for NGOs to activate non-compliance procedures were not warmly received. The recorded violations showed that the Parties activated the procedures and not the secretariat or NGOs.[418] There were, however, issues with the compliance mechanisms, such as: failure to fully report on a timely basis, failure to meet targets and timetables in select countries such as Russia and Central and Eastern Europe, and smuggling of CFC's into Western countries.[419] The Protocol established the implementation committee to deal with non-compliance issues, and interim procedures and mechanisms for determining non-compliance were adopted. These actions were deemed a radical step in international environmental law and a possible precedent setter.[420]

Despite these positive responses to non-compliance, the Protocol's major criticism was the countries' inability to access climate finance. As many developing countries did not have concrete pathways to tapping into international public and private-public finance, it affected compliance. In turn, only a limited number of developing countries had accredited national, regional and sub-national implementing entities to access these funds directly and had to rely on their development partners to prepare project proposals and access financing. This process took time and affected countries' compliance.

Weiss commenting on the Montreal Protocol's implementation, opined that nations have been unusually aggressive and effective in implementing the Montreal Protocol.[421] Weiss adds that the Protocol fostered states' implementation by establishing an implementation committee, developing non-compliance procedures, and expanding the technology and economic assessment panels. These played a crucial role in causing Parties to ratchet up targets and timetables, adding more chemicals to the list of controlled substances and addressing recycling problems.[422]

[417] Ibid.
[418] Edith Brown Weiss above n408 at 147.
[419] Edith Brown Weiss above n408 at 153.
[420] Willem J. Kakebeeke and others "Air and Atmosphere" (1990) 1 YBIEL at 98.
[421] Edith Brown Weiss above n408 at 146.
[422] Ibid.

The Implementation Committee reviewed Parties' submitted reports, responded to targets violations and timetable obligations, and undertook visits to countries believed to be non-compliant. In addition, the Committee could discretionally use incentives (assisting countries to comply) or punishment (warning and suspension of rights and privileges under the Protocol) to address non-compliance. One such incentive that aided implementation was establishing dedicated funding to enable the Multilateral Fund (MLF) phase-out.[423]

The implementation committee also reviewed instances of non-compliance against the backdrop of reporting procedures and substantive obligations as several countries had initially failed to provide the required reports or failed to present complete reports on time. For Article V countries (developing countries), the committee provided them with incentives to develop their capacity to report. The committee followed up by asking the implementation bodies and funding the secretariat to give progress reports on how the assistance was helping countries' capacity to report.[424] Through UNEP, the Vienna Convention also launched a quarterly newsletter called *Ozone Action* to provide information on specific developments in public and private sectors regarding advancements in neo-technology and technology cooperation with developing countries.

Regulatory actions stemming from the Montreal Protocol reduced global ODS production and consumption. It allowed for substitute gases that were less harmful to the ozone and increased alternative technology, such as the ODS replacement used in degreasing and cleaning operations containing no ODS compounds. By 2010, the CFC-11 equivalent compared to 1988 peak levels of total ODS had reduced by twenty-six per cent and further projected to reduce to only nineteen per cent of its peak. A recent study has also shown a decline in global CFC-11 emissions during 2018-2019.[425]

As of December 2019, the MLF received contributions from developed countries or non-Article V countries, totalling over US$ 4.07 billion.[426] The Fund also received additional voluntary contributions amounting to US$25.5 million from a group of donor countries to finance fast-start activities to implement the HFC phase-down. In addition, the Montreal Protocol influenced countries' implementation efforts by improving and redesigning its

[423] Mario Molina and others above n412 at 20618.
[424] Edith Brown Weiss above n408 at 153.
[425] Stephen A. Montzka and Others "A Decline in Global CFC-11 Emissions During 2018-2019" (2021) 590 Nature at 429.
[426] Multilateral Fund "Convening of the 85th, 86th and 87th Meetings (Updated) http://www.multilateralfund.org/default.aspx .

internal implementation mechanisms. While the Protocol's implementation mechanism can be improved, there have been tangible results demonstrating influence.

The non-compliance procedure of the Montreal Protocol has been commended as an unprecedented procedural mechanism that enforced international obligations to all by dispensing with the requirement for states to first exhaust domestic legal channels before approaching the regime's enforcement committee.[427] The Protocol applied the multilateralism approach of informal persuasion and 'mobilization of shame' employed by global institutions to seek feasible and amicable solutions. The Protocol recognised sovereignty concerns and was flexible and decisive. It also gradually established a close link to international financial mechanisms such as the MLF to strengthen its enforcement mechanism.[428] It is surmised that the Montreal Protocol was self-enforcing in providing incentives for compliance and financial consequences for non-compliance.[429] On the other hand, it employed trade restrictions that discouraged free-rider behaviour.[430]

In examining the economic structure of the Montreal Protocol, Sunstein suggested that the cost-benefit advantage of the Protocol was mainly responsible for the success of the Montreal Protocol and should be considered in the creation of future environmental treaties.[431] In addition, she argued that the cost-benefit advantage made the Montreal Protocol more advantageous than the Kyoto Protocol. For example, the projected cost for executing the Montreal Protocol objectives was US$21 billion, a fraction of the benefits, compared to the Kyoto Protocol that cost US$325 billion and exceeded the benefits.

The Montreal Protocol's economic structure also provided for trade linkages that promote cooperative research and development. Article 9 of the Montreal Protocol required Parties to cooperate to promote research, development, and information exchange on the best technologies, to improve the containment, recovery, recycling, or destruction of controlled substances or otherwise reduce their emissions.[432]

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[427] Osamu Yoshida "Soft Enforcement of Treaties: The Montreal Protocol's Noncompliance Procedure and the Functions of Internal International Institutions" (1999) 10 Colorado Journal of International Environmental Law and Policy 1 at 98.
[428] Ibid at 100.
[429] Ibid.
[430] Brian J. Gareau above n411 at 217.
[431] Cass R. Sunstein above n351 at 44 .
[432] Montreal Protocol on Substances that Deplete the Ozone Layer 1522 UNTS 3 (opened for signature 16 September 1987 and entered into force 1 January 1989), art 9.

Non-parties to the Montreal Protocol were not precluded from accessing these technologies, and even though Parties to the Agreement had a right to withhold the information on their recent research and development (R&D) findings to non-parties, it was beneficial for the common good to refrain from having such restrictions. Therefore, when R&D technologies that limit the production and usage of controlled substances are widely available, the costs to the countries acceding to the Agreement would drop.[433] In addition, R&D sharing becomes an incentive for the first countries to sign the Agreement because they can earn a return from the lower costs of alternative chemicals.

The Montreal Protocol also tackled trade leakages, a situation where non-signatories to an environmental agreement take a competitive advantage over signatories that have decided to reduce their pollution, per their obligations. For example, instead of phasing out CFCs, India purchased an entire CFC chemical plant from the US and established three new CFC manufacturing plants, claiming that it was for domestic needs whereas it was exported to other developing nations.[434] The Montreal Protocol also used trade restrictions to ban trade between signatories and non-signatories of CFC-containing substances.[435] To conclude, the Protocol's robust economic structure influenced countries' transition to less harmful chemical substances by cleverly managing industry and powerful nation-states' interests and persuading them of the economic viability of the change to less harmful production practices.[436]

Parties' cooperation with the Montreal Protocol was commendable, encouraging parallel discussions among industries and governments regarding investments and market risks.[437] The Protocol provided an arrangement where informal and formal discussions offered a forum for different approaches, ideas, and positions to be clearly and freely expressed, unhindered by country positions. The cost-benefit mechanism also maximised participation, an example was the US, a 'self-interested welfare maximiser', that reduced CFC emissions even before the Protocol took effect.[438] The US' participation was sufficient, as one of the greatest producers of CFCs and hydrochlorofluorocarbons (HCFCs), and the initial European scepticism gave way to compliance with the Montreal Protocol's objective.[439] In a nutshell, industries and

[433] Scott Barrett above n397 at 310.
[434] Scott Barrett above n397 at 321.
[435] Scott Barrett above n397 at 313.
[436] Brian J. Gareau above n411 at 227.
[437] Tina Birmpili "Montreal Protocol at 30: The Governance Structure, the Evolution, and the Kigali Amendment" (2018) 350 C.R. Geoscience 425 at 430.
[438] Cass R. Sunstein above n351 at 6.
[439] Cass R. Sunstein above n351 at 17-18.

governments participated maximally in negotiating and complying with the Protocol's objectives demonstrating the Protocol's influence on countries.

The Montreal Protocol's influence on the states' behaviour varied. For some countries, it was immediate, while for others, it took years. For example, it took British scientists seven extra years to verify the actual existence of a hole in the ozone layer attributed to industrial chemicals and capable of changing the atmosphere on a global scale. Europe only took a radical turn in 1994 and adopted a regulation to control ozone-depleting substances that it amended in 2000 with even stricter provisions than those of the Montreal Protocol. The amended regulation set out controls for the production, trade, use, and recovery of ozone-depleting substances and included detailed reporting requirements. The EU regulation also included inspections and penalties while making way for new substances to be included in the control scheme.[440] The apparent behavioural change from countries such as the EU, the US, and the United Kingdom, demonstrates the Protocol's influence on the behavioural effects of Parties.

Not much has been written about fragmentation and the Montreal Protocol specifically. While fragmentation may not be inimical to a regime's influence, it can impact monitoring and compliance. The Montreal Protocol was designed so that it applied to countries that were Parties to the GATT. In addition, the synergy between the trade mechanisms of GATT and the Montreal Protocol helped ease potential fragmentation issues, especially regarding trade. However, the Protocol can be improved to increase synergies with other multilateral environmental agreements, such as the Paris Agreement, Stockholm Convention on Persistent Organic Pollutants (POPs), Basel Convention on Waste, International Plant Protection Convention (IPPC) and Rotterdam Convention on chemicals.[441]

The Montreal Protocol designed and executed suitable environmental programs that aided compliance. The United Nations Industrial Development Organisation (UNIDO) helped the developing countries phase out more than one-third of ODS' by introducing new ozone-friendly technology and equipment and providing training on technology use and safety.[442] Through the MLF, GEF and bilateral contributions, UNIDO has completed over 1340 Montreal Protocol projects and is currently implementing management for the phase-out of HCFCs in

[440] European Commission "The Montreal Protocol" (European Communities, 2007) https://ec.europa.eu/clima/sites/clima/files/docs/montreal_prot_en.pdf ; detailed country by country actions contained in appendix.
[441] Ibid.
[442] UNIDO "Montreal Protocol" https://www.unido.org/our-focus/safeguarding-environment/implementation-multilateral-environmental-agreements/montreal-protocol .

70 countries. The UNDP also aided in implementing the Protocol by assisting 120 partner countries to access $733.5 million in funding from different sources.[443] Finally, the programme eliminated 67,870 tonnes of ODS while also reducing 5.08 billion tonnes of CO2-eq GHG emissions by rendering technology transfer and technical assistance, formulating and implementing country and sector strategies, and capacity building.

The Montreal Protocol showed commitment to environmental sustainability in its mandate to phase out ODS. The phase-out is an essential component of the UNDP's efforts to achieve sustainable, inclusive and resilient human development. The Protocol has also supported countries to achieve several SDGs, namely SDG 1, 2, 3, 7, 9, 12 and 13.[444] Countries also responded to these programs indicating the Protocol's influence on them.

There is no express mention of climate justice within the provisions of the Montreal Protocol, however, the Protocol demonstrated fairness by delaying the phase-out schedule for developing countries by ten years as long as their CFC consumption remained below .3 kg per capita. Also, while not expressly mentioned, the ODS phaseout's action benefits future generations-another consideration for climate justice. According to NASA, there is proof of ozone hole recovery due to the ODS ban.[445] The Montreal Protocol has therefore been successful in engendering climate actions by itself and through countries' efforts.

From the preceding, the Montreal Protocol, in contrast to the Kyoto Protocol, fared better in garnering participation based on its inclusionary and flexible design. Similar to the Kyoto Protocol, it had firm enforcement mechanisms such as its trade restrictions and non-compliance procedures, which could be instituted at first instance with the IER. This novel approach positively distinguished it from the Kyoto Protocol. While climate finance barriers impacted the efficiency of the Montreal Protocol's implementation parameter, the IER marginally remedied the situation through its agency UNIDO, which assisted developing countries to transition from HFCs. To conclude, the Montreal Protocol ticked many of the parameters suggested by scholars to be determinants of regime influence on Parties' actions. The Protocol

[443] UNDP "Montreal Protocol" http://www.undp.org/content/undp/en/home/sustainable-development/environment-and-natural-capital/montreal-protocol.html .
[444] UNDP "The Sustainable Development Goals (SDGs) and the Montreal Protocol on Substances that Deplete the Ozone Layer" https://www.undp.org/content/dam/undp/library/Environment%20and%20Energy/Ozone%20and%20Climate/UNDP%20MP%20-%20SDGs.pdf .
[445] NASA "NASA Study: First Direct Proof of Ozone Hole Recovery Due to Chemicals Ban" https://www.nasa.gov/feature/goddard/2018/nasa-study-first-direct-proof-of-ozone-hole-recovery-due-to-chemicals-ban .

is by no means perfect and needs some work mainly in monitoring, however, it continues to be aggressive in its ambition for a complete HFC phase-out and has set 2030 as the year to achieve this target.[446] Given the preceding, the Montreal Protocol has had more significant influence over countries than the Kyoto Protocol.

IV. The Paris Agreement: Learning from Past Mistakes?

Architecturally speaking, some refer to the Paris Agreement as a bottom-up approach to addressing climate change. Eckersley, for example, argues that the State is still the preeminent political institution for addressing environmental problems, as they remain the gatekeepers of the global order.[447] Hare and others believe that the top-down approach favouring a strong IER is the first-best approach.[448] They argue that 'a strong top-down' regime can provide the necessary confidence that countries need to cut down on emissions and facilitate early actions.

The introductory chapter has explained the hybrid structure of the Paris Agreement that allows for flexibility in the discharge of Parties obligations in consonance with the CBDR principles. Indeed Article 2(2) of the Paris Agreement provides that the "Agreement will be implemented to reflect the principle of equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances". However, in terms of the Agreement's actual goal to limit global average temperature rises to below 2°C, sceptics argue that it would result in severe consequences of 'actual loss and damage' for several countries and populations; in other words, the goal is not ambitious enough.[449]

Considered an internationally legally binding treaty, its provisions contain varying levels of 'bindingness' which can be detected in the wordings used in the Agreement's provisions. Because of these varying levels, some scholars state that the Paris Agreement contains binding obligations of conduct but not of result.[450] Other scholars opine that the Paris Agreement binds countries to a general goal of reduced carbon emissions even though the implementation of that

[446] David W. Fahley "The Montreal Protocol Protection of Ozone and Climate" (2013) 14 Theoretical Inq. L. 25 at 33.
[447] Robyn Eckersley *The Green State: Rethinking Democracy and Sovereignty* (MIT Press, 2004).
[448] William Hare and Others The Architecture of the Global Climate Regime: A Top-Down Perspective (2010) 10 Climate Policy 6 at 603.
[449] Jorge E. Viñuales and others "Climate Policy after the Paris 2015 Climate Conference" (2017) 17 Climate Policy 1 at 2.
[450] Lisa Benjamin "The Legal Structure of the Paris Agreement- Flexible and Fit or Fragile and Fading?" (Historical Climatology, March 26, 2020) http://www.historicalclimatology.com/features/the-legal-structure-of-the-paris-agreement-flexible-and-fit-or-fragile-and-fading

goal is left non-binding.[451] It is argued that the two additional principles of the Paris Agreement in Article 4 (3) that urges Parties' NDCs to progress from the current NDCs and further reflect the 'highest possible ambition' is a potent and powerful tool.[452] This means that although implementation is left non-binding, the combined implication of both principles signal to Parties that their efforts should progress over time and that they have a duty or responsibility to aim for the highest possible ambition in pursuing climate action while being mindful of the equitable principle of CBDR-RC and national circumstances.

In terms of its institutional arrangement, the Paris Agreement is delivered by the COP, serving as the Meeting of the Parties to the Paris Agreement (CMA), the UNFCCC Secretariat, the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI). The CMA oversees the implementation of the Paris Agreement and takes decisions to promote its effective implementation.[453] Other institutions may serve the Paris Agreement at the discretion of the CMA according to the Paris Agreement.

The Paris Agreement is a treaty under international law observable from formal indicators such as the Agreement's provision for entry into force and its being subject to ratification, not unlike the usual procedures for treaties.[454] Broadly, the Paris Agreement gives effect to the ultimate objective of the UNFCCCC to manage global risks associated with climate change.[455] Article 2 of the Paris Agreement presents a threefold dimension of the Agreements central aim: to strengthen the global response to the threat of climate change by holding global average temperature increases to well below 2ºC while pursuing efforts to limit the increase to 1.5ºC; increasing Parties' ability to adapt to climate change impacts by fostering climate resilience and developing low GHG emissions that does not threaten food production, and making finance flows consistent with a low GHG emissions and climate-resilient development pathway.[456]

To achieve the aim of Article 2 of the Paris Agreement, Parties are to undertake and communicate ambitious efforts. These efforts broadly include the preparation, communication

[451] Michael D. Ramsey, Evading the Treaty Power? The Constitutionality of Nonbinding Agreements (2016) 11 Florida Int'l U. L. Rev. 371.
[452] Christina Voigt and Felipe Ferreira "Dynamic Differentiation": The Principle of CBDR-RC, Progression and Highest Possible Ambition in the Paris Agreement" (2016) 5 Transnational Environmental Law 2 at 295.
[453] UNFCCC "What are Governing, Process Management, Subsidiary, Constituted and Concluded Bodies?" https://unfccc.int/process-and-meetings/bodies/the-big-picture/what-are-governing-process-management-subsidiary-constituted-and-concluded-bodies
[454] Ralph Bodle and Others "The Paris Agreement: Analysis, Assessment and Outlook" (2016) 1 CCLR 5 at 6.
[455] Halldor Thorgeirsson Objective (Article 2.1) in Daniel Klein and others (eds) *The Paris Agreement on Climate Change: Analysis and Commentary* (Oxford University Press, United Kingdom, 2017) at 123.
[456] The Paris Agreement above n35, art 2.

and maintenance of successive NDCs. Further, Parties are to pursue domestic mitigation measures to achieve its objectives with developed countries taking the lead by undertaking economy-wide absolute emission reduction targets.[457] Developing countries are also to continue enhancing mitigation efforts progressing to economy-wide emission reduction targets in accordance with national circumstances. In the light of the Agreement's CBDR principles, least developed countries and small island countries *may* prepare and communicate their strategies and plans for emissions reductions that reflect their special circumstances.

Some scholars have stated that Article 2 does not impose any binding obligations on Parties but only frames a collective goal in aspirational language despite contrary suggestions.[458] Article 4 of the Paris Agreement, however, sets clear obligations for Parties. Article 4(2) for example, provides that "*each Party shall prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions*."[459] This is to be submitted every five years in accordance with decision 1/CP.21 and any relevant decisions of the CMA.[460]

Some scholars argue that despite the bindingness of this provision, it creates an obligation of conduct rather than one of result.[461] Article 4(8) of the Agreement also obligates Parties to provide the information that can aid clarity, transparency and understanding in accordance with the relevant decisions of the CMA. It is significant to note that although Parties are obliged to submit clear and transparent NDCs,[462] these NDCs are not formally part of the Paris Agreement, even though the Agreement refers to them.[463] It is suggested that the content of NDCs are not binding and there is no strict obligation to implement the exact content of the NDCs, although they should in good faith make efforts to achieving their objectives. In other words, implementing NDCs is not a part of the Paris Agreement, rather, the Paris Agreement and COP Decision provide binding, procedural rules for the preparation and assessment of

[457] The Paris Agreement above n35, art 4.
[458] Navraj Singh Ghaleigh "Paris Agreement, Article 2: Aims, Objectives and Principles" Research Paper Series No 2020/02 1 at 13. See also Alexander Zahar, 'The Paris Agreement and the Gradual Development of a Law on Climate Finance' (2016) 6 Climate Law 75, 82.
[459] The Paris Agreement above n35, art 4(2).
[460] The Paris Agreement above n35, art 4(9).
[461] Lavanya Rajamani and Jacob Werksman "The Legal Character and Operational Relevance of the Paris Agreement's Temperature Goal" (2018) 376 Phil. Trans. R. Soc. A at 6.
[462] The Paris Agreement above n35, art 4(9).
[463] Ralph Bodle and Others above n454 at 13.

NDCs – not their execution.[464] Some scholars buttress that these provisions relating to the preparing, communicating and updating of the NDC, providing necessary and transparent information and reporting according to the yet to be established rules under the ETF and regularly providing a national GHG inventory and the information necessary to track progress in the implementation and achievement of NDCs, amount to legally binding obligations.[465] Bodansky notes that these provisions encompass comparatively strong procedural obligations.[466]

To facilitate Parties' implementation and compliance with the obligations set out in the Paris Agreement, Article 15 establishes a mechanism to facilitate implementation and promote compliance with the provisions of the Agreement. These obligations can be found in several Articles of the Paris Agreement: Article 4,[467] 9(5) and (7)),[468] and 13(7) and (9).[469] The mechanism consists of a committee that is expert-based, facilitative in nature, non-adversarial and non-punitive.[470] In other words, the Committee is not an enforcement or dispute settlement mechanism and does not impose penalties or sanctions. The Committee referred to as the Paris Agreement Implementation and Compliance Committee (PAICC) is to operate under the CMA's adopted modalities and procedures and annually report to the CMA, and the first review of the Committee's modalities and procedures is scheduled for 2024.[471]

The mandate of the PAICC is to facilitate implementation and promote compliance with the Paris Agreement. Its function includes considering issues related to the implementation of or compliance with the Paris Agreement provisions on the basis of a written submission from that Party with respect to its own implementation of and/or compliance with any provision of the

[464] Climate Focus "The Paris Agreement Summary" December 28, 2015 https://climatefocus.com/sites/default/files/20151228%20COP%2021%20briefing%20FIN.pdf at 4.
[465] Daniel Bodansky "The Legal Character of the Paris Agreement" (2016) 25 Review of European, Comparative and International Environmental Law 2 at 142.
[466] See The Paris Agreement above n35, art 4(2), 4(3), 4(8), 4(9), 4(13) and 13(7)
[467] Preparing, maintaining, and communicating NDC's; mandatory communication every five years.
[468] Developed country Party obligation to provide financial resources to developing countries in both mitigation and adaptation in continuance of their existing obligations.
[469] Parties are to regularly provide a national inventory report of anthropogenic emissions by sources using good methodologies and provision of any necessary information to track progress made in implementing and achieving NDCs; developed countries are to provide information- financial, capacity building and technological transfer support to developing country parties; See Decision 20/CMA.1, para 22
[470] The Paris Agreement above n35, art 15.
[471] Decision 20/CMA.1; UNFCCC "Committee to Facilitate Implementation and Promote Compliance Referred to in Article 15, Paragraph 2, of the Paris Agreement" https://unfccc.int/process-and-meetings/bodies/constituted-bodies/committee-to-facilitate-implementation-and-promote-compliance-referred-to-in-art-15-para-2-of-the/committee-to-facilitate-implementation-and-promote-compliance-referred-to-in-article-15-paragraph-2 .

Paris Agreement.[472] The Committee can suo motu initiate the consideration of issues where a Party has not communicated or maintained an NDC based on the most recent communication in the public registry referred to in Article 4(12) of the Paris Agreement.[473] Further, where Parties have not submitted a mandatory report or communication of information under Article 9(5), 13(7)(9) or 9(7) or participated in the facilitative, multilateral consideration of progress based on secretariat-provided information, the Committee will initiate the consideration of issues.[474] The Committee can also initiate a consideration of issues based on recommendations made by expert review teams such as the TER.[475] Parties can also initiate a consideration of issues in relation to itself but this is potentially doubtful based on the records of the Kyoto Protocol's Compliance Committee's referenced party initiation which was never utilised in the history of the committee.[476]

In the spirit of acknowledging national sovereignty and promoting non-adversarial engagement, the Committee may with the consent of the Party concerned engage in a facilitative consideration of issues where there is persistent inconsistencies in the Party's submitted information. It is important to signal that the facilitative rules and procedures in line with the MPG in Decision 20/CMA 1 is still being developed, as such it is unclear what qualifies as persistent inconsistencies.

Taking into account, Article 13(14)(15)[477] of the Paris Agreement and the flexibilities allowed for, the Committee's consideration will be based on recommendations made in final technical expert review (TER) reports prepared under Article 13(11)(12).[478] The PAICC's work is quite distinct from that of the TER in the sense that it does not investigate the contents of communications, contributions, reports and information set out in paragraph 22(a) (i-v) of Decision 20/CMA1.[479] To avoid the duplication of the PAICC's mandated work, the modalities and procedures provide that the Committee should take into account the work being undertaken by other bodies and under other arrangements as well as through forums serving or established

[472] Decision 20/CMA.1 FCCC/PA/CMA/2018/3/Add.2, Para 20
[473] Ibid Para 22(a)(i).
[474] Ibid Para 22(a)(ii)(iii).
[475] Ibid.
[476] Lisa Benjamin and Others "Article 15: Compliance Mechanism" in Geert Van Calster and Leonie Reins (eds) *The Paris Agreement on Climate Change: A Commentary* (Edward Elgar Publishing, 2021) at 356.
[477] Provides for support to developing countries for the implementation of Article 13 and for the building of developing countries' transparency -related capacity on a continuous basis.
[478] FCCC/PA/CMA/2018/3/Add.2, Para 22(b)
[479] FCCC/PA/CMA/2018/3/Add.2, Para 23.

under the Paris Agreement.[480] This provision anticipates the potential duplicity of work by the PAICC and the ETF and implies that the each committee, team or forum need to work together or keep abreast of each other's work to avoid duplicity of functions.

Similar to the flexibility that the Montreal Protocol implementation mechanism offered developing countries to meet their objectives, the PAICC in the exercise of its functions is to pay particular attention to the respective national capabilities and circumstances of Parties, especially the least developed countries and small island developing States, at all stages of the process, in accordance with the provisions of the Paris Agreement.[481]

The PAICC has met eight times in total, five times formally and three times informally. These meetings have been conducted virtually as the coronavirus pandemic has prevented in-person meetings which has impacted its work as progressing in the development of its draft rules of procedure in accordance with the modalities, procedures and guidelines for adoption at CMA may be achieved more effectively in person.[482] In its annual report to the CMA at its third session, the PAICC has agreed on its draft rules of procedure of its institutional arrangements and recommended that CMA invites the PAICC to accelerate its work on the remaining rules of procedure in accordance with paragraphs 17 and 18 of decision 20/CMA.1.[483]

There have been some criticisms against the construct of Article 15 that suggest that without an enforcement function similar to Article 8 of the Kyoto Protocol's, the Paris Agreement risks becoming duplicative, wasteful or impotent.[484] It is important to note that MPGs of the implementation mechanisms of the Paris Agreement such as the ETF and the PAICC provide for collaboration and sharing of information among the committees and the review teams to avoid duplicity. Another criticism is that unlike the Kyoto Protocol that provided for agreed quantifiable emissions limitation and reduction commitments (QELRCs) in Annex B, the Paris Agreement allows each party to determine its contribution individually. This method adopted by the Paris Agreement acknowledges state sovereignty and autonomy and gives guidance on

[480] Ibid Para 19(d).
[481] Ibid Para 19(c).
[482] UNFCCC "Annual report of the Paris Agreement Implementation and Compliance Committee to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement" FCCC/PA/CMA/2020 (1-12 November 2021)
[483] UNFCCC "Annual report of the Paris Agreement Implementation and Compliance Committee to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement" FCCC/PA/CMA/2021/6 (31-12 November 2021)
[484] Alexander Zahar "A Bottom-Up Compliance Mechanism for the Paris Agreement" (2017) 1 Chinese Journal of Environmental Law at 77.

the scope of Parties' NDCs and their level of ambition ("highest possible ambition").[485] It is similar to the Montreal Protocol's flexibility on how chemical regulations applied to developed and developing countries. It is carefully structured to fit with Parties' NDCs.[486] However, it differs from both the Montreal and Kyoto Protocol that include ultimatums and specific regulatory parameters. While Parties must submit their NDCs and mandatorily report their emissions reductions action, there is no corresponding obligation to keep emissions below a certain threshold, unlike the Montreal Protocol. The Committee's facilitative, rather than punitive response to a failure to submit mandatory reports or information can be criticised, however, it is argued that Parties still want to be regarded highly by peers and may participate and comply with the Committee proceedings. Therefore, the facilitative Committee proceedings can encourage compliance without the angst associated with some Parties' response to the Kyoto Protocols rigid stance.

Similar to the Kyoto and Montreal Protocol, the financial mechanism of the Paris Agreement enables implementation. Article 2 of the Paris Agreement highlights the necessity and role of finance as an important aspect in the implementation of UNFCCC commitments. Further, climate finance is acknowledged as a key component for the international climate regime effectiveness. Article 9 of the Paris Agreement further supports Article 2 by affirming the continuing necessity for climate finance, particularly the need for developed countries to support low carbon transition and developing countries vulnerable to climate change impact.

Article 13 of the Paris Agreement also establishes the ETF to support effective implementation.[487] The ETF builds on the transparency-related arrangements, including the reporting and review process, under the UNFCCC to ensure that mitigation and adaptation actions are transparent and the support given to countries is also transparent. The transparency framework provides flexibility in carrying out its implementation of Article 13 particularly with regards to the different needs and capacities of Parties.[488] The rules for the implementation of the ETF are set in the MPGs adopted in the Katowice Climate Package through decision 18/CMA. There are eight guiding principles for the MPGs of the ETF under the Paris Agreement.[489] These principles enable the functioning of the ETF to be facilitative, non-

[485] Christina Voigt and Xiang Gao "Accountability in the Paris Agreement: The Interplay between Transparency and Compliance" (2020) 1 Nordic Environmental Law Journal at 35.
[486] Christina Voigt and Felipe Ferreira 'Differentiation in the Paris Agreement" (2016) 1 Climate Law at 58.
[487] The Paris Agreement above n37, art 13.
[488] Article 13(3) particularly recognizes the special circumstances of least developed countries and small island developing states.
[489] FCCC/PA/CMA/2018/3/Add.2 Decision 18/CMA Annex Paragraph B

intrusive, non-punitive and they include enhancing the transparency arrangements under the Convention, recognizing LDCs and SIDS circumstances and being flexible; recognizing the importance of facilitating improved reporting and transparency over time; promoting transparency, accuracy, completeness, consistency and comparability; avoiding duplication of work and undue burden on Parties and the Secretariat; ensuring that Parties maintain at least the frequency and quality of reporting in accordance with their respective obligations under the Convention; ensuring that double counting is avoided; and ensuring environmental integrity.

The import of the ETF's functions that includes promoting a flexible, non-intrusive, non-punitive approach to enable Parties discharge their obligations under the Paris Agreement, enables cooperation of Parties. Following the regime theory which indicates enhancement of cooperation amongst Parties as an indicator of regime influence, the ETF's role when fully operational can be a good indicator of the Paris Agreement influence. This is achievable as Parties are familiar with many of the requirements of the ETF, particularly developed country Parties, as they have had experience with the MRV requirements under the UNFCCC and the Kyoto Protocol. For developing countries that are not as familiar with the MRV process, the ETF MRV requirements provide for flexibility that reflects the principles of equity and CBDR-RC for developing countries.

The ETF's transparency of action purpose is to provide a clear understanding of climate change action, considering Art 2 of the Paris Agreement and to enable clarity and tracking of progress towards achieving Parties' NDCs, while its transparency of support purpose is to provide clarity on the support received and provided by relevant individual Parties in the context of climate change actions under Article 4, 7, 9, 10 and 11 of the Paris Agreement. The support includes the provision of a full overview of financial support that will feed into the global stocktake under Article 14.[490] The stocktake is a global level assessment to determine progress being made, at a collective level, towards achieving the purpose and long-term goals set out in Article 2 of the Agreement.[491]

Under the ETF, Parties are obligated to regularly provide national inventory report of anthropogenic emissions by sources and GHG removals by sinks, prepared using IPCC good practice methodologies and agreed upon by the CMA, and any information necessary to track

[490] The Paris Agreement above n35, art 13(6).
[491] UNFCCC Secretariat "Reference Manual for the Enhanced Transparency Framework under the Paris Agreement" https://unfccc.int/sites/default/files/resource/ETFReferenceManual.pdf

progress made in implementing and achieving its NDC under Article 4.[492] Developed country Parties are required to provide information on any financial, technological or capacity building support they have provided developing country Parties and developing country Parties are also to provide information on any support they have received in the aforementioned categories in addition to any needs they may have.[493] This information will feed into the global stocktake which will be utilised during the facilitative processes of both the ETF and PAICC to encourage implementation of Article 4 of the Paris Agreement.

Parties are required to submit a Biennial Transparency Report (BTR) as part of its reporting requirements, pursuant to the MPGs for the transparency framework for action and support referred to in Article 13.[494] Countries have adopted the MPGs necessary to operationalize the ETF at COP26.[495] The review of the first BTR shall be in country and subsequent ones may be either centralised or a desk review. BTRs should be submitted at least twice in a 10-year period. The first BTR of Parties must be submitted no later than December 31, 2024.[496] Countries will complete their existing transparency reports by December 31, 2022 (for developed countries) and December 31, 2024 (for developing countries).[497] Following the submission of the BTRs, the Technical Expert Review (TER) will be initiated. After the TER report is published, the facilitative, multilateral consideration of progress (FMCP) of Parties will be conducted.

The TER requirement is an integral part of the ETF which Parties are obligated to participate in.[498] Distinct from the PAICC, the TER can review the communications, information submitted by Parties such as the NDCs to check for consistency with the MPGs and to identify areas of improvement for that Party. The TER team considers the Party's implementation and achievement of its NDC, however, this review has to be done in cognisance of respective national capabilities and circumstances of developing country Parties.[499] Similar to the PAICC, the TER cannot review the adequacy or appropriateness of a Party's NDC, its domestic actions,

[492] The Paris Agreement above n35, art 13(7)
[493] The Paris Agreement above n35, art 13(9-10)
[494] The BTR includes information on the GHG inventory, the accounting approach(es) selected and the indicators used for tracking progress and support provided and received), and the review of that information through a technical expert review and FMCP, all of which enhance the integrity of implementation of the Agreement. For more details see UNFCCC "Reference Manual for the Enhanced Transparency Framework under the Paris Agreement" (2020) https://unfccc.int/sites/default/files/resource/ETFReferenceManual.pdf
[495] UNFCCC "Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its third session, held in Glasgow from 31 October to 13 November 2021 FCCC/PA/CMA/2021/10/Add.2.
[496] Decision 18/CMA.1, para. 3.
[497] Decision 1/CP.24, para. 38.
[498] The Paris Agreement above n35, art 13(11)
[499] The Paris Agreement above n35, art 13 (11)(12)

or support provided (in terms of finance, technology transfer and capacity building). While the TER process can aid Parties' implementation of their NDCs, it falls short in galvanising Parties to ramp up their ambition in view of the urgency of action highlighted in the IPCC's sixth assessment report.

This transparency and accessibility of the communications and reports of Parties can motivate countries to increase their climate ambition and efforts. The transparency also builds trust and confidence that Parties are striving to meet their climate targets contained in their NDCs. Where Parties do not provide these mandatory communications, the PAICC may initiate procedures as well or this may be referred to the PAICC by the TER or other review experts.

Some scholars suggest that the ETF mechanism can enhance implementation by addressing the challenges to implementation and capacity problems, maintaining a level playing field amongst all Parties and building trust.[500] A remarkable feature of the ETF is its design that balances providing a space for Parties to share implementation experiences for mutual learning and creating peer pressure amongst Parties to improve their climate action performance.[501] Another beneficial aspect of the ETF is the flexible format of its TER which can be carried out as a centralised review, that is, from a single centralised location, an in-country review where the review is conducted in the country of the Party undergoing TER, a desk review where the TER team conduct the review remotely from their respective countries and finally a simplified review where the Secretariat undertakes an initial assessment of a Party's national inventory reports (NIR) for consistency and completeness with the MPGs which will be form part of the consequent TER of the Party's NIR.[502] For the first time, the ETF will review all the Parties' implementation progress through their submitted reports which is a notable step in increasing transparency around national and global emissions reductions actions and improving data.

Article 14 of the Paris Agreement also aids Parties' implementation of the Paris Agreement. In more detail the provision states that the CMA shall periodically take stock of the Agreement's implementation to assess collective progress of achieving the Article 2 objective. The stocktake will utilise the best available science, be conducted in the light of equity which is in consonance with the CBDR-RC and in a comprehensive and facilitative manner considering mitigation, adaptation and the means of implementation and support with regard to the best available

[500] Sebastian Oberthur and Eliza Northrop "The Mechanism to Facilitate Implementation and Promote Compliance with the Paris Agreement: Design Options" (World Research Institute Working Paper, 2018) at 6.
[501] Christina Voigt and Xiang Gao above n489 at 34.
[502] Decision 18/CMA 1, paragraph 151-155.

science and equity considerations.[503] The rationale of this stocktake is to inform Parties of their progress and motivate the enhancement of their NDCs and international cooperation for climate action.[504] The first global stocktake is in 2023 and will take place every five years afterwards.[505] The global stocktake is described as being 'at the heart of the ambition cycle', in the sense that it is expected to supply the evidence base that will better or more closely align national and global interests.

The global stocktake can enhance climate finance support from both developed countries and other Parties who are encouraged to provide financial support to developing countries to enable them mitigate and adapt to climate change impacts. This is possible through a conjunction of the global stocktake that reviews progress toward the global climate finance goal and the ETF which provides clarity on provided and received support. It is expected that a combination of the stocktake and the ETF mechanism can provide markets with confidence that low-carbon opportunities are attracting investments.[506]

In terms of compliance with Article 4(2) of the Paris Agreement, 194 first NDCs have been recorded in the NDC registry including NDCs from Eritrea and Iraq who are yet to become parties.[507] as of April 2022, 131 countries have submitted new NDC targets.[508] And 91.1% of global emissions and 72 percent of the global population are covered by the new NDC submissions. 22 of these countries submitted stronger NDC targets.[509]

Just as the ETF aids the implementation of the Paris Agreement, the detailed guidance on the reporting and review processes for the information to be submitted by Parties makes it possible for the ETF to track the progress made by each country. The guiding principles of the ETF's MPGs, are designed to ensure that the information received from Parties are reported in a timely fashion and reviewed. Parties have agreed to common reporting tables for national GHG inventories; common tabular formats (CTF) for tracking progress towards NDCs and climate finance, technology transfer and capacity building; outlines of the biennial transparency report (BTR), national inventory document and technical expert review report; and a training

[503] The Paris Agreement above n35, art 14(1).
[504] The Paris Agreement above n35, art 14(3).
[505] The Paris Agreement above n35, art 14(2).
[506] Lavanya Rajamani and Jacob Werksman above n461 at 10.
[507] UNFCCC "Nationally Determined Contributions: The Paris Agreement and NDCs" https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs/nationally-determined-contributions-ndcs#eq-4
[508] Climate Action Tracker "Climate Targets: Status of the NDC Update Process" https://climateactiontracker.org/climate-target-update-tracker/
[509] Ibid.

programme for the technical review experts which helps the review process to be as robust and accurate as possible.[510]

The reporting and review process of the ETF mechanism serves as a monitoring tool to track Parties' progress. The Paris Agreement's monitoring mechanism is well designed to ensure Parties are supported in the process of implementing their NDCs. The TER team who are trained review the information submitted by Parties to ensure that they are consistent with the common reporting tables, format and outline of the various reports and communications that Parties are to submit.[511] The PAICC is also instrumental in the review process as it liaises with lead reviewers when identifying cases of significant and persistent inconsistencies of Parties' submitted information referred to in Decision 20/CMA.1, annex, paragraph 22(b).

Moving on to consider the economic structure of the Paris Agreement, it is beneficial to examine the market mechanisms and the financial mechanisms of the Paris Agreement and how they might be influential. The Paris Agreement, similar to the Kyoto Protocol, has economic incentives and trade-offs under the CDM. Article 6 of the Paris Agreement provides for voluntary cooperation in the implementation of NDCs using market and non-market approaches. Regarding market approaches, Parties can opt to cooperate with each other on a voluntary basis using internationally transferred mitigation outcomes (ITMOs) towards their NDCs, however this should be geared toward promoting sustainable development, ensuring environmental integrity and transparency.[512] ITMOs is not defined in the Agreement, but can take different forms such as linking emission trading systems (ETSs) across jurisdictions, investment in emission reduction projects, technology transfers and even credits from REDD+ schemes.[513] Parties' initiated voluntary cooperation is backed by Article 4(2)(a) of the UNFCCC that provides that "…Parties may implement such policies and measures jointly with other Parties and may assist other Parties in contributing to the achievement of the objective of the Convention."[514] The cooperative approaches could also include crediting programmes which generate credits for reductions or removals of emissions that are transferable between countries or it could be government-to-government collaboration outside the scope of the

[510] UNFCCC "Reporting and Review under the Paris Agreement" https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-paris-agreement
[511] These are referred to in chapters II to VI of the annex to decision 18/CMA.1
[512] The Paris Agreement above n35, art 6(2).
[513] IISD "Current Status of Article 6 of the Paris Agreement: Internationally Transferred Mitigation Outcomes (ITMOs)" (IISD, December, 2019) https://www.iisd.org/system/files/publications/status-article-6-paris-agreement.pdf .
[514] The Paris Agreement above n37, art 4(2)(a)

crediting programmes that can provide funding or other support for abatement activities in exchange for transfers of resulting mitigation outcomes.[515]

The second market approach covered in Article 6(4-7) of the Paris Agreement provides for a UNFCCC-governed crediting mechanism to incentivise GHG mitigation. Again Parties may voluntarily opt to use this mechanism established under the authority and guidance of the CMA and supervised by the Supervisory Body. Importantly as with Party-initiated cooperative approaches,[516] Article 6(5) discourages double counting where emission reductions resulting from the mechanism referred to in Article 6(4) shall not be used to demonstrate achievement of the host Party's NDC if used by another Party to demonstrate achievement of its NDC. Under the UNFCCC crediting mechanism, the CMA shall ensure that a share of proceeds from activities under its mechanism shall be used to assist developing country Parties that are vulnerable to climate change adverse effects to meet adaptation costs. The flexibility of the market approaches covered in Article 6(1-7) strengthens the economic structure of the Paris Agreement and incentivises Parties to opt for either of the approaches as there are benefits in either option.

Ideally, the UNFCCC governed crediting mechanism is preferable for ease of accountability and not necessarily convenience. In terms of accounting, the Paris Agreement emphasises robust accounting measures which Parties are obliged to utilise, so this may not necessarily discredit the part-initiated cooperative approach. Some scholars opine that the UNFCCC-governed mechanism which is under the authority and guidance of the CMA gives the mechanism international legitimacy and provides countries with a universal approach and infrastructure for crediting.[517]

The Paris Agreement also provides for non-market approaches (NMAs) that are integrated, holistic and balanced toward NDC implementation.[518] The non-market approach aims to promote mitigation and adaptation action, enhance public and private sector participation in NDC implementation and to enable opportunities for coordination across instruments and relevant institutional arrangements.[519] Further, these non-market approaches that fulfil these aims are to be promoted by the 'framework for non-market approaches to sustainable

[515] Andrew Howard "Voluntary Cooperation (Article 6) in Daniel Klein and others (eds) *The Paris Agreement on Climate Change: Analysis and Commentary* (Oxford University Press, 2017) at 185.
[516] Article 6(1) of the Paris Agreement.
[517] Andrew Howard n519 above at 189.
[518] The Paris Agreement above n35, Article 6(8-9).
[519] The Paris Agreement above n35, Article 6(8)(a)(b)(c).

development' defined in Article 6(9) of the Paris Agreement. The framework and work programme is to be implemented by the Glasgow Committee on NMAs. For countries that are sceptical about carbon markets and whether or not they are equipped to benefit from them, the NMAs serve as a good alternative and will not be regulated under Article 6(2) or 6(4) rules. At COP26, rules related to Article 6(8) non-market approaches were resolved clarifying that NMAs could include social inclusivity, financial policies and measures, circular economy, blue carbon, just transition of the workforce, and adaptation benefit mechanism. Further, the work programme under the framework for non-market approaches has been adopted and it sets out the activities that can aid the implementation of NMA.[520]

For six years, Parties to the Paris Agreement were at loggerheads trying to sort out modalities and rules for how Article 6(2)(4) and (8) will be implemented, particularly in sorting out the critical details of double counting of credits, carry over of legacy credits, administration of UNFCCC- governed crediting under Article 6(4) and what form the framework for non-market cooperative approach should take and its components amongst others. During COP 26 climate negotiations, the rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement were finalised, giving more stability to the economic structure of the Paris Agreement. For example, the new rules guard against double counting of GHG emissions reduction and limits the use of Certified Emission Reductions that can be used toward a country's NDC achievement to projects registered on or after 1 January 2013.[521] Also a new international mechanism that oversees a portion of the international carbon market activity has been established by the new rules with clear guidelines for its operations.[522] More importantly, COP26 has reaffirmed that the international carbon markets are crucial toward reaching the Paris Agreement's objective.[523] This sets the UNFCCC in a vantage position of oversight should Parties opt for the Article 6(4) UNFCCC-governed crediting, thereby creating potential IER influence.

[520] See UNFCCC "Decision-/CMA.3 Work Programme under the Framework for Non-Market Approaches Referred to in Article 6, paragraph 8, of the Paris Agreement" https://unfccc.int/sites/default/files/resource/cma3_auv_12c_PA_6.8.pdf

[521] For more detail see the advanced version of the CMA Third session FCCC/PA/CMA/2021/L.19, particularly Annex IX, X and XI (A) and (B)

[522] Ibid, particularly Annex III Part A and B.

[523] Charles E. Di Leva and Scott Vaughan "The Paris Agreement's New Article 6 Rules: The Promise and Challenge of Carbon Markets and Non-Market Approaches" (IISD, December 13, 2021) https://www.iisd.org/articles/paris-agreement-article-6-rules

Significantly, the new rules prescribe conditions for participating in the carbon markets which include: being a party to the Paris Agreement, preparing and communicating NDCs in accordance with Article 4, designating a national authority for the mechanism, indicating to the supervisory body how its participation will contribute to sustainable development and the specific activities that it is considering approving and how these activities under will contribute to NDC fulfilment.[524] The new rules strengthen the economic structure of the Paris Agreement by connecting benefits of the market approaches to the fulfilment of obligations of Parties contained in Article 4 of the Paris Agreement. Article 6(8) provides a certain flexibility that strengthens the economic structure of the Paris Agreement, offering options that Parties can choose from which the UNFCCC is still involved in terms of offering workshops, presenting technical papers and synthesis reports and engaging with public and private sector stakeholders etc.[525]

Article 9 of the Paris Agreement which covers climate finance is also a component of the economic structure of the Paris Agreement. A solid framework of climate finance that is further developed through mandates given to different bodies including the COP, CMP, CMA, SBI and SBSTA is built by a combination of the Paris Agreement and Decision 1/CP.21. Article 9(1) obligates developed countries to provide financial resources to developing countries in line with Article 4(3) of the UNFCCC. Other Parties are also encouraged to provide financial support voluntarily.[526] Article 9(3) also acknowledges mobilization of climate finance from a variety of sources, including public and private sources and such mobilisation should represent a 'progression beyond previous efforts'. The implication is that the previous US$100 billion goal for 2020, agreed in Cancun is now a floor and a new collective quantified goal was pushed to 'prior to 2025.'[527] Read together Article 9 (1-3) provides robust avenues for climate finance that is a mix of obligations and voluntary support from other countries that may not be categorised as developed countries.

Remarkably, Article 9(5) obligates developed country Parties to communicate quantitative and qualitative information that include projected levels of public financial resources to be provided to developing country Parties. Developed country Parties are also obligated to provide transparent and consistent information relating to support provided to developing country

[524] FCCC/PA/CMA/2021/L.19, particularly Part IV, paragraph 26.
[525] FCCC/PA/CMA/2021/L.19, particularly Annex IV paragraph 7.
[526] The Paris Agreement, above n35, art 9(2).
[527] Decision1/CP.21, para 53.

Parties biennially and it must be in accordance with the modalities, procedures and guidelines adopted by the CMA.[528] Article 9(8) refers to the institutions that will implement climate finance which are the Financial Mechanism of the Paris Agreement, its operating entities such as the GEF which manages the Least Developed Country Fund (LDCF) and the Special Climate Change Fund (SCCF). The GCF is not mentioned but future CMA decisions may include it when considering the architecture of funds and institutions.[529] In line with its hybrid approach, Article 9(9) obligates the financial institutions to ensure efficient access to financial resources through simplified approval procedures and enhanced readiness support. By recognising these two significant bottlenecks to climate finance effectiveness, these provisions mandate the operating entities to tailor their procedures, coordination mechanisms and support efforts for the benefit of developing countries. The provisions also acknowledge that climate finance access has been a huge issue in previous agreements such as the Kyoto and Montreal Protocols. This does not mean that climate finance issues have been resolved but the Article 9(8) provisions enrich the understanding of the issues faced by some developing countries which are mainly the two bottlenecks mentioned above.[530]

In summary the joint provisions of both Article 6 and 9 strengthen the economic structure of the Paris Agreement, recognising that economic and financial realities of climate change mitigation and adaptation and acknowledging that consistent financial flows are needed in lowering GHG emissions. The provisions outline flexibility of market and non-market mechanisms to encourage maximum participation of Parties. Further, the inclusion of all Parties in contributing to climate finance for the benefit of developing country Parties is also laudable and of immense benefit to developing countries. Finally, the economic structure is strengthened by oversight functions of the CMA in terms of reporting obligations of developed country Parties in a prescribed form on the one hand and the UNFCCC-governed crediting in terms of carbon market participation. This overall potentially places the IER in an influential position to foster cooperation of Parties of the agreement toward achieving the Paris Agreement key objective.

[528] This is done as stipulated by Article 13(13) of the Paris Agreement. See Article 9(7) of the Paris Agreement.
[529] Decision 1/CP.21
[530] Jorge Gastelumendi and Inka Gnittke "Climate Finance (Article 9) in Daniel Klein and others (eds) *The Paris Agreement on Climate Change: Analysis and Commentary* (Oxford University Press, 2017) at 252.

The time structure of the Paris Agreement obligates Parties to communicate climate actions in 5-year cycles.[531] The CMA is to undertake its first global stocktake in 2023 and thereafter every five years unless otherwise decided by the CMA.[532] Subsequent NDCs will be informed by the outcomes of the global stocktake more particularly described in Article 14 of the Paris Agreement.[533] The IPCC report has recommended that global net human-caused emissions of CO_2 would need to fall by about forty-five per cent from 2010 levels by 2030, reaching net zero around 2050.[534] Although there is no specific timeframe for the complete phase-out of GHG emissions, many countries have set 2050 as their target for net-zero emissions. In addition to urging Parties to aim to reach global peaking of GHG emissions as soon as possible, Article 4(1) of the Paris Agreement provides that Parties are to undertake rapid reductions to achieve a balance between anthropogenic emissions by sources and removals by GHG sinks in the second half of this century. These efforts should however be on the basis of equity, in the context of sustainable development and to eradicate poverty. Again the timing of the balance is left broad and could be anytime between 2050 and 2100. As Parties could not agree on a specific date for global emissions to peak, the term 'as soon as possible' had to used.

More recently in 2021, over 200 countries came together to forge the global climate pact to turn momentum into action. The Pact comprises of a package of decisions that consist of a range of agreed items, including strengthened efforts to build resilience to climate change, to curb GHG emissions and to provide the necessary finance for both. Parties have collectively agreed to work to reduce the gap between existing emission reduction plans and what is required to reduce emissions, so that the rise in the global average temperature can be limited to 1.5 degrees.[535]

Paragraph 17 of the pact recognizes that limiting global warming to 1.5 °C requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around mid-

[531] The Paris Agreement above n35, art 4(9); UNFCCC "How does the Paris Agreement Work" https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement#:~:text=The%20Paris%20Agreement%20works%20on,nationally%20determined%20contributions%20(NDCs).

[532] The Paris Agreement above n35, art 14(2).

[533] The Paris Agreement above n35, art 4(9).

[534] IPCC "Summary for Policymakers" In Valerie Masson- Delmotte and others (eds) *Global Warming of 1.5°C: An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty* (2018, IPCC Switzerland).

[535] UNFCCC "The Glasgow Climate Pact – Key Outcomes from COP26" https://unfccc.int/process-and-meetings/the-paris-agreement/the-glasgow-climate-pact-key-outcomes-from-cop26

century, as well as deep reductions in other greenhouse gases.[536] Paragraph 18 and 19 of the Pact also recognises that mitigation action needs to be accelerated in this critical decade and it invites Parties to consider further actions to reduce by 2030 non-carbon dioxide GHG emissions, including methane and also accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems.[537]

It is significant to acknowledge the robustness of Article 4(1) and its intent for a global peaking of GHG emissions 'as soon as possible' considering the different capacities of countries to achieve this peak, the provision goes further to encourage rapid reductions thereafter to achieve the balance mentioned above. The import of Article 4(1) makes two types of action essential – first, global emissions reduction not necessarily to zero but to a point where there is a balance between emissions and sequestration. Some scholars suggest that such balance may be determined by scientists rather than policy makers.[538]

The robustness of the provisions also include considerations of equity, sustainable development contextualisation and poverty eradication efforts. It is expected that the mechanisms provided for in Articles 13 and 15 can aid the implementation of Article 4. The robustness of Article 4(1) is also reflected in the way it does not limit sequestration to natural carbon sinks, but leaves room for other options such as carbon capture and storage technologies.

The sixth assessment report which is the latest IPCC report buttresses the need for more ambitious and accelerated action and, at the same time, rapid and deep cuts in GHG emissions.[539] The report states that the quicker and further emissions fall, the more scope there is for people and nature to adapt. The IPCC report highlights the urgency in its summary report for policymakers. The IPCC report while emphasising urgency does not give any specific time to make this rapid emissions reductions.[540]

Overall, Article 4(1) is the first treaty provision to recognise the need to stop net GHG emissions in the long term and the collective aim is sufficient at this time to indicate a direction

[536] UNFCCC, 'Glasgow Climate Pact, Decision -/CP. 26, advance unedited version' available at https://unfccc.int/documents/310475 [1/CP. 26]. UNFCCC, 'Glasgow Climate Pact, Decision -/CMP
[537] Ibid
[538] Harald Winkler "Mitigation (Article 4) in Daniel Klein and others (eds) *The Paris Agreement on Climate Change: Analysis and Commentary* (Oxford University Press, 2017) at 144.
[539] IPCC "IPCC Sixth Assessment Report: Impacts, Adaptation and Vulnerability" (February 28, 2022) https://www.ipcc.ch/report/ar6/wg2/resources/press/
[540] Climate Focus above n464 at 3.

of travel for GHG mitigation.[541] In addition to framing the long term goal, Article 4 sets out the binding individual obligations of conduct regarding NDCs which would aid Parties to undertake rapid reductions to achieve a balance between anthropogenic emissions by sources and removals by GHG sinks in the second half of this century. The framing of Article 4(3) reflects a clear and strong expectation that there will be a progression over time of Parties' mitigation NDCs, first from their individual country context and then progressively to highest possible ambition of that country. The framing of progression expectations lies somewhere between obligatory and recommendatory and Parties have the discretion to scale up their ambition but their NDCs must have the components and accounting standards laid out in Article 4. Despite the framing, achieving a balance between anthropogenic emissions by sources and removals by GHG sinks in the "second half of this century" is not specific and could hinder upward ambition of Parties who may assume that they have the benefit of time to scale up ambition. Parties' upward ambition will need to be motivated by the combined work of the transparency, compliance, implementation and global stocktake frameworks and their modalities, procedures and guidelines.[542]

Although it is challenging to measure the Paris Agreement's influence on countries using the time structure parameters as its structure does not cater to time specificities, the evidence of countries pledging towards carbon neutrality by 2050 and submitting updated NDCs is indicative of the Paris Agreement's influence. The most recent IPCC synthesis reports that contains the three Working Groups Assessment Reports: WGI – The Physical Science Basis, WGII – Impacts, Adaptation and Vulnerability, WGIII – Mitigation of Climate Change, and the three Special Reports: Global Warming of 1.5°C, Climate Change and Land, The Ocean and Cryosphere in a Changing Climate recommendations especially the summary for policymakers, are influencing climate change strategies and policies of governments. The 2022 IPCC assessment reports expressly notes that adaptation planning and implementation have continued to increase across all regions and many cities including adaptation in their climate policies and planning processes.[543]

Regarding fragmentation, it is essential to reiterate that fragmentation within international environmental law is expected. Fragmentation can occur in the overarching climate change

[541] Benoit Mayer "Article 4: Mitigation" in Geert Van Calster and Leonie Reins (eds) *The Paris Agreement on Climate Change: A Commentary* (Edward Elgar Publishing, 2021) at 112.
[542] Harald Winkler n542 above at 164.
[543] IPCC "Climate Change 2022 Impacts, Adaptation and Vulnerability: Summary for Policymakers" https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf

framework and within its subsystems. For example, the Paris Agreement, similar to the Kyoto Protocol, creates fragmentation in how it allows Parties to independently decide on, regulate and report their emissions reduction portfolio. Another way the climate regime is fragmented is in the area of climate finance. Some scholars have highlighted climate finance as crucial for the effectiveness and the fairness of the global response to climate change.[544] Presently the Paris Agreement under the UNFCCC employs various climate finance mechanisms such as the GEF, GCF, CDM, a new multilateral monitoring body known as UNFCCC's Standing Committee on Finance, various multilateral development banks, bilateral aid agencies and funds in contributor countries, and finally national climate change trust funds in recipient countries.[545]

Arguably, all the financial mechanisms may be too much and not necessarily talk to each other, but this is expected as climate change itself is a complex issue requiring extensive holistic yet separate mechanisms to encourage compliance. The Paris Agreement's hybrid structure justifies these mechanisms, which can help drive climate action from bottom to top. Other criticisms may speak to the inability of the UNFCCC to monitor climate funding contributions and track climate finance received for climate projects. Further, the UNFCCC cannot presently consolidate climate funding from various sources and standardise accounting measures that cause difficulty in tracking and holding pledging countries accountable for management, disbursement and utilisation of climate finance.[546]

In terms of environmental sustainability and climate justice parameters, some scholars argue about the justice, equity and fairness of the Paris Agreement. On climate injustice, scholars argue that the Paris Agreement does not adequately recognise countries' inequitable vulnerabilities to climate change.[547] The term climate justice covers a broad range of issues, from cultural to inter-generational justice considerations.[548]

Other scholars cited climate finance as an example of the Paris Agreement not satisfying the requirements of climate justice.[549] Article 9 of the Paris Agreement provides that "developed

[544] Jonathan Pickering and others "Special issue: Managing Fragmentation and Complexity in the Emerging System of International Climate Finance"(2017) 17 International Environmental Agreements: Politics, Law and Economics at 2.
[545] Ibid at 6.
[546] Ibid at 10.
[547] David Scholsberg and Lisette B. Collins above n112 at 365.
[548] Ibid at 365.
[549] Rosemary Lyster "Climate Justice, Adaptation and the Paris Agreement: A Recipe for Disasters" (2017) 26 Environmental Politics 3 at 451.

country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention."[550] Paragraphs 3-5 of Article 15 also provides that developed countries should take the lead in mobilizing climate finance and that they are to communicate indicative quantitative information about such efforts biennially. Article 9 uses the language 'shall', indicating a firm obligation for Parties to comply with the requirements of climate finance. While some developed countries have not optimally contributed toward the global climate fund, the Paris Agreement provides the impetus for solid dialogue regarding climate finance in CMPs and COPs. It is argued that the Paris Agreement has incorporated climate justice concerns into its framework and catalyses climate action from developed countries through the fulfilment of climate finance obligations. As chapter six will reveal, the developed countries within the case studies have contributed significantly to the GEF and the GCF toward mitigation and adaptation efforts of developing countries.

The Paris Agreement has been criticised for being unjust as it does not have any legally binding emissions reduction targets, exacerbating the plight of small island and developing countries arising from adverse climate change impacts. Furthermore, even though the Paris Agreement is framed in a manner that acknowledges the different capabilities of developing and developed countries, it stops short of emphasising concrete timelines for emissions reductions. Some scholars argue that deliberately refraining from compelling terminology may be counterproductive and inimical to climate justice.[551] As a result, countries may delay reducing emissions, causing harm to vulnerable countries linking back to the Paris Agreement's inadvertent enabling of injustice.

The UNFCCC has also experienced difficulty resolving disputes regarding Article 8 of the Paris Agreement that incorporates the Warsaw International Mechanism for Loss and Damage during previous COPs. The import of this article requires Parties to enhance understanding, action and support on loss and damage such as early warning systems, risk insurance facilities, climate risk pooling and other insurance solutions, but this is to be done 'as appropriate, cooperatively and facilitatively.[552] Although the inclusion of Article 8 has "provided the bones for a loss and damage scheme", the provision does not achieve much in terms of calling for

[550]The Paris Agreement above n35, art 9.
[551] Rosemary Lyster above n553 at 447.
[552] Ibid at 450.

scaled-up financing from developed countries to strengthen efforts to address loss and damage arising from adverse climate change impacts.

It is significant to note that the lack of explicit provisions in the Paris Agreement that emphasise loss and damage concerns and the need for enhanced institutional arrangements for facilitating action and support to address loss and damage create climate justice concerns. Furthermore, while COP25 recorded some favourable outcomes regarding the need for finance in the decision, there was no consensus to specifically reference developed country obligations to provide new and additional finance.

The Paris Agreement provisions on climate finance contribution have yielded some results. Developed countries have continued to carry out their obligations to contribute to the Least Developed Countries Fund and the Special Climate Fund. In addition, the US$100 billion target to address developing country needs have not been met, primarily due to the vagueness of the Paris Agreement in specifically apportioning the amounts that public and private sources are to contribute. The Agreement has also not indicated how different financial instruments such as loans and grants should be counted.[553]

To a large extent, the Paris Agreement has influenced climate justice through the courts. Climate change litigants have begun to rely on the Paris Agreement provisions to hold governments accountable for environmental protection. Importantly, climate justice has metamorphosed from a discourse on GHGs and melting ice caps into a civil rights movement with the people and communities most vulnerable to climate impacts at its heart. In other words, climate justice now incorporates fundamental human rights concerns relating to the environment. Courts have recently begun to weigh national laws against the Paris Agreement commitment to determine whether fundamental human rights have been breached. For instance, in the *Neubauer* case, the Federal Constitutional Court responded to a legal challenge by plaintiffs that the *Bundesklimaschutzgesetz* (Climate Protection Act) was insufficient to meet its target of reducing GHGs by 55 per cent by 2030 from 1990 levels.[554] The Court held that specific provisions of the Climate Protection Act did not specify the further GHG emissions required after 2030 to meet Germany's 2050 carbon neutrality target in 2050 and that this was

[553] Amar Bhattacharya and Others "Delivering on the $100 Billion Climate Finance Commitment and Transforming Climate Finance" (December, 2020) https://www.un.org/sites/un2.un.org/files/100_billion_climate_finance_report.pdf .

[554] BVerfG, Decision of the First Senate of 24 March 2021- 1 BvR 2656/18, 1 BvR 78/20, 1 BvR 96/20, 1 BvR 288/20.

incompatible with the protection of fundamental human rights for failing to set sufficient provisions for emission cuts beyond 2030.[555]

Interestingly, the court drew an analogy between prompt emissions reductions and restrictions on freedom. The Court held that "the regulations at stake would be unconstitutional if they allowed so much of the remaining budget to be consumed that the future loss of freedom would inevitably assume unacceptable proportions from today's perspective, because there would be no time left for mitigating developments and transformations."[556] Accordingly, the Court ordered the legislature to set explicit provisions for reduction targets from 2031 onward by the end of 2022.[557] The Paris Agreement has also spurred climate justice movements by providing a scientific foundation, through the IPCC reports, for persons to demand emissions reductions from their host governments.

Both the Paris Agreement and the SDGs can transform how development issues and climate change are addressed. The Paris Agreement refers multiple times to sustainable development, and the SDGs provide the most comprehensive and balanced global development agenda to date, but sustainable development may not be achieved if governance, institutional and climate finance issues are not tackled.[558] The CMA will need to navigate the complex and fragmented landscape of climate governance by first understanding the different political economies of different countries and then tailoring incentives and programs to suit the countries' specific needs.

Having examined the Paris Agreement against the parameters set out in chapter three, the Paris Agreement is tracking well toward influencing its members. One of the remarkable features of the Paris Agreement is the engagement of non-state actors and their role in supporting national climate efforts. Unlike the Kyoto and Montreal Protocols, there have been more litigation that have, in some cases, compelled governments to review their climate laws and policies. One drawback of the Paris Agreement that may impact its influence is the fleshing out of its implementation mechanisms. Skeletally, a robust implementation strategy that is collaborative

[555] See Section 3 and 4 of the Bundesklimaschutzgesetz.
[556] 1 BvR 288/20 at [195].
[557] Ibid.
[558] David Le Blanc "Towards integration at last? The sustainable development goals as a network of targets" (2015) DESA Working Paper no. 141 ST/ESA/2015/DWP/141. Department of Economic and Social Affairs, New York, NY, USA; Luis Gomez-Echeverri "Climate and Development: Enhancing Impact through Stronger Linkages in the Implementation of the Paris Agreement and the Sustainable Development Goals (SDGs) (2018) Phil. Trans. R. Soc. A 376 https://royalsocietypublishing.org/doi/pdf/10.1098/rsta.2016.0444 .

and problem-solving is in place, but the rules of procedure for its implementation is yet to be finalised.

It is unclear whether the compliance and implementation mechanisms of the Paris Agreement will be as influential as the Montreal Protocols'. Recall that the Montreal Protocol incorporated trade restrictions as part of its compliance mechanisms, but the Paris Agreement has not indicated any trade restrictions. As the Paris Agreement's functional arrangement favours a facilitative approach, it is unclear how effective the facilitative processes will be.

V. Conclusion

The Kyoto and Montreal Protocol both recorded successes, although the Montreal Protocol was deemed more successful. Some of the weaknesses of both Protocols include lack of independent monitoring and verification mechanisms, inadequate time structure and fragmentation. For example, although the Montreal Protocol was definitive of its goals regarding specific chemicals to be discarded, it did not provide a specific time for the ODS' to be discarded altogether. Similarly, the Kyoto Protocol did not give a specific time frame for countries to meet their emissions reductions targets. The Paris Agreement has followed this track by not specifying an ultimatum, in terms of a specific year, for emissions reductions; this may impact the vulnerable communities that continue to suffer from deleterious climate change effects.

It is submitted that while Article 4(1) of the Paris Agreement pushes for rapid GHG emissions reductions, reiterated by the sixth assessment report of the IPCC, the wordings of the provision that sets the goal to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of this century is quite vague. This, however, does not rule out the potential influence of the Paris Agreement provisions and IPCC's reports that presents the current state of the climate, calling for rapid and accelerated actions to get countries to ramp up their climate ambition and actions. The IPCC synthesis reports can also be influential, for example, the sixth Synthesis Assessment Report, particularly the WGIII contributions on climate change mitigation is particularly useful to guiding countries to reduce emissions and may be potentially helpful for countries' emissions reductions.[559] The recent global climate pact forged during COP26 that aims to turn the 2020s into a decade of climate

[559] IPCC "AR6 Climate Change 2022: Mitigation of Climate Change, The Working Group III Contribution to the Sixth Assessment Report" https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/

action will support the strengthening of efforts to build climate change resilience and curb GHGs.

The Paris Agreement, like the Montreal Protocol, offers alternative means of reducing emissions through the upscale of renewable energy technologies, but this alternative may not be as immediately successful in emissions reductions as it was for CFC-phaseout. The process of technology transfer and funding to developing countries has been laborious and slow. Nonetheless, the UNFCCC has incentivised many renewable energy projects in developing countries that may speed up the transition to renewable energy technologies. These will be discussed in chapter six.

The Paris Agreement offers more economic incentives than the Kyoto and Montreal Protocols to support countries' compliance with its provisions, however, one drawback is developed countries' failure to fulfil their financial obligations of contributing to the climate fund. The failure of countries to fulfil their climate financing obligations by providing financial assistance to countries negatively impacted by climate change creates justice concerns. It is expected that the first global stocktake scheduled for 2023 and the ETF mechanism can together aid the implementation of Parties' climate finance obligations and influence markets to invest in low-carbon opportunities.

In terms of implementation, the Paris Agreement offers robust mechanisms, discussed above, that can aid Parties' implementation of Article 2 objectives, however these mechanisms are in its nascent stages. For example the PAICC is still developing its rules of procedure guiding its functions outlined in para 22(a) and (b) of Decision 20 of the CMA.[560] The ETF is also operationalised as countries are now actively engaged in establishing the necessary arrangements to implement the ETF as deadlines approach for the BTR and TER.[561]

The Paris Agreement encourages synergy within its provisions, particularly with Article 13, 14 and 15.[562] The MPGs for these provisions encourage collaboration with each other. Decision 1/20 of the CMA provides for collaboration with representatives of the various bodies and

[560] These paragraphs outline the facilitative functions of the PAICC where parties have not complied with Article 4 of the Paris Agreement; UNFCCC "Decision 20/CMA.1 Modalities and procedures for the effective operation of the committee to facilitate implementation and promote compliance referred to in Article 15, paragraph 2, of the Paris Agreement" FCCC/PA/CMA/2018/3/Add.2

[561] UNFCCC "Moving Towards the Enhanced Transparency Framework" https://unfccc.int/enhanced-transparency-framework#eq-10

[562] The systemic review function of Article 13, 14 and 15 can feed into each other. Potentially the review outputs for one can feed into the other for example the TER reports feeding into the global stock take.

arrangements under or serving the Paris Agreement to participate in its meetings. The PAICC, the TER, SBSTA and SBI amongst others will need to cooperate to facilitate Parties' compliance with and implementation of Article 4 of the Paris Agreement. However, its practicability will depend on careful planning and availability of the bodies and arrangements. To date the PAICC has engaged in a knowledge building exercise to better understand the workings of the ETF.[563] Experts presented to the PAICC on the ETF's reporting, including content and timelines of information that Parties must submit under the framework, and commented on the TER and the facilitative multilateral consideration of progress under the framework, specifically in terms of how the Committee might engage with these processes and their respective outputs.

The structure and composition of the Paris Agreement is designed to facilitate maximum cooperation by Parties. The Paris Agreement obligations in terms of submitting NDCs and every other related information contained in Article 13, 14 and 15 together with their MPGs support Parties' implementation of their NDC commitments, however, the Agreement falls short as it is precluded from investigating or commenting on the ambition of a Party's NDC. There is the risk of Parties submitting unambitious NDCs, however, it is expected that the cooperative and facilitative procedures of the PAICC and the TER team can encourage more accelerated and ambitious efforts of Parties to meet the Paris Agreement ultimate objective contained in Article 2.

Unlike the Kyoto Protocol and Montreal Protocol that had 'stern' compliance measures, the Paris Agreement has a more nuanced and facilitative compliance structure. It has been suggested that some Parties may want to see the PAICC exercise stronger compliance measures such as a finding or declaration of non-compliance especially where there has been flagrant and repeated instance of non-compliance with core legal obligations under the Paris Agreement.[564] Overall, the Paris Agreement is tracking well to influence countries to reduce emissions against some of the parameters outlined, however, the IER inbuilt compliance and implementation measures are not fully operational. It is useful to see that the MPGs for the compliance and implementation mechanisms and the ETF are designed to encourage Parties' compliance and implementation of NDCs, not in a punitive manner that impedes cooperation

[563] FCCC/PA/CMA/2021/6, para 9.

[564] For example, the Kyoto Protocol's compliance committee. Annex to Decision 27/ CMP.1, Section XV, para 1(a); Yamide Dagnet and Eliza Northrop "Facilitating Implementation and Promoting Compliance (Article 15)" in Daniel Klein and others (eds) *The Paris Agreement on Climate Change : Analysis and Commentary* (Oxford University Press, Incorporated, 2017) at 348.

but in a facilitative manner that fosters cooperation. Future research can benefit from capturing the influence of the inbuilt compliance and implementation mechanisms when fully operational.

CHAPTER FIVE

IER AND REGIONAL INSTITUTION INTERACTIONS: A MACRO-COMPARATIVE ANALYSIS OF THE EU, WEST AFRICAN, SOUTH ASIAN AND MENA REGIONS

I. Introduction

The third chapter explained how the IER interacts with its actors to facilitate the fulfilment of environmental obligations. These actors include regional or intergovernmental organisations and institutions that could be environmental or financial, and a cluster of member states lacking organised and distinctive REOs. Consequently, interactions between states and the IER may be direct, mainly where the REOs are not well-structured or non-existent.

This chapter is divided into seven parts. Part I introduces the various regions that the selected countries belong to, offering justification for regional efforts in emissions reduction. Part II offers a brief overview of the EU's involvement in climate action. Part III covers regional climate action and interaction in West Africa. Part IV engages with regional climate efforts in South-East and East Asia. Part V explores MENA's regional climate action. Part VI compares the regional efforts across the four regions using the parameters set out in chapter three to determine IER influence. Finally, part VII offers conclusions on findings in the chapter.

In more detail, this chapter examines the UNFCCC interactions with various regional or intergovernmental environmental organisations. The Paris Agreement in its preamble recognises the importance of the engagements of all levels of government and various actors, and these include REOs. The Agreement in several articles also refer to the regional dimensions for capacity building to mitigate and adapt to climate change.[565] Generally, REOs can function as intermediaries between the IER and countries by acting as channels through which climate finance is disbursed to countries. REOs can also support national climate action through capacity building, technical assistance and strategic networking. Quite often, several countries within a region might experience similar climactic impacts and cooperation amongst these regions in terms of sharing knowledge and resources can be beneficial to all parties. It is important to signal here that with the Paris Agreement's hybrid approach to tackling climate change, REO's have some measure of responsibilities to tackle climate change. Further, the IER institutions or bodies can engage with REOs to foster regional solutions to climate change

[565] The Paris Agreement above n35, art 7 and 11.

issues. All the REOs discussed below, apart from the EU, are not Parties to the Paris Agreement but have observer status.

The chapter engages with the EU, European Commission, the ECOWAS Commission, ASEAN and SAARC. It is important to signal that some of the selected countries to be discussed in the next chapter are not subsumed under regions with formal REOs, and some countries may choose not to be a party to an REO. In addition, some regions do not have any REO. For instance, China and India would otherwise be grouped under the Association of Southeast Asian Nations (ASEAN) for convenience, but they are not formal group members. Morocco, another case study, belongs to the Middle East and North Africa group, which has no structured formal REO. The interactions between the IER and selected countries will be better explored in the next chapter.

The chapter investigates the influence of the UNFCCC or its institutions on regional organisations, using the parameters outlined in chapter three, and examines whether the REOs influence on their members links to the UNFCCC or other external factors. The interactions of the relevant REOs will also be captured to ascertain whether IER influence over REOs is direct, indirect or non-existent. In addition to IER and REO interactions, is essential to note that other multilateral or intergovernmental institutions play a significant role in climate change mitigation, particularly in terms of finance.

Financial institutions have a significant role in delivering the Paris Agreement goals on GHG emissions reduction. At the core of delivering the Paris Agreement objectives are economic policy and finance instruments that can engender economic transformation and foster sustainable, low-carbon and vigorous growth. These financial institutions can, for instance, invest in sustainable infrastructure that reduces GHG emissions. Although 26 major financial institutions undertook pledges under the Paris Agreement, the scope of the study is restricted to the recognised regional multilateral financial institutions within the EU, ECOWAS, ASEAN and MENA region. Again, some regions have not created independent regional financial institutions that specifically address climate change issues, and other financial institutions or mechanisms operating in such regions may be IER agencies working independently or in partnership with the REO. A good example is the MENA region, which has no recognised regional financial institution making financial commitments to climate change. The World Bank, however, is the recognised institution financing climate infrastructure in the MENA region.

The other financial institutions that the chapter engages with are the European Investment Bank (EIB), West African Development Bank, primarily referred to as Banque Ouest Africaine de Développement (BOAD) and the Asian Development Bank (ADB). More frequently and in recent times, these financial institutions have embedded climate-related financial and service-oriented mechanisms within their investment portfolio. These institutions contribute to financing the RE technologies uptake, training and support and are relevant when examining regional implementation efforts. As the Paris Agreement requires that all actors cooperate to reduce emissions, multilateral development banks, including the regional banks and the World Bank, must also provide the necessary investments in monetary terms required for sustainable infrastructure.[566]

The third chapter highlighted some criticisms of IERs, with some scholars recommending a UN reform as the UN is the recognised global umbrella framework for coordinating environmental efforts.[567] Some of the criticisms may be justified, and systematic improvement of the IER is imperative. It is proposed that, similar to the regime theory position, positive engagement with regional or intergovernmental organisations can help countries achieve global environmental objectives. Young and Levy have supported this position by linking the improvement of IER effectiveness to the increased participation of more actors within the regime.[568] Héritier adds that the provision of common goods requires collective action that has to take place vertically across multiple government levels and horizontally across multiple arenas.[569] However, some disagree, suggesting that multiple efforts by various governments and organisations to reduce emissions may result in significant leakages, inconsistent policies, inadequate certification, system manipulation and free riding.[570]

This chapter's support to the thesis' main argument aligns with the submission that "no single actor, public or private, has sufficient potential for action and sufficient power to solve problems of interdependence on their own, nor have they all the knowledge and information

[566] Nicholas Stern "The Roles of Financial Institutions and Finance Ministries in Delivering the Paris Agreement on Climate Change" (LSE, November 29, 2016) http://www.lse.ac.uk/GranthamInstitute/news/the-roles-of-financial-institutions-and-finance-ministries-in-delivering-the-paris-agreement-on-climate-change/ .
[567] Sylvestre-Jose-Tidiane Manga "Post-Paris Climate Agreement UNFCCC COP-21: Perspectives on International Environmental Governance" (2018) 26 A.J.I.C.L 3 at 309.
[568] Marc A. Levy and Oran Young above n144 at 279.
[569] Adrienne Héritier "New Modes of Governance in Europe: Policy Making without Legislating?" in Adrienne Héritier (eds) *Common Goods: Reinventing European and International Governance* (Rowland & Littlefield Publishers, Inc, Oxford, 2002) at 185.
[570] Tim Rayner and Andrew Jordan "The European Union: The Polycentric Climate Policy Leader? (2013) 4 Wires Clim Change.

required to solve complex, dynamic, and diversified problems, therefore, actors have to rely on each other."[571]

If transboundary solutions negotiated at global levels are not backed up by efforts at the regional, national and local levels, there is no guarantee that they will function well.[572] The 2014 IPCC report concurs, urging global, regional (governmental and non-governmental) organizations, states, businesses, and individuals to work together to reduce GHG emissions and foster climate change mitigation and adaptation. The IER must, therefore, urgently establish strong relationships with regional and national organisations to achieve emissions reductions targets. IERs must also adequately consider the complex and multi-level nature of climate change that require well-equipped governance systems to manage and resolve conflicts of interest across multiple scales and among diverse policy actors.[573]

The following section briefly examines the earliest engagement of the EU with the UNFCCC on climate change. Then, it examines other interactions between the EU Commission and the Nordic region and the interactions between the UNFCCC and the Nordic region to lay the foundation for IER influence, whether direct or indirect.

II. European Union Involvement in International Climate Policy

The demands for a collective response within an international framework to address the global nature of climate change led the EU to actively advocate for climate action. The EU's earliest participation in environmental issues dates back to 1958 when the European Economic Community (EEC) was established.[574] The EU specifically began to address climate change issues in the 1970s,[575] although other scholars purport that climate change first appeared on the EU agenda in 1990 when EU leaders began calling for targets and strategies to be agreed upon to limit GHG emissions.[576] The 1987 Single European Act conferred legality and powers on

[571] Adrienne Héritier above n573 at 185.
[572] Elinor Ostrom "Polycentric Systems for Coping with Collective Action and Global Environmental Change (2010) 20 Global Environ Change at 550.
[573] Monica Di Gregorio and others "Multi-Level Governance and Power in Climate Change Policy Networks" (2019) 54 Global Environmental Change at 73.
[574] HM Government "Development and Current State of Competence" in *Review of the Balance of Competences between the United Kingdom and the European Union Environment and Climate Change* (2014, UK Government) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284500/environment-climate-change-documents-final-report.pdf ; It was established by the 1957 Treaty of Rome albeit without any specific reference to environmental protection.
[575] Tim Rayner and Andrew Jordan above n574 at 76.
[576] Sebastian Oberthur and Marc Pallemaerts "The EU's Internal and External Climate Policies: An Historical Overview" in Sebastian Oberthur and Marc Pallemaerts (eds) The New Climate Policies of the European Union (Brussels University Press, 2010) at 29.

the EU to take environmental action, exercisable by the Council acting unanimously or by qualified majority voting. By 1999, the Treaty of Amsterdam made it a prerequisite, in principle, for the EU to integrate environmental protection requirements in its policies. In 2007, the Lisbon Treaty amended the EU policy objectives to include climate change concerns.

In the context of negotiating subtleties, the EU has been described as an agenda-setter in persuading nations to agree on the temperature target of 2°C during climate negotiations.[577] In other words, its ability to encourage experimental efforts and actively steer actors at local, regional and national levels have made it an interesting phenomenon among scholars. The EU has also been at the forefront of policy development and implementation to reduce its members' reliance on fossil fuels.[578] This progress is reflected in the EU's environmental-norms promotion during COP21 in Paris.[579]

Articles 2(2) and 4(2)(e) of the Treaty on the Functioning of the European Union (TFEU) gives the EU competence to make decisions alone or act either alongside member states. Article 2(2) can also prevent a member state from acting when the EU has done so on its behalf. Articles 11 and 191 to 193 empower and mandate the EU to: legislate in environmental and climate change matters and to ensure that its environmental policy contributes to the objectives of preserving, protecting and improving the quality of the environment, protecting human health, the prudent and rational utilisation of natural resources, and promoting measures at the international level to deal with regional or global environmental problems, in particular climate change.[580] Therefore the EU has express competence in the negotiation and implementation of international agreements.[581] The EU is the only regional organisation that is a party to UNFCCC and its Protocols and Agreements, signalling full external recognition of the EU as an actor in the regime at par with nation-states.[582]

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[577] Olivia Gippner "The 2°C Target: A European Norm Enters the International Stage—Following the Process to Adoption in China" (2016) 16 Int. Environ Agreements at 53.
[578] Michael B. Charles and others "The EU–Africa Energy Partnership: Towards a Mutually Beneficial Renewable Transport Energy Alliance? (2009) 37 Energy Policy at 5546.
[579] Diarmuid Torney and Mai'a K. Davis Cross "Environmental and Climate Diplomacy: Building Coalitions Through Persuasion" in Camilla Adelle and others (eds) *European Union External Environmental Policy: Rules, Regulation and Governance Beyond Borders* (1st edn, Springer, 2018) at 40.
[580] Treaty on the Functioning of the European Union OJ L. 326/47-326/390 (signed 25 March 1957, entered into force 1 January 1958) art 191(1).
[581] HM Government "Review of the Balance of Competences between the United Kingdom and the European Union Environment and Climate Change" (February 2014) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284500/environment-climate-change-documents-final-report.pdf .
[582] Carolina B. Pavesel and Diarmuid Torney "The contribution of the European Union to Global Climate Change Governance: Explaining the Conditions for EU Actorness" (2012) 55 Rev. Bras. Polít. Int. at 143.

The EU influenced the UNFCCC regime by bridging gaps associated with the UNFCCC's negotiation design. Notably, the EU took the lead in negotiating and implementing the Kyoto Protocol.[583] The EU also published a Communication that identified clear measures to limit global average temperature rise to less than 2°C above the pre-industrial level.[584] The EU went on to adopt several measures to fulfil its commitment of an 8 per cent reduction in GHG emissions by 2012, one of which was the EU Emissions Trading Scheme (EU ETS) created by Directive 2003/87/EC, and the development of policy and legislation on carbon dioxide emissions from cars. The EU also set a 20-20-20 climate and energy target directive to achieve a highly energy-efficient, low carbon economy by 2020. The EU ETS and an effort sharing decision would enable a 20 per cent reduction in GHG emissions compared to 1990 levels, a 20 per cent rise of RE in the EU energy consumption shares and a 20 per cent energy efficiency improvement. The EU has also absorbed the UNFCCC's mitigation goal through renewable energies outlined in Article 2 (a) (iv) of the Kyoto Protocol as a political means of prioritising the achievement of these objectives.[585]

In the lead up to the Paris Agreement adoption, the EU produced a second reflection paper entitled "EU Climate Diplomacy for 2015 and beyond", which identified priorities for EU climate diplomacy considering low-carbon development support, connections between resource exploitation, economic security and climate issues. The EU also equipped itself with the requisite economic and environmental knowledge of critical countries to negotiate during COP21. The EU also encouraged and facilitated the INDC blueprint, an intrinsically technical and complex procedure, especially for developing countries,[586] collaborated with member states and EU NGOs to intensively work with several third countries and sent experts to some developing countries to help them prepare and submit their INDCs before the climate summit began. They applied the same method EU members used to determine the precise percentage of their proposed emissions reductions.[587]

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[583] Anne-Sophie Tabau and Sandrine Maljean-Dubois "Non-Compliance Mechanisms: Interaction between the Kyoto Protocol System and the European Union" (2010) 21 E.J.I.L 3 at 749.

[584] Commission of the European Communities 2009; EEAS and EU Commission 2011.

[585] Volker Roeben "Governing Shared Offshore Electricity Infrastructure in the Northern Seas" (2013) 62 I.C.L.Q. 4 at 854.

[586] Claire Dupont, Sebastian Oberthür, and Katja Biedenkopf " Climate Change: Adapting to Evolving Internal and External Dynamics" in Camilla Adelle and others (eds) *European Union External Environmental Policy: Rules, Regulation and Governance Beyond Borders* (1st edn, Springer, 2018) at 111.

[587] Franzjosef Schafhausen, Director General, Federal Ministry of Environment, Building and Nuclear Safety, Germany, EU Pavilion at COP21, "Practitioners Panel: Learning from INDC preparations and accelerating implementation after Paris", 8 December 2015.

The EU also interacts with the UNFCCC through the European Commission (EC). The EC helps shape the EU's overall strategy by proposing new EU laws and policies, monitoring their implementation and managing the EU budget.

The EC interacts with the UNFCCC by tailoring its targets and objectives to meet the UNFCCC's objectives in protocols and agreements. These objectives include emissions reductions and the promotion of sustainable development. Other examples of interaction include how the EC supports instruments such as the United Nations International Civil Aviation Organisation's (UNICAO) State Action Plans on CO2 Emissions Reduction Activities for International Aviation and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

The EU and the UNFCCC influence each other in different ways. Some scholars have attributed compliance of the EU to the Kyoto Protocol to the UNFCCC's disciplinary measures.[588] The UNFCCC has also been influential in its supervisory authority over the EU ETS. For example, one of the UNFCCC's Kyoto Protocol's implementation mechanisms, the International Transaction Log (ITL), now operates jointly with the Community Independent Transaction Log (CITL), subjecting EU supervision to international supervision. Prior to the merger, both logs had functioned separately.[589] This implies that the CITL must accept any conclusions on inconsistencies or discrepancies that the ITL detects regarding Kyoto units.[590]

Another example of EU and UNFCCC interactions is the partnership between the European Investment Bank (EIB) funded by EU member states and the GCF in 2016, allowing them to work together to finance climate action in developing countries.[591] The GCF also benefited from accrediting the EIB as a partner as it had faced operational challenges due to its new status

[588] Elinor Ostrom above n576 at 85.
[589] The CITL monitors the transfer of allowances only within the EU ETS.
[590] Art. 30(2) of the consolidated version of the TFEU. According to the terminology used in Commission Reg. 2216/2004 of 21 Dec. 2004 for a standardized and secured system of registries pursuant to Dir. 2003/87/EC of the European Parliament and of the Council, OJ (2004) L 386/1, and in Dec. 280/2004/EC of the European Parliament and of the Council, OJ (2004) L 386/1 and Commission Reg. 994/2008 of 8 Oct. 2008 for a standardized and secured system of registries pursuant to Dir. 2003/87/EC of the European Parliament and of the Council and Dec. 280/2004/EC of the European Parliament and of the Council, OJ (2008) L 271/3, repealing Reg. 2216/2004 of 1 Jan. 2012.
[591] Green Climate Fund "European Investment Bank and Green Climate Fund sign Partnership Agreement" September 28, 2017 https://www.greenclimate.fund/news/european-investment-bank-and-green-climate-fund-sign-partnership-agreement .

and its potential insufficient capitalisation arising from the US announcement of withdrawal from the Paris Agreement.[592]

A. Interactions between the EU and Members

The relationship between the EU and its member states is complex. The EU and its members have shared competence in climate change issues, meaning that both parties need to consent before entering any climate treaty.[593] It also means that the EU's participation in a climate treaty, for instance, does not automatically mean the participation of each EU member. Therefore the EU efforts merely complement members' efforts. Shared competence between the EU and its members can cause some friction, especially in cases of non-compliance. Who should take responsibility for non-compliance, the EU or the particular member? Fortuitously, the UNFCCC, through its Kyoto Protocol, answers this in the joint reading of Article 4.6 and Article 24, known as the 'bubble clause'. The EU and its members can be held jointly accountable if they do not meet their common quantified emission reduction obligations.[594]

Similar to the UNFCCC, the EU utilises a somewhat soft leadership strategy in how it relates to its members.[595] This leadership style is arguably weak as the EU may not be able to manoeuvre or checkmate the actions of member states by relying on its general political and economic weight as it does not by itself have the political or economic clout alone to tackle climate change. Therefore, the EU has to employ diplomacy, argumentation and persuasion to encourage members to make and fulfil targets to reduce GHG emissions.

In terms of its legislative framework, the EU is reputed to have the most extensive environmental laws of any intergovernmental organisation,[596] and in the past decades, has put a broad range of environmental legislation in place, much of it long-established.[597] Members are required to transpose these EU laws domestically for onward implementation.[598] These EU

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[592] Megan Bowman and Stephen Minas "Resilience through Interlinkage: The Green Climate Fund and Climate Finance Governance" (2019) 19 Climate Policy 3 at 343.
[593] Anee-Sophie Tabau "Shared Accountability of the European Union and its Member States in the Climate Change Regime" (2013) 22 RECIEL 1 at 91.
[594] Kyoto Protocol to the United Nations Framework Convention on Climate Change n 10 above, art 3.
[595] Sebastian Oberthur and Claire Roche Kelly "EU Leadership in International Climate Policy: Achievements and Challenges" (2008) 43 The International Spectator at 3, 6.
[596] Andrew Jordan and Camille Adelle *Environmental Policy in the European Union: Contexts, Actors and Policy Dynamics* (Earthscan: London and Sterling, VA, 3rd edn, 2012).
[597] Hulla & Co Human Dynamics "Handbook on the Implementation of EU Environmental Legislation" (Environmental and Climate Regional Accession Network, 2015-2016) at 24. http://www.ecranetwork.org/Files/Handbook_on_Implementation_of_Environmental_Legislation.pdf .
[598] Olga Gioti Papadaki "European Environmental Policy and the Strategy 'Europe2020" (2012) 4 Regional Science Inquiry Journal at 154.

laws can be categorised as regulations, decisions, and directives. Regulations are binding, and their provisions are automatically imposed on all member states. Decisions are also automatically binding when they enter into force, but they relate to specific cases and are usually directed to specific members or groups of members, companies or private individuals and are only binding on them. Directives outline one or more objectives that member states must fulfil within a determined time, without imposing limits on the choice of instruments or procedures for implementation. EU law requires its members to implement directives with unquestionable binding force and with the specificity, precision and clarity required to satisfy the need for legal certainty and clarity as to its legal effect.[599]

The EU has often adopted IER and IEA objectives to create its directives. A good example is the EU 20-20-20 Directive highlighted above that mirrors the Kyoto Protocol objectives.[600] The EU also created a RE Directive that established an overall policy for renewable energy production and promotion in the EU to be individually achieved from national targets. [601] This directive urged all EU countries to ensure that at least 10 per cent of their transport fuels come from renewable sources by 2020. This Directive was further amended in 2018 in compliance with the EU's commitment to the Paris Agreement and its 2030 energy and climate framework, proposing to cut emissions by at least 40 per cent below 1990 levels by 2030.[602] According to the EC, members have largely implemented the 2018 amendment throughout the EU.[603]

In terms of implementation, the EU also sought to tackle emissions reductions through the EU ETS to encourage Europe's largest emitting industries to reduce their carbon emissions and invest in clean technologies.[604] The EU ETS is the largest global carbon market[605] and the central pillar of European climate policy.[606] Different studies have attempted to assess the EU ETS strengths and weaknesses, but most of the findings only cover particular sectors. A 2015

[599] Hulla & Co Human Dynamics above n597.
[600] Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the efforts of member states to reduce their GHG emissions to meet the community's emission reduction commitments up to 2020, Official Journal of the European Union, L140 (2009), pp. 136-148
[601] (2009/28/EC)
[602] EUR-Lex "Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources" PE/48/2018/REV/1 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC
[603] Directive (EU) 2018/410 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32018L0410
[604] Djamel Kirat and Ibrahim Ahamada "The Impact of the European Union Emission Trading Scheme on the Electricity-Generation Sector" (2011) 33 Energy Economics 5 at 996.
[605] Jahn Olsen "The EU ETS: Back in the Spotlight" (March 22, 2019, Bloomberg NEF) at 2 https://poweringpastcoal.org/insights/policy-and-regulation/the-eu-ets-back-in-the-spotlight .
[606] Brigitte Knopf and Others "The European Emissions Trading System (EU ETS): Ex-Post Analysis, the Market Stability Reserve and Options for a Comprehensive Reform" (IDEAS Working Paper Series from RePEc, 2014).

study identified some weaknesses with the EU ETS, such as the absence of a clear legal framework necessary for converting the current pledges into binding rules at the national level that was capable of jeopardizing the establishment of a direct and profitable link between the extensive European legislation on energy and environment, and the harmonious and efficient development of smart cities in Europe.[607] Other scholars criticise the first two phases of the EU ETS, suggesting that price volatility, governance, and monitoring problems contributed to implementation impediments.[608] Knopf and others suggested that the EU ETS, through legally binding caps, ensured that emissions have remained below the annual cap between 2009 and 2013.[609] Gloaguen and Alberola add that the EU climate policy and energy package may have been the drivers behind the reduction of around 766-805 Mt CO_2.[610]

Some scholars have likened the EU's compliance and implementation mechanisms failures to that of the UNFCCC. Yamineva and Romppanen, for example, argue that it is not the lack of comprehensive rules or laws that account for the continued suffering of Europeans from air pollution, but rather a poor implementation and compliance with existing regulatory frameworks.[611] For example, there have been litigation cases by individuals against the EC relating to reducing emissions. The most recent case brought before the EU General Court by individuals against the EU is the *Carvalho and Others v Parliament and Council* case. [612] In this case, an action seeking to compel the EU to take more stringent GHG emissions reductions was brought before the General Court.

The General Court dismissed their action that sought to annul partially (i) Directive (EU) 2018/410 of the European Parliament and of the Council of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, particularly Article 1 of Decision (EU) 2015/1814 (ii) Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual GHG emission reductions by members from 2021 to 2030 contributing to climate action to meet commitments

[607] Rosario Ferrara "The Smart City and the Green Economy in Europe: A Critical Approach" (2015) 8 Energies 6 at 4724.
[608] Simone Borghesi and Massimiliano Montini "The Best (and Worst) of GHG Emission Trading Systems: Comparing the EU ETS with Its Followers" (Front. Energy Res, July 29, 2016).
[609] Brigitte Knopf and Others above n606 at 3.
[610] Olivier Gloaguen and Emilie Alberola "Assessing the Factors Behind CO2 Emissions Changes over the Phases 1 and 2 of the EU ETS: An Econometric Analysis" (CDC Climate Research Working Paper No, 2013-15) https://www.i4ce.org/wp-core/wp-content/uploads/2015/10/13-10-CDC-Climat-R-WP-13-15-Assessing-the-factors-behing-CO2-emissions-changes.pdf .
[611] Yulia Yamineva and Seita Romppanen "Is Law Failing to Address Air Pollution? Reflections on International and EU Developments" (2017) 26 Rev Eur Comp Int Environ Law 3 at 193.
[612] T-330/18, General Court (Second Chamber), 8 May 2019.

under the Paris Agreement and amending Regulation (EU) No 525/2013, in particular, Article 4(2) thereof and Annex I thereto, and (iii) Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of GHG emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Article 4 of Decision No 529/2013/EU. On appeal, the Court upheld the General Court's decision to dismiss the action as it held that the appellants did not have the locus standi to institute the action and had insufficiently established the contested provisions of the EU Acts listed above. On further appeal to the Court of Justice of the European Union (6th Chamber), the Court upheld the General Court's decision and dismissed the appeal.[613]

In 2016, the European Parliament recognised that even though members had primary implementation responsibilities, the EC, as Guardian of the Treaties, could oversee the application of EU adopted legislation. As a result, the Commission launched the Environmental Implementation Review (EIR)[614] designed to help members fully implement EU environmental legislation.

The EIR as a tool provides an informed picture of implementation gaps of members gauged against a set of benchmarks that showcase existing, agreed policy objectives and key obligations defined by the EU environmental legislation. The EIR also creates a platform for dialogue where members can discuss achievements and shortcomings in tackling implementation gaps and future actions needed, potentially providing support. The EIR provides country-specific reports every two years, which might help foster transparency and healthy competition. The reports are also comprehensive, capturing administrative capacity quality issues, compliance assurance, access to justice and redress mechanisms, access to environmental information, and environmental taxation.[615]

The EU also addressed implementation concerns by establishing the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL). IMPEL comprises environmental authorities of EU members, accession and candidate countries, and Norway and provides a platform for policymakers, environmental inspectors and enforcement officers to

[613] Case 569/19 P Carvalho and Others v Parliament and Council [2021] ECLI:EU:C:2021:252

[614] EUR Lex "Communication from the Commission to the European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions: Delivering The Benefits Of EU Environmental Policies Through A Regular Environmental Implementation Review" (European Commission, 2016) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2016:316:FIN .

[615] Ibid.

exchange ideas and best practices. Although IMPEL shares some similarities with the EIR, both have distinct functions. The EC has codified regulations to monitor and report GHG emissions at national and regional levels.[616] It also keeps a GHG inventory containing all members inventories reported under the EU GHG monitoring mechanism.[617]

Regarding enforcement, the EC employs a facilitative approach, starting with informal discussions and supporting members to implement EU rules. Where members continue to breach these rules deliberately, the EC issues a formal notice to the offending party to correct such violations, then refers the matter to the European Court of Justice (ECJ) if non-compliance continues.[618] Some examples are the formal notices issued to Luxembourg, Portugal, Poland and Ireland to fulfil their energy-efficient buildings obligations, complete transposition measures required under the amendment to the Nuclear Safety Directive (Council Directive 2014/87/Euratom) and notify transposition measures required under the revised Basic Safety Standards Directive (Council Directive 2013/59/Euratom) respectively.

These enforcement actions have influenced members compliance. Borzel and Buzogany predict that a continual decrease in noncompliance will form part of a long-lasting trend based on the fluctuation and overall decline of non-compliance to EU environmental law since 1994.[619] They further elucidate in their study that where there have been cases of infringement, more than two-thirds of all the cases in which the EC sends a warning letter are settled before it officially opens proceedings by issuing a reasoned opinion.[620] They conclude by stating that the capacity building offered by the EC has helped accession countries and (new) member states improve their compliance with EU environmental law.[621]

The EC is currently pursuing legal action against certain member states for failing to comply with their obligations under EU law.[622] Some examples are Cyprus and Italy that failed to properly treat urban wastewater and failure to protect their citizens over the effects of nitrogen

[616] Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 (No longer in force and replaced with Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018.
[617] European Commission "Emissions Monitoring and Reporting" https://ec.europa.eu/clima/policies/strategies/progress/monitoring_en
[618] European Commission "Enforcing EU Environmental Law: Benefits and Achievements" http://ec.europa.eu/environment/pubs/pdf/enforcing_EU_environmental_law_factsheet.pdf
[619] Tanja A. Börzela and Aron Buzogány "Compliance with EU Environmental Law: The Iceberg is Melting" (2019) 28 Environmental Politics 2 at 316.
[620] Ibid at 320.
[621] Ibid at 323.
[622] European Commission "March Infringements Package: Key Decisions" March 7, 2019 http://europa.eu/rapid/press-release_MEMO-19-1472_en.htm

dioxide. Greece was also referred to the ECJ for failing to protect its waters against pollution arising from nitrates from agricultural sources. As a result, the EC sought financial sanctions against Greece. The EC has also issued Sweden formal notices in December 2016, at the instance of the UN, to improve on its waste management in alignment with the EU rules on waste.[623] As of 2020, there have been 451 recorded cases of infringement before the ECJ.[624] The images below present an overview of infringements from 2007 to 2020 and particularly by sector.

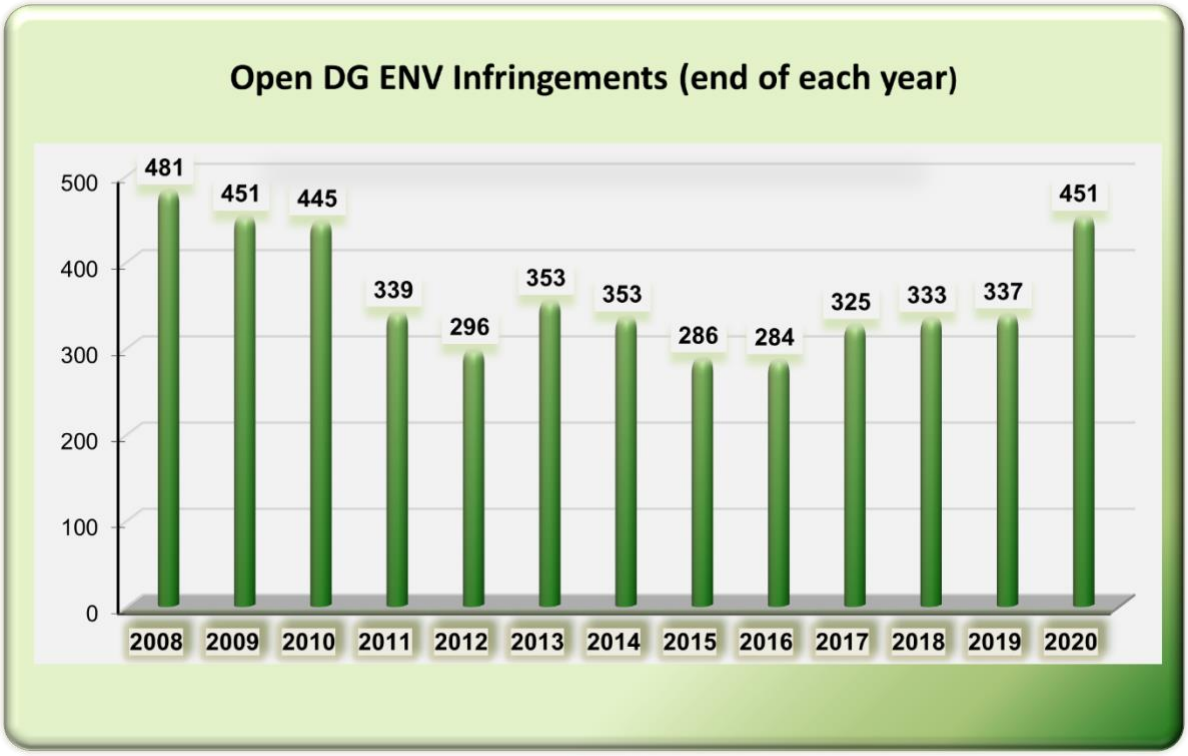

Figure 1: Infringement Cases before the ECJ between 2008 and 2020

[623] European Commission "March Infringements Package: Key Decisions" March 7, 2019 http://europa.eu/rapid/press-release_MEMO-19-1472_en.htm .

[624] European Commission "Legal Enforcements: Statistics of Environmental Infringements" https://ec.europa.eu/environment/legal/law/statistics.htm .

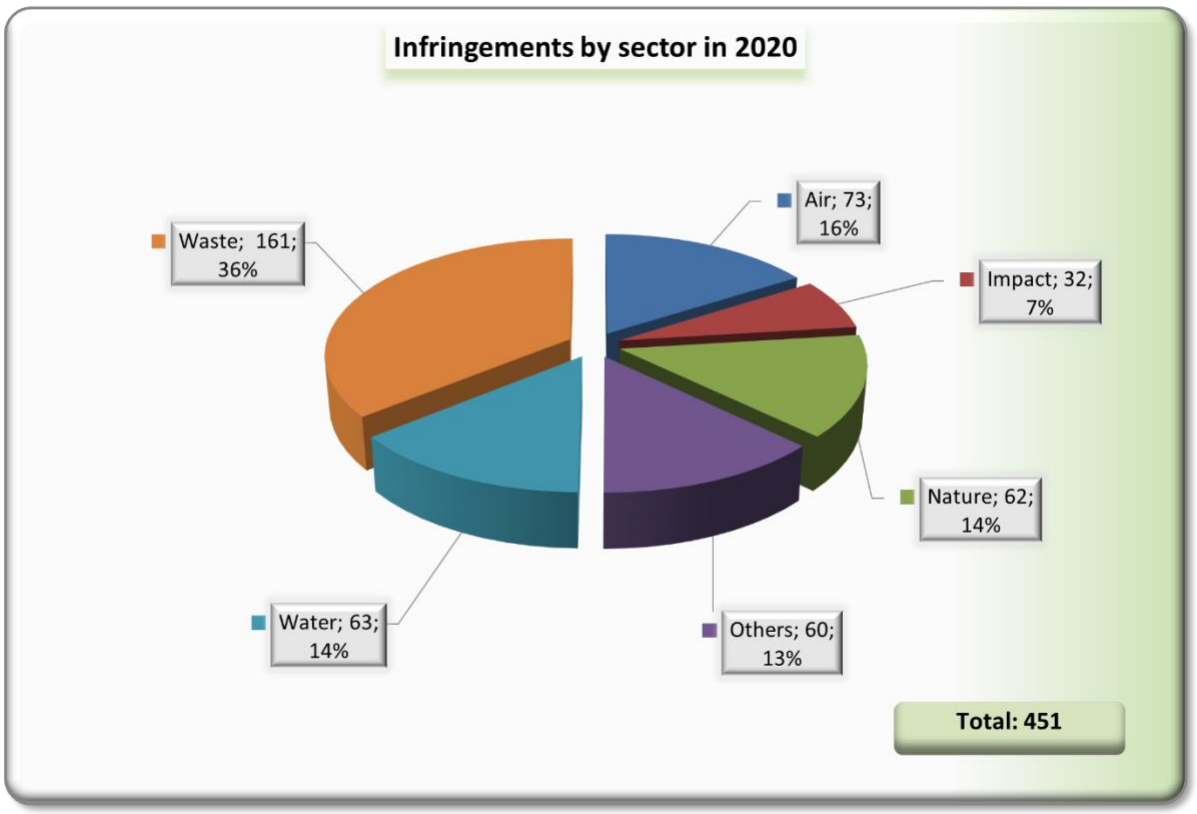

Figure 2: Infringement Cases by Sector 2020

The discussion above reveals that the EU has taken proactive steps to ensure members comply with its directives, however, caution must be exercised in the standards used to judge the influence of the EU over its members, particularly in implementation efforts. From the charts above, the results portray the varying influence of the EU over members annually based on the number of infringement cases. However, Demke warns that although compliance is an important indicator to check the member states full implementation and application of community legislation, these data on the implementation status may not be adequate indicators that the directives influence EU member behaviour.[625] One of the difficulties with this line of reasoning is that it ignores the direct linkages between the adoption of directives, which speak to the EU's influence over its members. Again borrowing from Young's extension of the regime theory, influence should include the process and not just outcomes.[626] Interactions of the Nordic region with the EU and the UNFCCC will be discussed in the following section.

[625] Christoph Demmke "Towards Effective Environmental Regulation: Innovative Approaches in Implementing and Enforcing European Environmental Law and Policy" (2001) Jean Monnet Working Paper 5/01.
[626] See generally Oran R. Young above n308.

B. Nordic, EU and UNFCCC interactions

The Nordic region does not have an REO as some Nordic countries belong to the EU. It has an intergovernmental environmental cooperation mechanism headed by the Nordic Council of Ministers for the Environment and Climate (Nordic Council). This mechanism aims to preserve and improve the environment and quality of life in the Nordic region, exert influence on cooperation at the regional and international level, and support the Nordic strategy for sustainable development implementation. [627] There is no clear evidence linking the establishment of the Nordic Council to either the UNFCCC or the EU. However, some developments in the EU have affected the work of the Nordic Council and matters considered by the Nordic Council often have an EU dimension.[628] Again, it can only be hypothesised that the EU's ambitious emissions reductions trajectory subtly influence the Nordic Council's agenda.

The involvement of Nordic countries in European integration occurred at different times and to different degrees.[629] Denmark became part of the European Community in 1973, while Finland and Sweden joined in 1995. Iceland and Norway, however, became associated with the EU through the European Economic Area (EEA) agreement but are not members. In 1994, Norwegians voted 'no' by referendum to joining the EU after its 1992 application for membership, however, it is still part of the EEA Agreement.[630]

Although Norway is not a member of the EU, it is referred to as the closest partner to the EU in global climate policy.[631] As a member of the EEA Agreement, which has environmental cooperation as part of its terms, Norway has implemented almost all EU environmental legislation in its law except those related to nature conservation, natural resource management, agriculture and fisheries.[632] To this extent, it can be inferred that the EU has played a significant role in the development of Norwegian environmental policy. Further, as part of the strategies for reducing GHG emissions, Norway has been part of the EU ETS and has about half of its emissions included in the EU ETS reinforcing this as a cornerstone in Norwegian climate

[627] Nordic Cooperation "About the Nordic Council of Ministers for the Environment and Climate (MR-MK) https://www.norden.org/en/information/about-nordic-council-ministers-environment-and-climate-mr-mk
[628] Karina Jutila and Terhi Tikkala "Together or Apart? : The Nordic Council and the EU" (Think Tank, 2009) at 4.
[629] Morten Egeberg "The Nordic Countries and the EU: How European Integration Integrates and Disintegrates States Domestically" (2003) ARENA Working Papers WP 11/03.
[630] Norwegian Ministry of Foreign Affairs "Norway and the EU" https://www.norway.no/en/missions/eu/
[631] Norwegian Ministry of Foreign Affairs "Climate Change and the Environment" https://www.norway.no/en/missions/eu/values-priorities/climate-env/#local-content .
[632] Norwegian Ministry of Foreign Affairs "Environment and Climate Change" 25 March 2015 https://www.regjeringen.no/en/topics/european-policy/areas-cooperation/environment-climate/id686218/ .

policy.[633] While it could be argued that the EU wields some influence over the climate decisions of its members and non-members (in this instance, Norway), there may be other factors that contribute to the reported high level of progress amongst the Nordic group. These factors will be examined further along in chapter six.

Various climate change performance indexes such as the EPI, CCPI and Climate Action Tracker (CAT) rank Sweden, Denmark, and Finland in the top quartile of best performers, raising questions around the influencing factors behind such progress. These countries usually exceed the targets that the EU sets. As EU-adopted environmental legislation can only set minimum standards, it does not prevent any member state from maintaining or introducing more stringent protective measures and ambitious targets, provided these are compatible with the Treaties.[634] From the foregoing, substantial influence of the UNFCCC on the Nordic Council is absent.

C. Linkages between the EU and Third Countries

To reinforce its leadership role, the EU has included some external dimension objectives, such as global energy governance, energy cooperation with third countries, and external trade and development policy as instruments to promote competitive and transparent low carbon energy markets and secure access to energy resources.[635] Because energy security is an EU priority, as contained in the EU Global Strategy of 2016, it must set precedents by offering partnerships and support to third countries. According to the Strategy, development cooperation is a crucial EU-devised instrument to respond to security and lead by example on sustainable development, climate change and global governance.[636] Development cooperation should take the form of enhancing energy and environmental resilience in third countries through energy sector reform policies towards energy transition and climate action.[637] Reform policies include energy liberalisation, expansion of renewables, better regulation and technological transfers.[638]

[633] Ibid.
[634] See Article 193 of the TFEU.
[635] EU Commission "A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy" (2015) https://www.eea.europa.eu/policy-documents/com-2015-80-final .
[636] European Union Global Strategy "Shared Vision, Common Action: A Stronger Europe: A Global Strategy for the European Union's Foreign and Security Policy", June 2016, at 22–23, http://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf .
[637] Matteo Barra and Martin Svec "Reinforcing Energy Governance under the EU Energy Diplomacy: A Proposal for Strengthening Energy Frameworks in Africa" (2018) 9 European Journal of Risk Regulation 2 at 247.
[638] See A Global Strategy for the European Union's Foreign and Security Policy at 27.

The EU has prioritised China, India and South Africa for its bilateral cooperative initiatives between itself and third countries.[639] Africa is also a key focus of EU external action for trade, development, energy and climate change policies and its global strategy that recognises the need to mobilise investments in Africa to achieve sustainable development goals.[640] On a broader scale, the EU engages globally in energy governance and partnerships, technology transfer and trading, and energy policy reform.

The EU also implements its climate finance commitments to its members and third countries through the EIB, which is self-reputed as the largest multilateral provider of climate finance worldwide and commits at least 25 per cent of its investments to climate change mitigation and adaptation efforts by supporting low-carbon and climate-resilient growth.[641] Stern has argued that multilateral and national development banks should increase their investments from US$50 billion to US$200 billion over the next ten years, and the EIB is likely on track with this commitment with its target of investing US$100 billion in climate action over the next five years.[642] This target, considered the leading climate finance contribution of any single multilateral institution, puts the EU in an excellent position to demonstrate climate leadership. Interestingly, EIB also manages Climate Action in the Middle East and North Africa (CAMENA) by providing grants targeted at specific climate initiatives to help Mediterranean partner countries combat climate change. Specifically, some of the projects already approved for the region include a EUR 300,000 study to support the implementation of potential Nationally Appropriate Mitigation Actions (NAMA) in the Mediterranean partner countries and EUR 600,000 technical assistance operation project to support procurement for the on- and off-site RE power plants facilities for the Gaza central desalination plant.[643] These will have both mitigation (by reducing carbon dioxide emissions) and adaptation outcomes (by helping to address water shortages).

However, the EU has been criticised for its lack of success in persuading countries such as the US, India and China because its own story scarcely offers many lessons in concrete methods

[639] Diarmuid Torney and Mai'a K. Davis Cross above n579 at 46.
[640] Matteo Barra and Martin Svec above n637at 262; EEAS (EU), Shared Vision, Common Action: A Stronger Europe: A Global Strategy for the European Union's Foreign and Security Policy, June 2016, at 36. http://eeas.europa.eu/archives/docs/top_stories/pdf/eugs_review_web.pdf .
[641] European Investment Bank "Together on Climate" https://www.eib.org/en/projects/priorities/climate-and-environment/climate-action/together-on-climate.htm
[642] Nicholas Stern above n566.
[643] European Investment Bank "CAMENA Climate Action Envelope" https://www.eib.org/en/projects/regions/med/trust-fund/camena/index.htm .

to persuade a reluctant public of the need to sacrifice economic gains and the difficult but necessary path toward a sustainable environment.[644] These criticisms include the number of infringement cases of EU member states before the ECJ. As far as third countries are concerned, it may be hypothesised that the UNFCCC wields more significant influence over many third countries as some of these countries may be sceptical about the reliability of the EU's climate compliance proposal. The intentions of the EU's involvement in developing third countries' climate resilience has also been questioned.[645] It is unclear what the EU intentions are, but it may be linked to personal interests in energy trade and its resolve to lead global climate policy. Nonetheless, given the changing dynamics and shifting constellations of power and politics in the international politics of climate change, the EU's demonstrated ambition to tackle climate change may render it a force to be reckoned with in climate negotiations in the coming years.[646]

The preceding discussion has shown cross interactions between the EU, UNFCCC, EU members, Nordic region and third countries. Some of these interactions are direct, causing the EU to be more influential than the UNFCCC and other interactions are indirect or non-existent. The EU has also influenced some third countries but has encountered difficulties such as communication challenges and reaching large numbers of poor and rural citizens when engaging in large-scale public outreach in many third countries.[647]

III. Climate Change Efforts in West Africa

Africa's involvement in climate negotiations before 2006 was limited to the African Group of Negotiators (AGN), an arm of the African Union (AU) acting on behalf of Africa. The AGN represented the entire African continent, but West Africa was not involved in negotiations and policymaking at this time.[648] West Africa's subsequent participation in global climate change negotiations can be linked to European influence. Europe and Africa had historical partnerships in technological and scientific fields that mirror an intricate array of national, regional, and international interests. The history between these continents has not always been considered wholesome due to the perceived European selfish interest that designed scientific and other policies to extract Africa's natural resources, establish new disciplines, and generate botanical

[644] Diarmuid Torney and Mai'a K. Davis Cross above n579 at 25.
[645] Louise Van Schaik and Simon Schunz "Explaining EU Activism and Impact in Global Climate Politics: Is the Union a Norm- or Interest-Driven Actor? (2012) 50 JCMS 1 at 170.
[646] Carolina B. Pavesel and Diarmuid Torney above n582 at 143.
[647] Diarmuid Torney and Mai'a K. Davis Cross above n579 at 54.
[648] Farayi Madziwa and Carola Betzold "20 years of African CSO involvement in Climate Change Negotiations: Priorities, Strategies and Actions (Heinrich Böll Stiftung, South Africa, 2014) at 5.

and often highly controversial human collections.[649] However, in the past few decades, European and African discourses have focused on equitable partnerships between both continents, emphasising common interests, mutual benefits and global challenges.[650]

The urgency for climate change mitigation and adaptation has also propelled the EU to establish partnerships with Africa in the field of science, technology and innovation. These partnerships can help developing countries mitigate or adapt to climate change impacts by producing and using RE technologies to act as a conduit for information dissemination between manufacturers and end-users.

At the topmost level, the AU has adopted several decisions on climate change, including specific work programmes and a draft African Strategy on Climate Change.[651] The AU also set up a committee of African Heads of State and Government on Climate Change (CAHOSCC) to work with the African Ministerial Conference on the Environment (AMCEN), the overarching body on climate change within Africa's action framework, to guide the AGN during global climate change negotiations. Today, the AGN is considered as one of the powerful coalitions present in climate discussions and acknowledged to have significantly shifted from its prior reactionary position.[652]

A. ECOWAS

The earliest West African regional coalition created with the AU's help was the Economic and Social Council (ECOSOC). This coalition was responsible for implementing "internationally agreed development goals" and tackling economic, social, and environmental issues.[653] Later in 1972, ECOWAS was formed and has since gained the status of an intergovernmental organisation.[654] ECOWAS, similar to the EU, has a legislative, executive and judicial arm. The legislative arm is known as the Community Parliament. The ECOWAS Commission can make regulations, decisions and recommendations, and under the new legal regime, regional decisions are immediately applicable and binding on the members. Members can, therefore,

[649] Clifton Crais and Pamela Scully "Sara Baartman and the Hottentot Venus: A Ghost Story and a Biography. (Princeton University Press, 2009); Saul Dubow A commonwealth of knowledge: Science, sensibility and white South Africa 1820–2000. (Oxford University Press, Oxford, 2006).
[650] Joint Africa-EU Strategy 2007.
[651] See e.g. AU, Assembly Decision 134 (VIII) of 29-30 January 2007 on Climate Change and Development in Africa ; AU, Assembly Decision 248 (XIII) of 1-3 July 2009 on the Accession of the African Union to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol; AU, Assembly Decision 640 (XVIII) of 30-31 January 2017 on Africa's engagement in the global climate change negotiations at COP22,
[652]See UNFCCC, supra note 16, art 4 (1)(e); Jean-Christophe Hoste, "Where was United Africa in the Climate Change Negotiations?" (Brussels: Egmont Royal Institute for International Relations, 2010) .
[653] United Nations "About ECOSOC" 2014 http://www.un.org/en/ecosoc/about/ .
[654] See Ojo "Nigeria and the Formation for a detailed analysis of the origins of ECOWAS" pps 571-604.

not hide behind the excuse of trying to ratify or transpose protocols and conventions.[655] However, the ECOWAS Commission has not to date issued any specific directives on climate change that mirror the UNFCCC and Paris Agreement objectives. Arguably this may be a contributor to the varied climate ambition within West Africa. Even though Africa as a continent does not significantly contribute to the total global GHG emissions, issuing directives to members may influence climate ambition, just like what is observed in the EU.

The ECOWAS Community Court of Justice (ECCJ) is the judicial arm of ECOWAS, created pursuant to Articles 6 and 15 of the Revised ECOWAS Treaty 1993. These provisions confer authority on the ECCJ to pass judgments that are binding on member states, institutions of the community, individuals and corporate bodies.[656] The ECCJ judgments are final and binding under the original 1991 Treaty, but national courts execute the judgments.

There is no research available on early interactions between ECOWAS and the IER on climate change, however, the ECOWAS Commission has included RE considerations in its accords for over 26 years. ECOWAS also adopted the ECOWAS Renewable Energy Policy (EREP) to increase the share of RE in the region's overall electricity mix to 35 per cent in 2020 and 48 per cent in 2030 (to 10 and 19 per cent respectively, excluding large hydro).[657] Currently, plans are in progress to support the ECOWAS Regional Electricity Regulatory Authority (ERERA) and the national regulators to create an electricity market to improve cross-border exchanges and set international exchange tariffs.[658]

B. ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE)

Regulation C/REG.23/11/08 established the ECREEE in 2009 against the backdrop of a very severe energy crisis in the region. As a specialised agency of ECOWAS, ECREEE was created to support the region's economic and social development in an environmentally acceptable manner by promoting and utilising RE and energy-efficient technologies.[659] Although the creation of ECREEE is not directly linked to the United Nations, the UNIDO offered strategic

[655] ECOWAS "Regulations" https://www.ecowas.int/ecowas-law/regulations-directives-and-other-acts/
[656] Ibid at 193.
[657] International Renewable Energy Agency "West Africa Clean Energy Corridor" https://www.irena.org/cleanenergycorridors/West-Africa-Clean-Energy-Corridor .
[658] European Commission "ECOWAS Electricity Regulation" https://ec.europa.eu/europeaid/ecowas-electricity-regulation_en .
[659] Open EI 'ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE)' https://openei.org/wiki/ECOWAS_Regional_Centre_for_Renewable_Energy_and_Energy_Efficiency_(ECREEE) .

technical assistance. In addition, some individual countries such as Austria, Cape-Verde and Spain also supported and are currently sustaining ECREEE.[660] However, it is not clear what the motivations are behind each country's support as none of these three countries lead in the creation and utilisation of RE technologies. Presently, ECREEE has five core partners, UNIDO, the EU, the World Bank, Spanish and Austrian governments. ECREEE is also an observer organisation of the UNFCCC and showcases its work during the annual COPs.[661]

ECREEE's activities include: policy and capacity development, knowledge management and awareness, investment and business promotion and coordination and implementation of several internationally financed sustainable energy programs and projects. ECREEE also manages the ECOWAS Renewable Energy Facility (EREF), a grant facility that provides grant co-funding for small to medium-sized RE and energy efficiency projects and businesses in rural and peri-urban areas. Since its establishment, ECREEE developed the EREP and the ECOWAS Energy Efficiency Policy (EEEP). These regional policies obligate countries to propose national action plans and measures that respond to the set regional targets by 2030. However, it is unclear whether these plans and measures corresponded with the Intended Nationally Determined Contributions (INDCs) submitted by the countries in this region before COP21 in 2015.

According to the ECOWAS Observatory for Renewable Energy and Energy Efficiency (ECOWREX), there has been commendable progress achieved in some ECOWAS countries, such as Ghana, Cape Verde and Senegal, in terms of formulating and implementing policies, laws, standards and incentive schemes. The IER through UNEP and UNIDO has influenced ECREEE's functional capacities by supporting individual projects in eleven ECOWAS countries.[662] The UNFCCC has also been influential as a platform by engendering partnership opportunities between the International Renewable Energy Agency (IRENA) and ECREEE to engage in RE capacity building programmes.[663] The EU has also influenced ECREEE's activities by earmarking more than 1.1 billion EUR to the ECOWAS energy sector and is

[660] Kathleen J Hancock "Energy Regionalism and Diffusion in Africa: How Political Actors Created the ECOWAS Center for Renewable Energy and Energy Efficiency" (2015) 5 Energy Research and Social Science at 110.
[661] ECREEE "ECREEE at COP23" http://www.ecreee.org/news/ecreee-cop23 .
[662] UNEP "West African Ministers Adopt Cleaner Fuels and Vehicles Standards" https://www.unep.org/news-and-stories/story/west-african-ministers-adopt-cleaner-fuels-and-vehicles-standards .
[663] IRENA "IRENA-ECREEE Energy Planning Capacity Building Programme: Training 1" https://www.irena.org/events/2015/Dec/IRENA-ECREEE-Energy-Planning-Capacity-Building-Programme-Training-1 ; ALER "ECREEE and IRENA Join Forces to Promote Clean Energy Mini-Grids in the ECOWAS Region" https://www.aler-renovaveis.org/en/communication/news/ecreee-and-irena-join-forces-to-promote-clean-energy-mini-grids-in-the-ecowas-region/ .

working as a close partner to ECREEE on several joint projects, studies and initiatives.[664] For example, the EU launched the Technical Assistance Facility (TAF) that supports many ECOWAS countries to finetune their energy policies and regulatory frameworks that can pave the way for increased investments in the energy sector.[665] Another example is the EU's co-funding to promote a climate-friendly electricity market in the ECOWAS region project that ran from 2018 to 2020.[666]

C. Interactions between ECREEE and Regional Members

As part of its commitment to emissions reductions, ECREEE has pledged to deliver in the following areas: electricity, sustainable biofuels, cooking mechanisms, and grid-connected (e.g. independent power producers, loss management) and off-grid issues (e.g. stand-alone systems, mini-grids) relevant to rural areas, aiming to achieve some key results in 2016 post COP21. To enable delivery in these areas, ECREEE proposed developing and adopting one regional RE and energy efficiency policy, developing and passing RE laws in all ECOWAS members states and ensuring that the national minimum renewable energy targets (MRET) adopted by ECOWAS member states are binding.[667]

ECREEE assists its members in developing, adopting, and implementing national renewable energy and energy efficiency policies and targets. The two ECREEE policies, EREP and the EEEP mandate countries to propose national action plans and measures that respond to the set regional target by 2030. So far, Ghana, Cape Verde and Senegal are in the process of formulating and implementing policies, laws, standards and incentive schemes, while others have yet to commence. ECREEE has also assisted in members capacity development by organising several RE and energy efficiency training workshops.

ECREEE has also coordinated several internationally financed sustainable energy programs and projects for members. Some examples are ECREEE Climate Change Program, ECOWAS Renewable Energy Entrepreneurship Support Facility, ECOWAS Programme on Access to Sustainable Electricity (EPASES) and Supporting Energy Efficiency for Access in West Africa (SEEA-WA) Project.

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[664] ECREEE "EU as a Key Partner to Support Renewable Energy in ECOWAS" http://www.ecreee.org/news/eu-key-partner-support-renewable-energy-ecowas .
[665] Ibid.
[666] Giz "Promotion of a Climate-Friendly Electricity Market in the ECOWAS Region (ProCEM) https://www.giz.de/en/worldwide/81018.html .
[667] ECREEE "Policy Development" http://www.ecreee.org/page/policy-development .

ECREEE has demonstrated some influence by incentivising members to utilise alternative energy sources through policies and programs. However, ECREEE and ECOWAS do not have any monitoring mechanisms to investigate members' INDC implementation presently. ECREEE has collaborated with UNIDO and the Austrian Development Cooperation to implement EPASES in urban and peri-urban areas between 2015 and 2020.[668] The proposed EPASES programme objective is basically to support and contribute to members' efforts in improving the enabling environment for energy investments.

ECOWAS also mandated ECREEE to assess and report on members progress in RE, energy efficiency and energy access targets annually.[669] So far, the 2017 report is available, which reveals RE advancements in grid-connected solar photovoltaic (PV) and the development of the market of small, affordable PV systems for lighting and other primary energy needs. Again, because ECOWAS does not independently monitor these developments but relies on the members submitted reports, there is a risk that the reports may not present an accurate picture of members efforts in deploying and using RE. Presently, there is no information on ECOWAS' compliance mechanism that can facilitate members' implementation and compliance with either the Paris Agreement's global targets or ECOWAS' environmental objectives. In sum, while ECOWAS through ECREEE has initiated several training and programs to facilitate RE usage and emissions reductions, it does not significantly influence members as it does not provide any sanctions for non-compliance. Interactions between the ECOWAS regime and its members may improve with a better-institutionalised design incorporating robust legislative and regulatory mechanisms to facilitate compliance.

D. EU and ECREEE Interactions toward GHG Emissions Reductions

The EC, the EU Council and the High Representative have built an external dimension within its energy policy framework to combat climate change and promote sustainable development in third countries.[670] The 2016 EU Global strategy, committed to fulfilling the Paris Agreement objectives, recognised the need to mobilise investments in Africa to achieve sustainable

[668] ECREEE "ECOWAS Programme on Access to Sustainable Electricity Services (EPASES)" http://www.ecreee.org/sites/default/files/epases_document_final.pdf .
[669] Jafaru Abdulraman and Daniel Paco and others "Regional Progress Report on Renewable Energy, Energy Efficiency and Energy Access in ECOWAS Region Monitoring Year: 2016" (ECREEE, July 2019) http://www.ecreee.org/system/files/ecreee_report_-_regional_monitoring_framework_2016_0.pdf .
[670] Matteo Barra and Martin Svec above n637 at 248.

development goals employing joined-up action among others in trade, development, energy and climate.[671]

An example of the EU's climate investment mobilisation was its award of €6.4 million for Senegal's rural electrification project.[672] This project was co-financed alongside the Senegalese government's contribution of €2.25 million and promoted electrification in not less than 40 villages in Casamance, Tambacounda and Kedougou. In aligning with the United Nations goal of reducing emissions, Dr Morlaye Bangoura, former ECOWAS Commissioner for Energy and Mines, stated that the project would significantly improve living conditions in the area and reduce GHG emissions.[673] The EU does not directly finance climate programmes for Africa, instead, the European Development Fund, financed by direct contributions from EU member states, is the largest and oldest development instrument that funds capacity-building activities in Africa, the Caribbean, and the Pacific (ACP) countries and overseas countries and territories.[674] While the EU is partnering with different West African countries on specific projects, there is not enough literature on EU and ECREEE interactions to suggest a significant influence of the EU on ECREEE's emission reductions efforts.

E. Influence of the UN on West Africa's Regional Climate Change Framework

The United Nations has partnered with West Africa in terms of climate change by establishing the United Nations Economic Commission for Africa's (UNECA) African Climate Policy Centre (ACPC). The centre was to function as an information hub on climate change issues to assist decision-makers in the region.[675] Nevertheless, this initiative has been highly criticised for being exogenous and susceptible to an undermining of continuity.[676]

The UNFCCC, in conjunction with the AfDB Group and BOAD, hosted an ECOWAS Green Investment Catalyst Roundtable in 2017 to deliberate on setting up a climate finance

[671] See EU Global Strategy " Shared Vision, Common Action: A Stronger Europe A Global Strategy for the European Union's Foreign And Security Policy" (2016) at 36.
[672] ECREEE "United Nations Delegate: "ECREEE Converts Commitments to Kwh for Real People" December 2015 http://www.ecreee.org/sites/default/files/newsletter/ecreee_newsletter_en_v_10_02022016.pdf .
[673] Ibid.
[674] Gracia Marín Durán "Environmental Integration in EU Development Cooperation: Responding to International Commitments or Its Own Policy Priorities? In Elisa Morgera (ed) *The External Environmental Policy of the European Union* (Cambridge: Cambridge University Press, 2012) pps 204-234.
[675] See UNECA, "African Small Island Developing States" (3 October 2017).
[676] Mariam Rita Fawole Masini "African SIDS under the International Climate Change Regime: Opportunities and Challenges for Regional Cooperation in Operationalizing the Paris Agreement" (2018) 14 McGill J. Sust. Dev. L. 119 at 133

platform.[677] The roundtable resulted in the formation of the West African Alliance on Carbon Markets and Climate Finance (WACC). This platform was to act as a repository and promote financial and technical assistance for project developers, funding facilities, risk-support, business models, best practices and solutions for private investment in ECOWAS.[678] In addition, it would function as an investment catalyst that supports private sector investment mobilisation for inclusive growth, using local expertise beneficial to local communities, particularly for early-stage project development. The platform would also raise awareness on investment initiatives that deliver on climate through innovative instruments such as green-debt, bonds and de-risking financial instruments. Regrettably, there is insufficient literature on the platform's status and the UNFCCC's involvement in its activities since its launch in June 2017.

UNIDO also promotes and accelerates inclusive and sustainable industrial development (ISID) in West Africa. The 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), necessary for framing the UN's and country efforts towards sustainable development in the next fifteen years, recognises UNIDO's effort in integrating ISID.[679] UNIDO is involved in many individual projects across West Africa, such as the investment promotion of the Strategic Program for West Africa Climate Change (SPWA-CC) mini-grids based on RE (small-hydro and biomass) sources in Nigeria.[680] In Liberia, UNIDO supported the SPWA-CC installation of multi-purpose mini-hydro infrastructure (for energy and irrigation) that is still ongoing.[681] UNIDO is a lead contributor in Burkina Faso's policy that promotes energy efficiency technologies in the beer brewing sector. The UNDP has also been involved in the development of the region's energy sector. An example is its pledged US$3,000,000 out of a US$4,000,000 budget to develop energy-efficient practices in building constructions in Senegal's commercial and residential sectors.[682]

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[677] UNFCCC "West African States Need Climate Finance Platform" (28 June 2017) https://unfccc.int/news/west-african-states-need-climate-finance-platform .
[678] UNFCCC "West African States Need Climate Finance Platform" https://unfccc.int/news/west-african-states-need-climate-finance-platform .
[679] UNIDO "UNIDO in Brief" https://www.unido.org/who-we-are/unido-brief .
[680] ECREEE " SPWA-CC Mini-Grids Based on Renewable Energy (small-hydro and biomass) Sources to Augment Rural Electrification" http://www.ecowrex.org/project/spwa-cc-mini-grids-based-renewable-energy-small-hydro-and-biomass-sources-augment-rural .
[681] ECREEE "SPWA-CC Installation of Multi-Purpose Mini-Hydro Infrastructure (For Energy & Irrigation) http://www.ecowrex.org/project/spwa-cc-installation-multi-purpose-mini-hydro-infrastructure-energy-irrigation .
[682] ECREEE " National Greenhouse Gas Reduction Program through Energy Efficiency in the Built Environment-Senegal" http://www.ecowrex.org/sites/default/files/documents/projects/senegal_undp_revised_09102012.pdf .

Many of the IER-assisted capacity building projects for regions are directed by the Paris Committee on Capacity Building.[683] Also, the UNFCCC COP23 was an excellent platform for about 350 international institutions and developing country Parties to share ideas on capacity-building activities to bridge the gaps developing countries experience that could interfere with their ability to meet their Paris Agreement commitments.[684]

From the preceding discussion, several actors have been involved in the development of West Africa's climate framework. The UN, through its specialised agencies and the UNFCCC, have been major contributors in providing technical and financial capacity to ECOWAS members. The EU has also contributed to the establishment of West Africa's climate framework through technical assistance. The EU, individual European countries and the IER all work with specific countries to provide financial assistance for energy projects to ECOWAS countries. However, there is insufficient data on project completions and whether they were impactful on their targeted communities. According to the available information on ECOWREX and ECREEE databases, UNIDO has not been involved in any energy projects in some of the ECOWAS countries since 2014. Also, the database does not provide up-to-date information on some of the projects that individual EU countries and the EC supports in West Africa. ECREEE, on the other hand, acts as a technical partner for various financiers to implement RE initiatives in West Africa. ECREEE's influence on members is relatively minimal as the institutional framework for a holistic relationship is lacking. While inference can be drawn to indicate the influence of both the IER and the EU on the region's climate efforts, such influence juxtaposed against climate change urgency is, in reality, minimal.

IV. South-East and East Asia

China and India are situated in regions with no umbrella intergovernmental organisations that incorporate environmental governance functions at the regional level. Unlike Europe and West Africa that have recognised and established intergovernmental bodies that can act as intermediaries between the IER at the global level and states at the local level, Asia does not have a similar structure. Chesterman buttresses this, stating that Asian countries are the least likely of any regional grouping to be a party to most international obligations or to have significant representation reflective of their size and number in international organizations.[685] He argues that even though Asia is the most populous and economically dynamic region on the

[683] UNFCCC "Paris Committee on Capacity Building (PCCB)" https://unfccc.int/pccb
[684] UNFCCC "UN Climate Change Annual Report 2017" https://unfccc.int/resource/annualreport/ .
[685] Simon Chesterman "Asia's Ambivalence about International Law and Institutions: Past, Present and Future" (2016) 27 E.J.I.L 4 at 946.

planet and arguably benefits most from international law and institutions' security and economic dividends, Asia is circumspect about embracing those rules and structures. He states that the Asia-Pacific group, consisting of 53 states, rarely adopts common positions on issues, unlike the AU and EU.[686]

Nonetheless, some regional institutions interact and cooperate with the IER to achieve emissions reductions objectives. These institutions and the roles they play will be discussed below. However, it is opined that the sub-regional groupings that exist only tend to cooperate on narrow shared national interests rather than a shared identity or aspirations.[687]

A. ASEAN Regional Forum and the International Climate Change Framework

The closest to an umbrella intergovernmental organisation that South East Asia has is ASEAN. Ten countries constitute its membership at the highest level, and twenty-seven countries are members of the regional forum. India and China, two of the case studies, belong to the ten dialogue partners that contribute to the regional forum. ASEAN was established in 1967 to accelerate economic growth, social progress and cultural development in the region and foster partnership to strengthen the foundation for a prosperous and peaceful community of Southeast Asian nations. It also aimed to promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries in the region and adherence to the principles of the UN Charter.

According to the joint statement by ASEAN on climate change, it considers itself to have played an active and leadership role in addressing climate change in the global community irrespective of its principal members not contributing significantly to GHG emissions.[688] ASEAN has also engaged in international negotiations to ensure a fair, equitable and effective outcome for the climate change regime and has made several declarations and statements supporting climate action since 2007.[689] ASEAN has responded to climate change by adopting the 2010 Statement on Joint Response to Climate Change and the 2012 ASEAN Action Plan on Joint Response to Climate (AAPJRC) through the ASEAN environment ministers. ASEAN is also pursuing a broad-based approach to tackling climate change by taking voluntary

[686] Ibid at 946.
[687] Ibid.
[688] ASEAN "ASEAN Cooperation on Climate Change" https://environment.asean.org/asean-working-group-on-climate-change/ .
[689] Raman Letchumanan "Climate Change: Is South Asia up to the Challenge? Is there an ASEAN Policy on Climate Change?" in Kitchen Nicolas (ed) *IDEAS Reports-Special Reports* (LSE London, UK, 2010) at 52.

mitigation actions, enabling technology transfer, providing financial assistance and capacity building.[690] Between 2007 and 2016, the ASEAN summits have periodically issued statements on climate change, especially in connection with the UNFCCC's COP.[691] These statements highlight ASEAN's common concerns over climate change and its resolve towards a global solution.[692]

Some scholars suggest that ASEAN does not emphasise cooperation on climate change issues and have suggested improvement.[693] Some areas that need improvement are: competence building and awareness, NDC tracking, and the inability to promote regional energy integration and cooperation on other transboundary issues. One major setback that will persist even when the factors mentioned above are tackled is rooted in the membership of ASEAN. There is a setback because significant polluters in the region are not full ASEAN member and cannot be bound by ASEAN's environmental sanctions, if any. Although 27 States, including major polluters such as China and India, are members of the ASEAN Regional Forum (ARF), it is unclear what influence ASEAN has over these countries to foster climate action in consonance with the Paris Agreement objectives.

If the ASEAN regional forum is designed to develop cooperative norms of behaviour, as some scholars contend, the forum should also encourage negotiations to meet desired outcomes.[694] Very similar to the UNFCCC, the ARF may be unable to resolve contentious issues, but it can influence its members' behaviours to achieve common goals by moulding cooperative norms of behaviour.

B. Influence of ASEAN on Regional Members

Southeast Asia has been described as a semi-unfavourable environment for regional cooperation.[695] Over the years from 1967, ASEAN, initially formed by Indonesia, Malaysia, the Philippines, Singapore and Thailand, has sought economic, socio-cultural and political

[690] Ibid at 62.
[691]ASEAN above n688.
[692] The ASEAN "Climate Change: The Time to Act is Now" September 2020 https://asean.org/storage/2020/10/The-ASEAN-Magazine-Issue-5-September-2020.pdf .
[693] Indra Overland "Impact of Climate Change on ASEAN International Affairs: Risk and Opportunity Multiplier" (2017) Norwegian Institute of International Affairs and Myanmar Institute of Strategic and International Studies at 16.
[694] Sisowath Doung Chanto "The ASEAN Regional Forum – The Emergence of 'Soft Security': Improving the Functionality of the ASEAN Security Regime" (2003) 3 Dialogue plus Cooperation at 41.
[695] Frank Frost "ASEAN and Regional Cooperation: Recent Developments and Australia's Interests" (Parliament of Australia, November 8, 2013) https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1314/ASEAN#_ftn13 .

cooperation.[696] ASEAN has often been contrasted with the EU regarding the perception of the EU influence on its members.[697] The EU regulates the relationship between the Union and its members and the cooperative arrangements among its members mainly through agreements with the force of law while ASEAN cooperates through informal understandings that impose no legally binding obligations.[698] The ASEAN approach obfuscates certainty as to why ARF members may fulfil international climate obligations and whether it is due to international pressure or regional pressure. Unlike the EU and ECOWAS, ASEAN does not have a Commission or a court of justice to aid the implementation of regional climate targets.[699]

Nonetheless, two reports compiled by the Massachusetts Institute of Technology (MIT) Joint Program on the Science and Policy of Global Change, MIT Energy Initiative, and the MIT Center for Energy and Environmental Policy Research (CEEPR) indicated that ten ARF members had made good progress in GHG emissions reductions, but would need to implement additional steps to achieve the targets specified in their individual NDCs.[700] The region is almost short by 400 MtCO2e (megatons of carbon dioxide-equivalent emissions) of its 2030 emissions target and needs to reduce emissions by 11 per cent relative to its current trajectory. Under its conditional pledges, the emissions gap is about 900 MtCO2e, indicating a need to reduce emissions by 24 per cent by 2030.[701]

C. ASEAN/ EU Environmental Cooperation

ASEAN and the EU entered into a strategic partnership in 2020, long after the EU signed the treaty that allows accession by regional organisations in 2012.[702] Both blocs pledged to make climate change policy a significant area of cooperation, and the EU has reserved millions of euros to support climate action in Southeast Asia.[703] The partnership's environmental focus is

[696] 'Declaration of ASEAN Concord II (Bali Concord II) Bali, 7 October 2003
[697] Axel Berkofsky "Comparing EU and Asian Integration Processes- The EU a Role Model for Asia?" European Policy Centre https://www.files.ethz.ch/isn/10941/doc_10972_290_en.pdf .
[698] ASEAN "The ASEAN Way and the Rule of Law" (Address by Rodolfo C. Severino, Secretary-General of the Association of Southeast Asian Nations, at the International Law Conference on ASEAN Legal Systems and Regional Integration sponsored by the Asia-Europe Institute and the Faculty of Law, University of Malaya, Kuala Lumpur, 3 September 2001).
[699] David Camroux "The European Union and ASEAN: Two to Tango? (Institute Delors, 2018) https://institutdelors.eu/wp-content/uploads/2018/01/eu-aseancamrouxnejune08.pdf .
[700] Mark Dwortzan "Technology and Policy Pathways to Paris Emissions Goals" (MIT News, 2018) http://news.mit.edu/2018/mit-reports-technology-and-policy-pathways-paris-agreement-goals-1210 .
[701] Ibid.
[702] Josep Borrell "An EU-ASEAN Strategic Partnership: How Did that Happen and What Does It Mean? December 6, 2020 https://eeas.europa.eu/headquarters/headquarters-Homepage/89962/eu-asean-strategic-partnership-how-did-happen-and-what-does-it-mean_en .
[703] DW.com "Can the EU's Climate Change Plan Work in Southeast Asia?" https://www.dw.com/en/can-the-eus-climate-change-plan-work-in-southeast-asia/a-57062423 .

the sustainable use of peatland and haze mitigation, biodiversity conservation, and heritage parks management in the ASEAN region.[704] Additionally, the EC has bilateral arrangements with some ASEAN members to reduce emissions.[705] In 2018, the EU and ASEAN produced a document on joint action on mitigating climate change impact from Civil Aviation. The project aimed to support ASEAN's participation in and implementation of international instruments that address aviation emissions. The EC budgeted €4,000,000 under the 2018 Partnership Instrument Annual Action Programme to increase knowledge and strengthen institutional capacities to address aviation and climate change.[706] Since 2015, both partners have held two high-level dialogues to discuss related regional climate change challenges and experiences with the view of overcoming them.

The EU has been influential in the ASEAN region for many years and notable for being the largest provider of development assistance to ASEAN. With the strategic partnership, the EU may influence ASEAN to implement some of its commitments to the Paris Agreement. However, it is telling that despite the two dialogues between both regions, nothing about coal-fired power has been addressed. The Blue Book that lays out the EU-ASEAN partnership barely refers to coal either. It may be inferred that the EU may want to tread cautiously and not upend the burgeoning relationship between both regions and may slightly pressure ASEAN to take firmer action. This tactic may be beneficial if both parties are willing to cooperate and be transparent, or it may be detrimental if ASEAN interprets the move as confrontational, meddlesome or a threat to their sovereignty.

D. SAARC (South Asian Association for Regional Cooperation)

The SAARC was established with the signing of the SAARC Charter in Dhaka on 8 December 1985. It comprises eight members: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka and its main objectives are to promote the welfare of the peoples of South Asia by improving their quality of life and accelerating economic growth, social progress and cultural development in the region.[707] Cooperation amongst member nations in international forums on matters of common interests is another crucial objective of SAARC.

[704] ASEAN "ASEAN Cooperation on the Environment: At a Glance" https://asean.org/wp-content/uploads/2018/02/50.-December-2017-ASEAN-Cooperation-on-Environment-At-A-Glance.pdf
[705] EU Commission "Cooperation with non-EU Countries and Regions" https://ec.europa.eu/clima/policies/international/cooperation_en .
[706] European Commission "Annex 20- EU-South Asia Cooperation on Mitigating Climate Change Impact from Civil Aviation" https://ec.europa.eu/fpi/sites/fpi/files/annexes_aap_2018_phase_ii_1.pdf .
[707] SAARC "About SAARC" http://saarc-sec.org/about-saarc .

In terms of the environment and climate change concerns, the SAARC at successive summits since 1987, has reiterated the need to reinforce and intensify regional cooperation to preserve, protect and manage the diverse and fragile eco-systems of the region, including the need to address the challenges posed by climate change and natural disasters. Consequently, regional centres have been set up to address varying aspects of environmental concerns, climate change and natural disasters. These include the SAARC Environment Center merged with SAARC Energy Center (SEC) to protect, conserve and use environmental resources prudently by adopting sustainable forest management practices through research, education and coordination among members.[708] The SAARC Disaster Management Centre (SDMC) also provides policy advice and facilitates capacity building, including strategic learning, training, system development, and information exchange for effective disaster risk reduction and management. [709] SAARC is a small intergovernmental body compared to the other intergovernmental bodies mentioned above, but similar to ASEAN, SAARC has no commission or court to facilitate the implementation of members emissions reduction commitment.

The EU is an observer in SAARC and supports countries in South Asia through technical and financial aid, but there is little available information on its interactions with SAARC regarding climate change and emissions reductions. Therefore, the EU is unlikely to have significant influence over SAARC in the climate change space.

E. IER influence in South-East Asian Region

According to ASEAN, there have been continued joint efforts between the UN through one of its agencies UNEP and Southeast Asia, in addressing climate change and responding to its impacts on socio-economic development, health, environment and water resources. Specifically, UNEP supports the Southeast Asia Climate Change Network (SACCN), which assists ASEAN member states in fulfilling their commitment under the UNFCCC.[710] There have also been joint meetings between ASEAN and the UN post-2015, which identified areas for future cooperation such as green economy and support toward ASEAN Action Plan on Joint Responses to Climate and Sustainable Cities. SAARC also collaborates with UNEP and the

[708] SAARC "Environment Natural Disasters and Biotechnology" http://saarc-sec.org/areas_of_cooperation/area_detail/environment-natural-disasters-and-biotechnology/click-for-details_6 .
[709] Ibid.
[710] ASEAN "An Overview of ASEAN-United Nations Cooperation" https://asean.org/?static_post=background-overview-united-nations .

UN International Strategy on Disaster Reduction (UNISDR) and has signed a Memorandum of Understanding (MOU) with both organisations. It is also an accredited observer of the UNFCCC since November 2010.[711] On paper ASEAN strongly supports the UNFCCC and calls for global efforts to address climate change, and the main members have all submitted their NDCs, however, some of the countries in this region still rely on coal for economic reasons.

While the UN and its specialised agencies have been involved in some environmental programs in the Southeast Asian countries, its influence on ASEAN's regional climate change framework is not as remarkable as ECOWAS. The influence is not significant when understood from the Asian context that does not, in reality, care for institutionalisation and institution building. The UN and its agencies work well with institutions as they do with countries. However, ASEAN and SAARC are not institutionalised as the members believe that regional integration does not have to be supported by institutions imposing legally binding rules and norms on them as members. Based on the preceding discussion, it is most likely that the IER may influence the Southeast Asian and South Asian countries individually rather than via intergovernmental organisations.

V. MENA Scenario

The World Bank has categorised MENA to include the following: North Africa (or the Maghreb) consisting of Morocco, Algeria, Tunisia, Libya and Egypt, Mediterranean (or the Levant) consisting of Jordan, Israel, Palestine (West Bank and Gaza), Lebanon and Syria, Gulf Cooperation Council (GCC) consisting of Bahrain, Kuwait, Oman, Saudi Arabia, Qatar and the United Arab Emirates and the Middle East consisting of Iran, Iraq (sometimes considered in the Levant), Djibouti and Yemen. As Morocco is one of the case studies examined, it is vital to examine climate change development within the regional context- similar to the approach with other regions.

This region is somewhat divided in the level of ambition demonstrated in emissions reductions. For instance, unlike its counterparts, in Northern Africa, Egypt has not made any unconditional GHG emissions reduction commitments.[712] Despite recently proactive contributions to the global climate change agenda, the GCC countries have not made any unconditional GHG

[711] SAARC "Environment Natural Disasters and Biotechnology" http://saarc-sec.org/areas_of_cooperation/area_detail/environment-natural-disasters-and-biotechnology/click-for-details_6 .

[712] Steven Griffiths "A Review and Assessment of Energy Policy in the Middle East and North Africa" (2017) 102 Energy Policy at 252.

emissions reduction commitments. In contrast, all of the North African countries, except Egypt, have made at least some form of unconditional commitment.[713] The GCC situation is quite complex as governments need to balance economic and social interests, in particular, energy subsidies which GCC elites need to maintain social and political stability.[714] The reliance on hydrocarbons is ironic as the GCC terrain has vast potential to develop RE technologies, especially wind and solar resources, due to its extensive desert land.[715] Israel, however, has been more ambitious in its climate targets and has unconditionally committed to reducing GHG emissions by 2030 to 26 per cent below the 2005 levels.

The reluctance of MENA states, according to the World Bank, to express any intention to implement a climate policy related to carbon taxes or emissions trading scheme, unlike Europe, may be linked to the absence of any recognised and structured intergovernmental environmental organisation to facilitate and motivate mitigation and adaptation efforts towards reduction of climate change impacts.[716] The INDCs submitted by MENA countries so far indicate that energy policy will not be strongly coupled to climate policy as energy security and energy cost minimization will motivate energy policy development.[717] Consequently, the cost associated with RE technology development may deter many countries in MENA from designing a climate policy.

Regional cooperation in the Middle East could be improved on. Factors such as political instability, mistrust, divergence in national histories, interests and trajectories, weak institutions, prospects of violent conflict, existing geopolitical alliances, and powerful global interests constitute obstacles to regional cooperation.[718] However, the urgency of climate change action requires an ecologically-based regional integration to achieve collective goals of ensuring a safe environment for present and future generations.[719] It is opined that in recent years, national authorities in the MENA region have recognised a strong need for concerted

[713] Ibid.
[714] Lea Pfeffer "The Position of the Gulf Cooperation Council Countries in regard to the COP 21" (Sciences Po, Kuwait Program, 2015) https://www.sciencespo.fr/kuwait-program/wp-content/uploads/2018/05/KSP_Paper_Award_Fall_2015_PFEFFER_Lea.pdf at 3.
[715] W.E. Alnaser and N.W Alnaser "The Status of Renewable Energy in the GCC Countries" (2011) 15 Renewable and Sustainable Energy Reviews, pps 3080-81.
[716] World Bank "State and Trends of Carbon Pricing 2016" (World Bank, Washington 2016).
[717] Steven Griffiths above n712 at 266.
[718] Abbas El-Zein and others "Health and Ecological Sustainability in the Arab world: A Matter of Survival" (2014) 383 The Lancet 9915 at 469.
[719] Ibid at 472.

and collaborative approaches to mitigating and adapting to climate change.[720] Consequently, proposals are being developed to establish a regional ministerial and technical council to provide climate change assessments and possible responses by the Arab region. Also, plans have been made to frame a clear position of the MENA region in international climate change negotiations to align with and 'possibly' implement the objectives of the Paris Agreement.[721]

A. Regional Center for Renewable Energy and Energy Efficiency (RCREEE)

Similar to ECREEE in West Africa, MENA has established the Regional Center for Renewable Energy and Energy Efficiency (RCREEE) to improve energy efficiency and RE uptake. The RCREEE was established based on the Cairo Declaration of 2008 and currently has seventeen members from the Arab region.[722] RCREEE's objective is to increase and enable the adoption of renewable energy and energy efficiency practices and diffuse the execution of cost-effective RE and energy efficiency policies, strategies and technologies in the Arab region.[723] To achieve these, RCREEE partners with the regional governments and global organizations to commence and steer clean energy policy dialogues, strategies, technologies and capacity development to increase the share of Arab states in future energy.

Currently, it gets its financing through contributions from its member states, through selected fee-for-service contracts and through the New and Renewable Energy Authority (NREA). Interestingly, it also gets funding from government grants provided by Germany through the German Development Cooperation (GIZ) GmbH, and Denmark, through the Danish International Development Agency (DANIDA).

B. RCREEE Influence on Members

RCREEE is involved in several RE and energy efficiency projects in MENA. In the area of capacity building, RCREEE responds to specific training demands and needs from members to build and strengthen qualifications, competencies and expertise in RE and energy efficiency fields and commits to training more than five hundred specialists from various Arab countries annually.[724] The training is conducted through exchange missions, national and regional

[720] Council of Arab Ministers Responsible for the Environment, 'Statement on Climate Change' (2009); Mari Luomi, 'Bargaining in the Saudi Bazaar: Common Ground for a Post-2012 Climate Agreement?'; The Finnish Institute of International Affairs, 'FIIA Briefing Paper 48' (2009)
[721] Damilola S. Olawuyi "Middle East and North Africa" (2017) 11 Carbon & Climate Law Review 4 at 339.
[722] Cairo Declaration of Intentions on Establishment of Regional Center for Renewable Energy and Energy Efficiency "RCREEE" June 25, 2008 http://www.rcreee.org/sites/default/files/legal_cairodeclaration_2008_en.pdf .
[723] RCREEE "Who We Are" http://www.rcreee.org/content/who-we-are .
[724] RCREEE "On-Demand Capacity Development Programs" http://www.rcreee.org/projects/demand-capacity-development-programs .

workshops and technical training.[725] RCREEE was also able to identify institutional, policy, regulatory, awareness and communication, pricing and financing barriers impeding the scaling up of energy efficiency in each country and estimate the energy demand projections for the years 2020 and 2025.[726]

RCREEE has also created an online platform to disseminate knowledge and foster dialogue about the RE and EE situation in Sudan to support the establishment of a sustainable energy network in Sudan.[727] The project's anticipated impact is to facilitate information flow among Sudanese stakeholders, improve coordination among the public agencies in Sudan, and introduce discussions about regulatory frameworks for RE and EE deployment. However, there is no information regarding the funding of this project and whether the project is completed.

RCREEE also offers technical assistance to its members' institutions. Technical assistance includes providing technical and regulatory recommendations with special consideration given to the region's specific sustainable energy market characteristics and each member's specific needs.[728] It also provides a platform where regional experts and international counterparts collaborate on the latest technologies and best practices to build institutional capabilities and readiness to plan and implement sustainable energy projects. The centre also awards research and development grants locally and regionally.

Like ECREEE, RCREEE cannot monitor the implementation of its member's NDCs post-2015. Additionally, even though it is recognised as a leading platform for clean energy policy dialogues, strategies, technologies and capacity development, RCREEE does not have compliance mechanisms to ensure individual energy plans are implemented. To conclude, RCREEE has a degree of facilitative influence in the region but not quite substantial. Many of the countries in MENA have also not indicated high ambition for RE uptake, which is suggestive of RCREEE's minimal influence on its members.

C. Interactions between the UN, MENA region and RCREEE

The accelerated degrees of depletion and degradation in the Arab world for the past two decades has cast reservations on the IER's ability to influence environmental consciousness

[725] Ibid.
[726] Ibid.
[727] RCREEE "Establishment of Sudan Sustainable Energy Network" http://www.rcreee.org/projects/establishment-sudan-sustainable-energy-network .
[728] RCREEE "Technical Assistance" http://www.rcreee.org/content/technical-assistance .

and action in the Arab league.[729] However, through its various organs, the UN interacts with the MENA region through partnerships, joint efforts, or wholly funding specific projects. The discourse in the preceding sections on MENA suggests a dismal picture of Arab Nations characterised in a seemingly lackadaisical approach toward GHG emissions reductions, however, a closer examination of the energy sector will reveal subtle yet noteworthy advancements.

Broadly, UNIDO has been assisting sub-regional economic communities (RECs) and their members in establishing and operating sub-regional sustainable energy promotion centres.[730] This assistance has recently been expanded to include partnerships in the African and Arab regions. The significance of these sustainable energy centres is to accelerate energy and climate transformation by creating economies of scale, equal progress and spill-over effects between countries. UNEP also supports the Arab region to mitigate and adapt to climate change through its climate change subprogramme.[731] The subprogramme achieves this through developing platforms for knowledge sharing and information, technology transfer, conducting impacts, vulnerability and adaptation assessments, finance and capacity building activities and providing advisory services to promote the CDM, RE, energy efficiency and others.[732] In addition, UNEP and the UNDP have collaborated to establish the Territorial Approach to Climate Change (TACC) that will help to tackle climate change from the local level by engaging with subnational and subregional authorities through awareness programmes and workshops.[733]

The UNDP and RCREE have also initiated the Diesel to Solar (D2S) initiative to facilitate the regional transition towards sustainable energy and helps address climate change issues in the Arab region.[734] The project's anticipated impact will encourage private investors to integrate solar PV technology into existing diesel-based systems to reduce diesel consumption.[735] Several UN agencies have also worked directly with some countries in the MENA region

[729] UN Environment Programme "Environmental Outlook for the Arab Region (EOAR)" (United Nations Environment Programme, Nairobi, Kenya, 2010).
[730] UNIDO "Global Network of Regional Sustainable Energy Centres" https://www.unido.org/our-focus/safeguarding-environment/clean-energy-access-productive-use/climate-policies-and-networks/global-network-regional-sustainable-energy-centres .
[731] UNEP "Responding to Climate Change" https://www.unep.org/regions/west-asia/regional-initiatives/responding-climate-change .
[732] Ibid.
[733] Ibid.
[734] RCREEE "Diesel to Solar (D2S) Initiative" http://www.rcreee.org/projects/D2S .
[735] Ibid.

without RCREEE. For example, the UNDP has assisted Tunisia's NDC implementation process by supporting two action plans and developing the NDC implementation roadmap to accelerate its energy transition between 2017 and 2018.[736] In addition, UN Environment has committed to supporting the Algerian Government efforts in providing RE, natural resource management and waste management in rural communities.[737] There are several other projects that UN agencies are involved in in the MENA region, but this section will not belabour them.

To conclude, it can be inferred that the IER interacts with the region through RCREEE and directly with member states. These interactions create a subtle influence on the region, particularly in MENA countries where the UN facilitates implementation, such as Tunisia, Algeria, Morocco, Sudan, and others. While Algeria and Morocco have increased their RE uptake, studies indicate that RE uptake is low, and MENA countries can better exploit their vast RE potential with more significant support.[738] The support needed transcends domestic efforts, and the UNFCCC collaborating with other UN agencies can scale up efforts to enable the region to maximise its RE potential. The above does not disregard the efforts of several MENA countries that are upscaling investments in RE, lower carbon and leveraging income from extractive industries.[739] However, there is minimal regional influence on MENA members as the region does not have a commission or a regional court to facilitate the implementation of common goals. Further, the MENA region is fraught with structural and socio-political challenges that hinder the establishment of an REO that can provide robust legal and institutional frameworks on renewable energy development and investment across the MENA region.

VI. Regional Comparative Overview: EU, ECOWAS, MENA and ASEAN

The parameters identified to determine IER influence can also be applied to regional organisations or institutions. Some regional institutions have played significant roles in helping other regional institutions navigate their emissions-reductions objective from the preceding sections. Also, these institutions may have influenced their members and other regional

[736] UNDP "NDC Support Programme - Tunisia" http://www.ndcs.undp.org/content/ndc-support-programme/en/home/our-work/geographic/arab-states/tunisia.html .
[737] UN Environment "Algeria: Combating the Desert and leading on Renewables". https://wedocs.unep.org/handle/20.500.11822/20485
[738] Ahmed Bouraiou and others "Status of Renewable Energy Potential and Utilisation in Algeria" (2020) 246 JCLP at 14; Thomas Schinko and others "Morocco's Sustainable Energy Transition and The Role of Financing Costs: A Participatory Electricity System Modelling Approach" (2019) 9 Energy, Sustainability and Society 1 at 12.
[739] Damilola S. Olawuyi "Can MENA Extractive Industries Support The Global Energy Transition? Current Opportunities And Future Directions" (2021) 8 The Extractive Industries and Societies at 5.

institutions more than the IER. There may be instances where members perform well in fulfilling climate obligations, but the regional institutions they belong to may not satisfy the parameters outlined in chapter three. It may be inferred that the IER has been more influential, especially where causative links can be established.

It is essential to acknowledge that regional institutions vary in terms of institutional design based on shared customary values, length of existence, financial capabilities, and organisation, depicted from the discussion above. This consideration may explain why one region functions differently from another, not necessarily better than the other. Nonetheless, developing regions that opt for another region's institutional style may benefit from employing their mechanisms and processes to function optimally. The following sections investigate IER influence by comparatively analysing the regions discussed above against the backdrop of the parameters in chapter three.

A. Institutional Design

For a concise analysis, the institutional design will comprise the regional institution's economic, time, regulatory and problem structure. The EU institutional design comprises seven institutions as per Article 13 on the Treaty of the European Union (TEU) with the European Parliament at the apex. Primarily, the European Parliament, the EU Council and the EC are involved in EU environmental legislation, where in principle, the EC proposes new laws, and the Parliament and Council adopt them. The Commission is also tasked with implementing and ensuring that the laws are appropriately applied[740] while the European Council sets out different policy frameworks for EU climate and energy policies, the most recent covering the 2020-2030 period.[741] ECOWAS borrows some aspects from the EU's institutional style, such as having the same number of institutions, a Commission and a parliament.

Both the EU and ECOWAS have institutional design gaps, but ECOWAS experiences substantial challenges. Some of these challenges are technical and financial. For example, even though decisions and directives are immediately binding on ECOWAS members, the Commission has not designed or established any climate change directives to bind member states. The absence of climate change directives may be due to lacking scientific and technical knowledge to determine appropriate emissions cuts that its members must implement. There

[740] Europa "EU Institutions and Bodies in Brief" https://europa.eu/european-union/about-eu/institutions-bodies_en .
[741] Council of the European Union "Tackling climate change in the EU" https://www.consilium.europa.eu/en/policies/climate-change/ .

are also issues of financial incapacity that prevent the Commission from hiring experts that can provide the technical knowledge and guide the ECOWAS legislature. The EU, on the other hand, has the financial and technical know-how and has robust systems in place to prescribe informed emissions cuts.

It is important to note that the two regions have different motivations that impact institutional design. While the EU is a global advocate for climate change mitigation and adaptation, its motivations include its desire to be a global player in the environmental space- somewhat of a force to be acknowledged. Europe was also historically one of the largest GHG emitters and has sought to change its negative historical narrative. However, Africa has contributed least to global emissions and is not as ambitious as the EU, which may contribute to its lack of directives and regulations on climate change and emissions reductions, thereby affecting its institutional design. Although ECREEE has been established to promote RE and EE, its influence over its members is unlike the EU, partly because ECOWAS members may not feel accountable to ECREEE without any binding obligations. ECREEE also relies on UN agencies and countries such as Austria and Spain to finance its RE programmes and initiatives that may improve its institutional design.

ASEAN is considered by some as the second most developed regional organisation after the EU, having the ASEAN Ministerial Meeting on the Environment (AMME) at the apex, ASEAN Senior Officials on the Environment (ASOEN), and seven subsidiary bodies/working groups.[742] Despite ASEAN's highly acclaimed organisation, its institutional design has not significantly influenced environmental cooperation with the region. The organisation has held several meetings and draw-up plans, but these environmental plans are not directives or regulations and are therefore not binding on members. Even though ASEAN functions as the regional go-to in negotiating and pushing forward climate obligations, it is not purpose-built to breach the 'Asian-Independence' stance where countries within the region refuse to join the organisation. Also, the ASEAN way, which requires unanimity in decisions and non-intervention in members' matters of personal interest, is unlike the EU command and control approach. Environmental issues are closely related to economic interests, which would fall

[742] ASEAN "About ASEAN Cooperation on Environment" https://environment.asean.org/about-asean-cooperation-on-environment/#:~:text=ASEAN%20cooperation%20on%20the%20environment,sustainable%2C%20resilient%2C%20and%20dynamic.

under the personal interests of states, effectively tying the hands of ASEAN's institutional framework from interfering or enacting legally binding decisions or regulations.

MENA does not have an intergovernmental environmental institution such as ECOWAS, the EU or ASEAN accounting for the amorphous climate efforts across the region. Consequently, one would envisage that RCREEE's establishment, without a more cohesive and overarching regional institutional framework, may not substantially influence emissions reductions efforts in the region as individual countries relate directly with the IER and not the regional regime.

1. Economic and Problem Structures

A sturdy economic structure can aid the implementation of environmental objectives, and climate change requires economic solutions. This section examines how the various regions have synced the economic and problem structure in their response to climate change issues. Where an institution's economic structure is designed so that its instruments are deeply embedded in the regional environmental regime, it eases members' integration process. It is important to note that economic structure includes economic instruments and funds from stable sources with an attractive cost-benefit ratio. The EU has used economic avenues to incentivise climate action among its members through the introduction and subsequent reform of the ETS, globally acknowledged in carbon emissions reduction and energy efficiency promotion.[743]

The EU also provided some funds to ease and encourage adjustment to EU policy, such as the LIFE fund that facilitates conformity with EU environmental policy on environmental protection, the European Regional Development Fund (ERDF) and the European Social Fund (ESF) that target structural adjustment in regions suffering particularly from internal market liberalization.[744] Tangentially, the EU also incorporates its climate policies into its 'normal' economic policies to ensure maximum coherence between its climate and energy policy.[745] An example is the inclusion of trade mechanisms in its energy sector that generates income and incorporates climate policies within the energy sector, promoting sustainable development, trade and consumption of energy sources.

In 2016, the EC produced a report on the implementation of Regulation (EU) No 691/2011 of the European Parliament and the Council on European environmental economic accounts.[746]

[743] European Commission "EU Emissions Trading System (EU ETS)'' https://ec.europa.eu/clima/policies/ets_en
[744] Jonas Tallberg "Paths to Compliance: Enforcement, Management, and the European Union" (2002) 56 International Organisation 3 at 615.
[745] Jos Delbeke and Peter Vis "EU Climate Policy Explained (Routledge, New York, 2015) at 129.
[746] EUR-Lex REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the implementation of Regulation (EU) No 691/2011 on European environmental economic accounts.

The data synced economic and environmental information to measure the environment's contribution to the economy and the economy's impact on the environment.[747] This is arguably a step in the right direction in synergizing environmental and economic data to enable better decision making at the regional level.

The ECOWAS economic structure depends on donations and grants from UN agencies, the EC and some European countries. Countries are incentivised by these donations and training and not necessarily from any inbuilt economic mechanism. West Africa is not a massive beneficiary of the CDM, and carbon trade has seemed irrelevant to West Africa's efforts to tackle climate change. Regarding the cost-benefit ratio of ECOWAS climate change initiatives, there is insufficient data to indicate that the recommended ECOWAS policies and programs have a higher benefit ratio to cost. Because there are no sanctions or legally binding regulations for RE uptake to reduce emissions, ECOWAS members may not be affected by costs, especially where funds are obtained from external sources and RE training is provided. Even though West African governments may solely or partly fund RE projects, there is insufficient data to draw an inference of a favourable cost-benefit ratio to ECOWAS members. Also, the ECOWAS environmental policy offered by the ECOWAS to its members to implement environmental commitments may not suffice as a helpful reference tool to analyse the cost-benefit ratio.

The Gulf region is yet to integrate adaptation and mitigation measures into national long-term development strategies by mainstreaming these measures into existing decision-making and policy processes.[748] GCC countries within MENA are reluctant to abandon fossil fuel reserves as they perceive RE to be more expensive, particularly concerning the region's energy demand. The region also suffers tense relations, and the absence of a regional regime as an umpire to resolve disputes among member states may impede the solution of the climate change dilemma. Climate change considerations are not integrated into domestic economic policies. This may have been because of the timing of the Paris Agreement's entry into force soon after the launch of GCC long-term economic development plans and two years after the significant drop in oil

COM/2016/0663 final (2016) https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1478531808092&uri=CELEX:52016DC0663 .

[747] Ibid .

[748]Aisha Al-Sarihi "Prospects for Climate Change Integration into the GCC Economic Diversification Strategies" (LSE Middle East Centre Paper Series, February 2018) http://eprints.lse.ac.uk/86873/1/Al-Sarihi_Prospects%20for%20climate%20change_2018.pdf at 14.

prices of mid-2014 that stalled the uniform establishment of climate change action plans across the GCC states.[749]

There are currently twelve active climate funds in the region, the largest being the Clean Technology Fund (CTF) that approved US$866 million funding for eleven projects in Morocco and Egypt and three regional projects.[750] The GCF also supports individual countries within the MENA region on several energy and sustainability projects. Bilateral funds from countries such as Germany also contribute to the climate finance in the region. It is noteworthy to mention that the governments in the region also fund the RCREEE, but these funds are not comparable to the region's external funding. Because the economic structure of MENA is not as developed as the EU or ASEAN, external funding is more visible. This funding, particularly from the IER mechanisms, indicate its influence on the region.

Southeast Asia Disaster Risk Insurance Facility (SEADRIF), signed by ASEAN plus three (China, Japan and South Korea), provides ASEAN countries with financial solutions and technical advice to increase their financial resilience to climate and disaster risks. China is one of the countries that contribute to this regional platform. SEADRIF is the first regional facility in Asia to provide climate and disaster risk financing and insurance solutions.[751] As a regional institution, ASEAN does not receive external funding to the same extent as ECOWAS and the MENA region, so IER influence is minimal.

The loose framework of ASEAN does not encourage the integration of climate change considerations in regional economic policies. Consequently, ASEAN members, particularly high GHG-emitting non-core members, are not motivated to ambitious climate action. Moreover, as the regional members are not presented with beneficial economic policies with embedded climate change considerations, the highest emitters (hiding under the umbrella of being non-core members) may not be motivated to reduce emissions per regional expectations. This lacuna weakens the institutional design, which may be deemed unimpactful due to its inability to solve the problem. However, some scholars disagree, stating that ASEAN's

[749] Ibid at 18.
[750] Charlene Watson and Others "Climate Finance Regional Briefing: Middle East and North Africa" (Heinrich Boll Stiftung, December 2017) https://us.boell.org/2018/03/05/climate-finance-fundamentals-9-climate-finance-regional-briefing-middle-east-and-north .
[751] The World Bank "ASEAN Asia First Regional Climate Disaster Risk Financing Facility" December 18, 2018 https://www.worldbank.org/en/news/feature/2018/12/18/asean3-countries-establish-asias-first-regional-climate-and-disaster-risk-financing-facility .

institutional architecture is impactful as it facilitates cooperation among ASEAN member states and enhances the ASEAN's ability to cooperate with other countries.[752]

To conclude, MENA's and ECOWAS' current institutional design has allowed for significant IER influence in the regions. The EU's institutional design has also influenced ASEAN and ECOWAS' institutional design. In the ECOWAS region, there are cross-regional influences from the IER, the EU and a coalition of European countries that contrasts with the ASEAN scenario. The financial and technical incapacities of MENA and ECOWAS has also allowed for external influences, while the cultural architecture of ASEAN has discouraged external influence.

2. Time and Regulatory Structure

The pillars of European environmental governance stand on the principles of subsidiarity (member states are generally at liberty to use measures that are more appropriate and efficient than the EU's proposed measures where such areas do not fall within the EU's exclusive competence), integration (incorporating legal, administrative, economic and participatory approaches and combining different sector policies), precaution (being reflexive in adopting measures based on proper risk assessment and periodic reviews), and prevention (anticipating hazards and taking measures to lessen the extent of damage).[753]

Kutting's suggestion that "regulatory structures reflect economic determinism and negotiations are guided very much by economic considerations and feasibilities" is a good indicator for a robust regulatory structure.[754] If Kutting's suggestion rings true, then the EU arguably has a robust regulatory structure.

The time structure of the EU gives members five to ten-year targets to report their climate efforts within the reporting period. Kutting also suggests that time in its various forms is such an important issue because of the irreversibility of environmental degradation and because it dominates every society and individual's life as all organisation is ultimately based on temporal issues".[755] The EU's institutional structure emphasises the urgency and the irreversibility of environmental degradation and prioritises environmental concerns in policy terms to prevent

[752] Koh Kheng Lian and Nicholas A. Robinson "Regional Environmental Governance: Examining the Association of Southeast Asian Nations (ASEAN) Model" https://environment.yale.edu/publication-series/documents/downloads/h-n/koh.pdf .
[753] Habib Zafarullah and Ahmed Shafiqul Huque "Climate Change, Regulatory Policies and Regional Cooperation in South Asia" (2018) 21 Public Administration and Policy 1 at 24.
[754] Gabriela Kutting above n292 at 38.
[755] Ibid at 41.

irreversible loss. The EU also acts quickly in adopting, ratifying and implementing global environmental objectives, and because directives and regulations apply to the twenty-seven members to the same standard and measure, it fulfils time structure requirements.[756] The EU's 2030 climate and energy policy framework has also aligned with the Paris Agreement in planning, reporting and monitoring.[757] This new framework has a more engaging governance structure that prescribes more stringent reports from members.

The principle of subsidiarity also applies in the ECOWAS region but only to the extent that international obligations or decisions that cannot be addressed at the national level can be brought before the ECOWAS Commission. The ECOWAS Environmental Policy states that "It is agreed that national competence shall be the rule whereas community competence shall be the exception".[758] This would mean that ECOWAS adoption of the Paris Agreement does not automatically impose obligations on its members. Going by the principle of subsidiarity, ECOWAS can benefit from setting minimum standards as the EU does, to steer countries to improve their commitments toward fulfilling the Paris Agreement objectives. As there are no climate change directives from the ECOWAS for members, the time structure component of the ECOWAS will not be examined further.

In terms of energy regulation, the ERERA regulates cross-border electricity exchanges between ECOWAS members and ensures that the rationalization and reliability for building a regulatory and economic environment are suited to the regional market's development. ERERA has helped manage the gradual shift to RE to reduce emissions but cannot control or dictate how and when its members fulfil their climate commitments. Its vision 2020 strategy to increase integration has not been achieved, further undermining its authority to regulate its members emissions-reduction commitments, thereby hindering the transposition of international environmental objectives into national legislations.

When comparing the EU with ECOWAS, it would appear that the EU exercises more influence on its members through a robust regulatory and economic structure than ECOWAS over its members. It is not clear that the IER influence seeps through the lacunae that the ECOWAS regulatory structure presents, but what is apparent is that ECOWAS regulatory structure in its

[756] Koh Kheng Lian and Nicholas A. Robinson above n752 at 1.
[757] Kati Kulovesi and Sebastian Oberthur "Assessing the EU's 2030 Climate and Energy Policy Framework: Incremental Change toward Radical Transformation?" (2020) 29 RECEIL at 153.
[758] Article 5(2) of the ECOWAS Environmental Policy 2008.
http://www.ecowrex.org/system/files/repository/2008_ecowas_environmental_policy_-_ecowas.pdf .

current form cannot be linked to its members' domestication of international treaties and policymaking.

Not unlike ECOWAS, SAARC applies the principle of subsidiarity by default but is yet to mainstream environment and climate change concerns into its overarching economic and social development framework.[759] In most parts of South Asia, environmental governance has been country-dominated with direct intervention, mainly through regulatory strategies over the use and upkeep of environmental resources.[760] However, smaller South Asian countries such as Bangladesh, Bhutan, Nepal, the Maldives and Sri Lanka have developed their climate security collaboration at a bilateral level and through non-governmental pathways.[761] Krampe claims that even though SAARC is aware of its role as a viable regional player and its importance in supporting national governance responses, it has not translated that willingness into concrete actions.[762] It is arguably surmised that the regulatory structure of SAARC requires significant improvement if it must influence its members' climate change efforts.

Further, there is no publicly available information on SAARC's time structure regarding a prescribed timeframe underscoring the urgency of climate action for members, to fulfil their NDC commitments or submit reports. Individual countries have designed their timeframe for meeting their emissions reductions targets, but without a general target in the region, climate commitments may fall short, undermining regional influence. ASEAN member states have, however, reaffirmed their commitment to the Paris Agreement and the UNFCCC, and are committed to exceeding the 2020 target set by the ASEAN Plan of Action for Energy Cooperation (APAEC) 2016 – 2025. While this commitment is laudable, it is not binding on its members and non-core members. As the ASEAN way is collaborative and hinges on unanimous cooperation, its regulatory structure is also not rigid. The loose structure of ASEAN, especially its lack of a central bureaucracy, impacts its influence over its members. Like ECOWAS, IER or other regional influence may seep through the cracks of a loose regulatory system.

The World Bank's grouping of MENA negatively impacts the regulatory structure of the region. In order to regulate the climate actions of member countries effectively, governments within

[759] Habib Zafarullah and Ahmed Shafiqul Huque above n753 at 31.
[760] Ibid.
[761] Florian Krampe and Ashok Swain "Is SAARC Prepared to Combat Climate Change and its Security Risks? September 6 2018 https://www.thethirdpole.net/en/2018/09/06/is-saarc-prepared-to-combat-climate-change-and-its-security-risks/ .
[762] Ibid.

the Gulf and MENA regions need to unify climate action, recognising that fulfilling their economic aspirations is highly dependent on their interlinked environmental sustainability.[763] MENA's political unrest, lack of expertise, human and financial resources and reliance on hydrocarbons have prevented the region from establishing a shared regulatory structure that can oversee environmental commitments.[764] RCREEE, which functions as an REO, still encounters institutional, policy, regulatory, awareness and communication, pricing and financing barriers to scale up the RE efficiency necessary for emissions reductions.[765] There has also not been any regional timeframe collectively agreed upon by members to report climate obligations implementation. Again the absence of a shared environmental regulatory structure and regionally prescribed targets impede regional influence on members. It would appear that the EU's institutional design that incorporates a nexus between the economic and regulatory structure and prescribing specific time targets elevates its influence on its members above the IER influence.

B. Legality

The EU derives its legality from Article 17 of the TEU Articles 234, 244 to 250, 290 and 291 of the TFEU and the Treaty Establishing a Single Council and Commission of the European Communities (Merger Treaty).[766] The EC also has a monopoly on legislative initiatives and critical executive powers in policies that include the environment. Article 191 to 193 of the TFEU mandates the European Parliament and the Council, acting under the ordinary legislative procedure and having consulted the Economic and Social Committee and the Committee of the Regions to decide on the actions to be taken to achieve the environmental objectives contained in Article 191.

The EU prescribes 'hard law' instruments through legally binding directives and regulations that emphasise environmental obligations to achieve the EU's objective of adopting a common

[763] Neeshad Shafi "Can Fighting Climate Change Bring the Arab World Closer Together?" (World Economic Forum, April 1, 2019) https://www.weforum.org/agenda/2019/04/to-fight-climate-change-the-arab-world-needs-to-come-together/ .
[764] OECD "Recommendations for the MENA region" in Regulatory Reform in the Middle East and North Africa (2013) at 70 https://www.oecd-ilibrary.org/docserver/9789264204553-7-en.pdf?expires=1558497612&id=id&accname=ocid47015440&checksum=D51E5F850E5CA7FCF725AE58C219DC17 .
[765] RCREEE "MENA – Delivery Mechanisms and Institutions to Realize Energy Efficiency Potential" http://www.rcreee.org/projects/mena-%E2%80%93-delivery-mechanisms-and-institutions-realize-energy-efficiency-potential .
[766] European Union "Consolidated version of the Treaty on the Functioning of the European Union" 26 October 2012, OJ L. 326/47-326/390; 26.10.2012, available at: https://www.refworld.org/docid/52303e8d4.html .

legal framework in various policy areas.[767] Though these directives are binding, how they are to be implemented is at members' discretion contrasted with regulations, which are binding in their entirety and apply directly to member states.[768] Interestingly, the EU's hard law approach has been critiqued to lack the expected efficiency due to the frequency of member breaches.[769]

ECOWAS derived its legality from the 1975 treaty in Lagos and was initially established solely for economic purposes but has included environmental concerns over the years.[770] As a supranational entity, ECOWAS enacts regulations and directives and decisions but is yet to enact any of the above measures that relate explicitly to climate change obligations in accordance with the Paris Agreement objectives. Also, because ECOWAS consists of Anglophone and Francophone states operating different legal systems, this may affect the pace of future reception of legally binding regulations or directives and decisions. Presently, there is an absence of ECOWAS climate change-specific regulations, decisions and directives, and it is problematic to infer regional influence on member countries' compliance and implementation. Instead, as the next chapter will reveal, climate policies and laws enacted by ECOWAS members are better linked to IER influence.

Despite ASEAN's environmental cooperation arrangements over the years, there is presently no overarching binding legal agreement underpinning its regional environmental management.[771] Therefore unlike the EU, ASEAN cannot issue legally binding environmental regulations or directives to members. The only legally binding agreements in the ASEAN regime today are economic in nature.[772] Using Young's expansion of the regime theory, inference can be drawn that the various ASEAN cooperation efforts, such as providing environmental strategic plans of actions and programmes, can indicate influence.[773] Acknowledging that a region's cultural differences may impact regime functions, it can be

[767] Corina Andone and Sara Greco "Evading the Burden of Proof in European Union Soft Law Instruments: The Case of Commission Recommendations" (2018) 31 International Journal for the Semiotics of Law 1 at 80.
[768] Corina Andone and Florin Coman-Kund "Argumentative Patterns in the European Union's Directives: An Effective Tool to Foster Compliance by the Member States?" (2017) 6 Journal of Argumentation in Context 1 at 76–96.
[769] Corina Andone and Sara Greco above n767.
[770] Economic Community of West African States (ECOWAS), Revised Treaty of the Economic Community of West African States (ECOWAS), 24 July 1993 https://www.refworld.org/docid/492182d92.html ;ECOWAS "Treaty" https://www.ecowas.int/ecowas-law/treaties/
[771] Ben Boer "Introduction to ASEAN Regional Environmental Law" (Teach Enviro Law Asia) https://www.teachenvirolaw.asia/sites/default/files/regional-environmental-law-asean.pdf at 255.
[772] ASEAN "The ASEAN Way and the Rule of Law" https://asean.org/?static_post=the-asean-way-and-the-rule-of-law .
[773] See generally Oran R. Young *The Effectiveness of IERs: Causal Connections and Behavioural Mechanisms* (MIT Press, 1999).

argued that ASEAN can influence members despite the absence of an overarching legal framework for environmental governance. The ASEAN idea of engendering cooperation is consensus building and cooperative programs instead of legally binding treaties (although in exceptional situations, a binding agreement is a possibility), and preference for national implementation of programs rather than reliance on a robust region-wide bureaucracy.[774] Currently, the ASEAN environmental governance structure leaves little room for creating binding regulations and decisions for implementation by states. Consequently, it may not be erroneous to infer IER influence on how members transpose environmental objectives.

In MENA, the absence of clear regional boundaries, low level of legitimacy of most countries, and continuing regional conflicts in the MENA region have impeded it from incorporating or accepting regional environmental governance in what MENA members consider to fall within the domain of national competence.[775] As there is little to no regional environmental governance, any domestic climate change policies may be linked directly to IER or other external influences.

C. Implementation, Compliance and Enforcement

Part II above discussed some of the ways that the EU enables members' implementation of its objectives, such as the EU ETS, the EIR, and the robust 2030 climate change framework. Although the EU ETS has recorded satisfactory participation and high implementation rates among members regarding GHG reductions, water and air pollution, which negatively impacts the climate, are prevalent in some EU countries. In response, the EIR has encouraged members to organise national environmental implementation review dialogues on the priority themes identified in their reports, including regional and local authorities and key stakeholders.[776] Nonetheless, the EU records implementation challenges among members ranging from persistent environmental problems such as water and air pollution to members' infringements leading to the growing number of EU petitions before the EC, Parliament and ECJ.[777]

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[774] Koh Kheng Lian and Nicholas A. Robinson above n756.

[775] Stuart Schoenfeld and Jonathan Rubin "Contrasting Regional Environmentalisms in the Eastern Mediterranean: A Social Constructionist Perspective" https://journals.openedition.org/espacepolitique/1939?lang=en .

[776] European Commission "Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee Of The Regions Environmental Implementation Review 2019: A Europe That Protects Its Citizens and Enhances their Quality of Life (April, 2019) http://ec.europa.eu/environment/eir/pdf/eir_2019.pdf .

[777] European Commission "Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee Of The Regions: EU Actions to Improve Environmental Compliance and Governance" (2018)

Implementation of environmental policies within ECOWAS is relatively weak.[778] Although the Commission acknowledges a wide range of stakeholders in the sub-region, these stakeholders' climate efforts are at best ad hoc, uncoordinated and fragmented. To address the gap, proposals were put forward to strengthen the ECOWAS environment department by adopting a robust environmental management framework capable of overseeing policy implementation in collaboration with other related institutions.[779] The proposal also sought to create a scientific committee or sub-committee responsible for monitoring and strengthening the scientific aspects of policies to aid implementation. However, these are recent developments, and until these implementation mechanisms become functional, internal regional influence on ECOWAS members is minimal.

Like ECOWAS, implementation mechanisms in ASEAN are in their developmental stages. ASEAN has produced a roadmap and blueprint for implementation of environmental-related action entitled "ASEAN 2025: Forging Ahead Together" and ASEAN Strategic Plan on Environment (ASPEN) 2025". These documents are a comprehensive guide of ASEAN cooperation on the environment for the next decade to promote sustainable development in the region.[780] There is insufficient information within the public domain to suggest a regional level implementation of climate change objectives or policies other than RCREEE implementation efforts in MENA. Instead, individual MENA members utilise the IER or its agencies, other intergovernmental and national financial institutions to implement their emissions reduction obligations.

In terms of compliance, there are disparate opinions about the EU members' compliance efforts. Some scholars base compliance on EU ETS performance, well-regarded for its emissions reductions incentives, while others refer to the number of infringement cases before the EC, Parliament and the ECJ. The EC's data shows a record fall in emissions since the full launch of the EU ETS in 2008, and the third consecutive annual decline after a slight rise was recorded in 2017.[781] While the coronavirus pandemic has been the main reason behind global emissions

http://ec.europa.eu/environment/legal/pdf/COM_2018_10_F1_COMMUNICATION_FROM_COMMISSION_TO_INST_EN_V8_P1_959219.pdf .

[778] IUCN "West Africa Environmental Policy" https://www.iucn.org/sites/dev/files/content/documents/policy_brief_wa_environmnetal_policy.pdf .

[779] ECOWREX "ECOWAS Environmental Policy" http://www.ecowrex.org/system/files/repository/2008_ecowas_environmental_policy_-_ecowas.pdf .

[780] ASEAN "ASEAN Cooperation on Environment" https://asean.org/wp-content/uploads/2018/02/50.-December-2017-ASEAN-Cooperation-on-Environment-At-A-Glance.pdf .

[781] S&P Global Platts "EU regulated CO2 emissions fall by record 13.3% in 2020: EC" April 16, 2021

reductions, the more stringent EU 2030 climate and energy policy framework could also have contributed to emissions reductions. There has also been an increase in EU infringement cases from 337 in 2019 to 451 in 2020.[782] Thus, while EU member compliance is not optimal, there is a degree of EU influence over member's compliance.

Like implementation, the absence of specific ECOWAS directives to mandate emissions reductions affects members' compliance. Unlike the EU, ECOWAS has not directly transposed the international climate obligations to regulations and directives, and countries will only comply with their commitments absent the influence of the ECOWAS. It is important to note that although ECREEE provides programmes and assistance to facilitate compliance, these efforts are almost always externally influenced.

Compliance within ASEAN and MENA regions is low, and is further hampered by inadequate policies and strategies. In ASEAN, non-core members rely heavily on coal, while in MENA, countries rely primarily on hydrocarbons. The INDCs in these regions still include these carbon-based fuels in their energy mix, only opting for a gradual phase-out, although the countries agree to phase-out if developed countries provide alternative energy technologies, training and financial assistance. The IER and its agencies, REOs such as the EU and some European countries influence climate compliance in the MENA region by jointly funding projects and providing technical assistance for specific projects. MENA core members' compliance is linked to international and regional elements, however, non-core member compliance based on the non-existing ASEAN compliance mechanism is infinitesimal.

Hedemann-Robinson suggested that although the European Commission is in an excellent position to supervise and ensure members' transposition of environmental directives, there are problems with enforcement.[783] However, in the last 15 years, the number of EU enforcement authorities (EUEAs) has grown from one to seven with the expansion of direct enforcement powers. The EC addresses non-compliance with a proactive approach in the form of informal discussions and facilitative support to apply the EU rules, and only if this fails to produce results will the EU take legal action, hence the infringement cases before the ECJ. The ECJ, however, is quite burdened with many infringement cases of members. Within ECOWAS,

https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/041621-eu-regulated-co2-emissions-fall-by-record-133-in-2020-ec .

[782] European Commission "Environment" https://ec.europa.eu/environment/legal/law/pdf/statistics%20Sector%20from%202007%20to%202019.pdf

[783] Martin Hedemann-Robinson "*Enforcement of European Union Environmental Law - Legal Issues and Challenges* (Abingdon, Routledge-Cavendish, 2007).

members carry out enforcement strategies domestically, even where directives are binding on members.[784] Going back to the dualist approach, the application of regional environmental regulations in some ECOWAS countries are not automatic, which may deter compliance, however, it has already been established that there are no regional climate change specific regulations in ECOWAS. Furthermore, as members directly domesticate the Paris Agreement, the ECOWAS enforcement powers are practically redundant.

ECOWAS enforcement influence is also weakened by its institutional framework that does not allow for the broad application of regional environmental legislation to all states equally, unlike the EU. Also, in stark contrast to the ECJ, the ECCJ suffers more neglect and has no recorded climate change infringement cases before it.[785] Furthermore, because the ECOWAS Revised Treaty, Supplementary Protocols and other legal instruments do not provide any means of enforcing the issued writ of execution where members fail to comply with the terms of the Court's judgments voluntarily, ECOWAS enforcement is severely impeded. Finally, the absence of available and accessible data concerning environmental cases before the ECCJ would also make it challenging to ascertain the number and stages of environmental judgments concerning emissions reductions.

Unlike the EU and ECOWAS Commission, MENA does not have a judicial enforcement arm. Regional cooperation within the MENA region is still in its developmental stages, consequently, there is no information regarding the enforcement of environmental objectives on the regional level. It is significant to note that Iran, Libya, and Yemen have all signed the Paris Agreement but are yet to ratify it.[786] This number is quite significant and is a barrier to enforcement both on a national or regional scale.

The pillars of ASEAN are built upon cooperation which is more voluntary than coerced. The absence of a core ASEAN environmental bureaucracy impacts the enforcement of environmental objectives. At the country level, there has been a remarkable increase in environmental policies and regulations due to the pressure and lobbying of both international and domestic stakeholders, however, environmental ministries or equivalent agencies in the region are often ill-equipped to either enforce existing regulations or design, implement,

[784] ECOWAS "Regulations" https://www.ecowas.int/ecowas-law/regulations-directives-and-other-acts/ .
[785] Mojeed Olujinmi Abefe Alabi "Analysis of the Role of the ECOWAS Court in Regional Integration in West Africa" (Ph.D. Dissertation, The University of Leicester, 2013).
[786] UNTS Depositary "Paris Agreement: Status as at 29-04-2022" https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en

monitor, inspect, and enforce new effective environmental and resilience policies.[787] Although the ASEAN declaration emphasises the necessity for implementing and enforcing measures to enhance international and regional cooperation in combating transboundary environmental pollution, capacity building, law enforcement fortification and promotion of environmentally sustainable practices, this has not been actualised. [788] It can be inferred from the assessment of the performance of the core members and non-core members that ASEAN influence using the enforcement criteria is minimal.

D. Participation and Behavioural Cooperation

Relying on the regime theory, broadly discussed in chapter two, behavioural cooperation, was an indicator of IER influence over its members.[789] A regime was influential if it enhanced cooperation that could positively affect members' behaviour. The progress levels of many EU members in emissions reductions in line with the Paris Agreement objectives point to a reasonable inference of participation and cooperation within the EU.[790] However, the levels of participation and cooperation across EU members are not uniform and this impacts their climate action performance. According to the CCPI 2022 report, the least performers in the EU were Czech Republic, Poland, and Hungary.[791] Overall, the EU met its overall target to reduce emissions by 20 per cent by 2020.

The EC also provides environmental programmes and a forum that facilitates the exchange of experience, communicates recent developments in the EU environmental policy to members, promotes best practices amongst its members to tackle environmental challenges, and fosters cooperation.[792] Consequently, many EU members have complied with EU environmental directives while others have surpassed regional targets, for example, Denmark and Sweden.

Present literature scarcely analyses the reasons behind the cooperation and participation of EU members in reducing emissions, however, it is suggested that EU ambition captured in a robust architectural framework enables cooperation and participation. The EU is constantly revising

[787] Venkatachalam Anbumozhi "Ensuring ASEAN's Sustainable and Resilient Future" 4 Building ASEAN Community: Political–Security and Socio-Cultural Reflections" https://asean.org/?static_post=asean-declaration-on-environmental-sustainability at 316.
[788] ASEAN "ASEAN Declaration on Environmental Sustainability" https://asean.org/?static_post=asean-declaration-on-environmental-sustainability .
[789] *See generally* Oran R. Young n783.
[790] UNFCCC "The Paris Agreement" https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement .
[791] CCPI "CCPI Results 2022" https://ccpi.org/wp-content/uploads/CCPI-2022-Results_neu.pdf
[792] EU Commission "Regional Cooperation" http://ec.europa.eu/environment/enlarg/reg_cooperation.htm .

its ambitions, compliance and implementation mechanisms and governance framework, and these adjustments impact the climate behaviour of members.

There is no data for comparative evaluations of ECOWAS members climate performance, and the available information only refers to energy access and the need for RE uptake. Like the EU, there is multiform climate progress across members. Energy access is a huge barrier as about 170.4 million people are without electricity and rely on alternative energy sources such as firewood and kerosene stoves, which contribute to emissions.[793] As the ECOWAS regional climate strategy is yet to be presented, ECOWAS countries are unclear about regional expectations. The absence of communicated regional expectations can lead to non-cooperation and participation at the regional level. It is arguable and strongly suggested that the progress at the national level may be more directly linked with the IER or other regional environmental regimes such as the EU, rather than ECOWAS itself, as the ECOWAS members' participation at the annual UNFCCC COP is remarkable.

Unlike the EU's method of automatically transposing international environmental objectives, ASEAN seeks members' approval before attempting to transpose international environmental objectives. Due to the selection of India and China as case studies within the region, it is somewhat difficult to assess the ASEAN's regional influence in terms of directly affecting the environmental behaviour of India and China since they are not core members of ASEAN, although China is part of "ASEAN Plus Three" and India is part of the East Asia Summit. SAARC also encounters cooperation challenges among members due to the sometimes testy relations that negatively impacts all policy areas, especially environmental policies.[794] Some countries bypass SAARC and take a bilateral approach in dealing with environmental problems by engaging with the IER.[795] This disregard belittles the environmental management capacity of the SAARC. Consequently, it is inferred that the direct influence of SAARC on behavioural change among members is minimal.

There have been plenty of discussions between MENA members around cooperating to tackle environmental issues - but these discussions have mostly resulted in unimplemented reports,

[793] Africa Energy Portal "Regional Profile" https://africa-energy-portal.org/region/west-africa
[794] Habib Zafarullah and Ahmed Shafiqul Huque above n753 at 26.
[795] See Khalid Rahman "Regional Cooperation, Global Changes, SAARC and China" (2012) 9 Policy Perspectives 1 from pp 5-14.

strategies, and summits.[796] Though several climate change projects occur in the MENA region, it is not borne out of regional cooperation and is never uniformly applied. The GCC may potentially foster cooperation but is presently incapacitated by disagreements among members, regional unrest and a proclivity to hydrocarbons.

E. Environmental Programmes

The EC launched the European Climate Change Programme (ECCP) to implement the Kyoto Protocol.[797] The Programme had two stages so far, the first between 2000 and 2005 that examined a vast range of policy sectors and instruments that could reduce GHG emissions and the second after 2005, that focused on promoting renewables in heating applications ("RES-H").[798] The EU also launched the LIFE programme, a financial instrument that could improve the development, implementation and enforcement of its climate policy and legislation and promote, integrate and mainstream climate objectives into other EU policies and the public and private sector and finally to support climate governance by involving civil society, NGO's and local actors.[799] The 2014-2020 funding period had a €3.4 billion budget.[800]

The EU also designed another programme between 2013 and 2016 called Environment and Regional Climate Regional Accession Network (ERCRAN) to strengthen regional cooperation in environment and climate action. Unfortunately, the details of the follow-up project to ERCRAN to cover the 2017-2020 period is currently unavailable.[801] The EU has also established the European Green Deal to foster more ambitious emissions reductions. A critical programme in the deal is providing financing schemes for households to renovate their homes to improve energy efficiency and avoid energy poverty. [802]

ECOWAS, through ECREEE, has also designed various environmental programs to aid the implementation of international and regional environmental objectives. The majority of these

[796] Neeshad Shafi "Can Fighting Climate Change Bring the Arab World Closer Together?" (World Economic Forum, April 1, 2019) https://www.weforum.org/agenda/2019/04/to-fight-climate-change-the-arab-world-needs-to-come-together/
[797] Costica Mihai and others "Voice Of The Students: How Can The EU Take The Global Lead On Tackling Climate Change?" (2017) Alexandru Ioan Cuza University of Iasi, Centre for European Studies, Iasi at 30.
[798] EU Commission "Second European Climate Change Programme" https://ec.europa.eu/clima/policies/eccp/second_en .
[799] EEAS "Programme for the Environment and Climate Action (LIFE)" http://eeas.europa.eu/archives/docs/enp/eu-programmes/pdf/16-fiche-programme-life_en.pdf .
[800] EU Commission "LIFE Programme" https://ec.europa.eu/easme/en/life .
[801] EU Commission "Regional Cooperation" http://ec.europa.eu/environment/enlarg/reg_cooperation.htm
[802] European Commission "The European Green Deal" https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF .

programs are externally funded, which affects independence in executing the programme objectives. Some notable programs are: ECREEE Climate Change Program, ECOWAS Small Scale Hydro Power Program, EPASES and ECOWAS Sustainable Biomass Actions (REDD+ mechanisms). However, it was only in 2018 that members of the Scientific and Technical Consultative Group on Climate Change (STCGCC) came together to validate the terms of reference for the development of a comprehensive regional programme on climate change and the study on its impacts and adaptation costs in agriculture, water resources and the coastal zones in West Africa.[803] These programs are by no means exhaustive but signal both regional and IER influence in ECOWAS.

ASEAN adopted a multi-sectoral integrated framework that prioritises NDC implementation and advancement of integrated climate change mitigation and adaptation responses through landscape approaches, however, these only apply to agriculture and forestry.[804] Singapore is, however, lending its expertise by offering climate change programmes to ASEAN.[805] Presently, there is no information regarding climate change specific programmes that are ongoing or completed by ASEAN. SAARC, on the other hand, has provided relevant cooperative programmes implemented by the SAARC regional centres, such as the SAARC Meteorological Centre, which coordinates the Intergovernmental Monsoon Initiative to assess the vulnerability of the monsoon system to climate change, the Himalayan Climate Change Adaptation Programme (HICAP) and the Himalayan Adaptation, Water and Resilience (HI-AWARE) programmes which generate knowledge about climate change impacts and adaptation in mountainous regions and glacier-dependent river basins.[806]

Some projects target GHG emissions reductions in the MENA region, such as the Policy Dialogue and Knowledge Management on Low Emission Strategies (DIAPOL-CE).[807] As RE uptake is crucial for emissions reduction in the MENA region, the project is pervasive. The

[803] ECOWAS "ECOWAS Strategizes to Curb Effects of Climate Change in the Region" https://www.ecowas.int/ecowas-strategizes-to-curb-effects-of-climate-change-in-the-region/ .
[804] ASEAN "ASEAN Multi-Sectoral Framework For Climate Change: Agriculture and Forestry Towards Food and Nutrition Security and Achievement of SDGs (Proposed Integrated Framework For AFCC Component 4) (Vietnam, 2018) https://asean.org/storage/2012/05/ASEAN-Multisectoral-Framework-for-climate-change.pdf .
[805] The Straits Times "Singapore to Offer Programmes in Climate Change to ASEAN: Masagos" https://www.straitstimes.com/singapore/environment/singapore-to-offer-programmes-in-climate-change-to-asean-masagos .
[806] Arabinda Mishra and Others "Climate Risks in the SAARC Region: Ways to Address the Social, Economic & Environmental Challenges" (Technical Report for Asian Development Bank, 2014) file:///C:/Users/kh182/Downloads/SAARCfinalreport_18Aug2014.pdf .
[807] GIZ "Achieving a Low-Emission Economy with Climate and Energy Strategies" https://www.giz.de/en/worldwide/32164.html .

project supports an economic impact assessment of low emission strategies to assess RE expansion impacts using scenario modelling in Morocco, Tunisia and Algeria, and provides technical and economic advice on using innovative technologies to improve climate-friendly technology financing. From the preceding discussion, regional and IER influences clearly enhance climate action through environmental programmes in MENA, ASEAN and ECOWAS.

F. Environmental Sustainability and Climate Justice

This section of Part VI will examine if the climate objectives and actions in each region amount to climate justice. It is important to signal that regional plans that stipulate emissions reductions without incorporating equitable methods to achieve them indicate climate injustice. The EU Parliament was presented with a motion for resolution on women, gender equality and climate justice and adopted it in January 2018. The motion referred to the Universal Declaration of Human Rights of 1948, UN Convention of 18 December 1979 on the Elimination of All Forms of Discrimination against Women (CEDAW), COP 18-22 (on gender and climate change) and the Paris Agreement.[808] It also recognised that women are particularly vulnerable to climate change and experience its effects disproportionately because of their social roles, noting that women's unequal participation in decision-making processes and labour markets compounds inequalities and often prevents women from fully contributing to and participating in climate policy-making planning and implementation. The adopted resolution portrays considerations for climate justice.

The climate justice parameter in the previous chapter included considerations for human rights, gender and inter and intra-generational justice in the climate change context. Interestingly, the adopted resolution recognised the need to encourage women empowerment and awareness by improving their knowledge concerning protection before, during, and after climate-related disasters within the EU. It also recognised that gender equality is a prerequisite for sustainable development and the efficient management of climate challenges. The adopted resolution included developing countries by recognising the possibilities for integrating climate change mitigation and adaptation and women's economic empowerment. The Paris Agreement has also been instrumental in upholding climate justice in the recent landmark cases decided at The Hague.[809]

[808] European Parliament "Report on Women, Gender Equality and Climate Justice (2017/2086(INI)) http://www.europarl.europa.eu/doceo/document/A-8-2017-0403_EN.html?redirect .

[809] Urgenda Foundation v The State of the Netherlands, HA ZA 13-1396, C/09/456689 ECLI:NL:RBDHA:2015:7145, ILDC 2456 (NL 2015), 24th June 2015, Netherlands; The Hague District Court.

Regarding environmental sustainability, the Lisbon Treaties strengthen Article 3(3) of the TEU where it provides that "the Union…shall work for the sustainable development of Europe-based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment."[810] The EU is also committed to implementing the UN's 2030 Agenda and outlined its strategic approach towards implementing the 2030 Agenda, including the SDGs. Furthermore, the EC has also introduced the future Common Agricultural Policy (CAP), which will play a fundamental role in developing a fully sustainable agricultural sector that supports environmental care, contributes to climate change mitigation and adaptation and sustainable energy.[811] Overall, the EU is committed to facilitating balanced progress among its members, demonstrated in its inclusion of climate justice consideration, just transition mechanisms and sustainability initiatives in the region.

Within the ECOWAS region, climate justice is still gaining traction. As there is scarcely any uniform climate change regulatory information, it is challenging to decipher climate justice from the regulatory angle. It is acknowledged that while ECREEE tackles gender mainstreaming in the energy sector, the ECOWAS Environment Policy is silent on climate justice issues than is expected, and the term is not referred to in the entire policy. ECOWAS regional policies need to address climate injustice reflected in how West African women and children experience adverse climate change impacts.

In terms of environmental sustainability, ECOWAS in 2017 restated its pledge toward environmental sustainability by working with UNEP to involve critical players within the private sector of West Africa to develop strategies that will ensure environmental protection.[812] The ECOWAS Environment Policy emphasises urgent restoration of the environment and the challenges hampering it, such as deforestation, erosion caused by unstable climatic conditions in the sub-region, ineffective collaboration, linkages and coordination among environmental management institutions.[813]

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[810] European Parliament "European Parliament Resolution of 16 January 2018 on Women, Gender Equality and Climate Justice (2017/2086(INI))" http://www.europarl.europa.eu/doceo/document/TA-8-2018-0005_EN.html?redirect .

[811] European Commission "The Environmental Objectives of the Future CAP" January 25, 2019 https://ec.europa.eu/info/news/environmental-care-and-climate-change-objectives-future-cap-2019-jan-25_en .

[812] ECOWAS "ECOWAS and UNEP to Partner Private Sector on Environmental Sustainability" August 21, 2017 https://www.ecowas.int/ecowas-and-unep-to-partner-private-sector-on-environmental-sustainability/ .

[813] ECOWAS "ECOWAS Environmental Policy" http://www.ecowrex.org/system/files/repository/2008_ecowas_environmental_policy_-_ecowas.pdf .

During its 13th summit, ASEAN made a declaration to implement multilateral and regional sustainable development and environmental agreements.[814] It also committed to intensifying regional and international cooperation by promoting, sharing and implementing environmentally sustainable practices and contributing to the UN Decade on Education for Sustainable Development through the ASEAN Environmental Education Action Plan (AEEAP) to nurture environmentally conscious ASEAN citizens. A subsequent Declaration post-2015 reaffirmed the need to promote environmental sustainability using the ASEAN State of Environment Report as a framework to achieve this.[815]

SAARC also refers to sustainable development in several documents such as the preambles to the Colombo Declaration on Common Environment Programme and Thimpu statement on climate change, SAARC Ministerial Statement on Cooperation on Environment - "Delhi Statement", SAARC Convention on Cooperation on Environment and others.[816] However, there is no express reference to climate justice in SAARC's environmental resources. There are also no scholarly resources that assess climate justice in the South Asian region regarding inter and intragenerational equities, human rights, and gender considerations related to climate change. Despite the lack of information, South Asian women and children still experience disproportionate climate change impacts and there is no available regional regulation that addresses these injustices.[817]

Significant operational, political, economic and social challenges hinder sustainability efforts in the MENA region.[818] Nonetheless, several Middle Eastern countries have taken positive steps to address core environmental issues and improve sustainability concerns in their respective countries in this past decade. One of the steps was increased investments by Middle Eastern countries toward sustainable development projects, such as introducing the Green

[814] ASEAN "Chairman's Statement of the 13th ASEAN Summit, "One ASEAN at the Heart of Dynamic Asia" Singapore, 20 November 2007" https://asean.org/?static_post=chairman-s-statement-of-the-13th-asean-summit-one-asean-at-the-heart-of-dynamic-asia-singapore-20-november-2007 .
[815] ASEAN "Declaration on ASEAN Post-2015 Environmental Sustainability and Climate Change Agenda" https://www.asean.org/wp-content/uploads/images/2015/November/27th-summit/ASCC_documents/Declaration%20on%20Post%202015%20Environmental%20Sustainability%20and%20Climate%20Change%20AgendaAdopted.pdf .
[816] IUCN "Index for the South Asian Association for Regional Cooperation (SAARC): Comparison of the provisions of the draft Global Pact for the Environment" https://www.iucn.org/sites/dev/files/content/documents/2018/globalpactsaarcfeb2018.pdf .
[817] S.S Yadav and Rattan Lal "Vulnerability of Women to Climate Change in Arid and Semi-Arid Regions: The Case of India and South Asia" (2018) 149 Journal of Arid Environments at 5.
[818] Natalia Hawkins "Sustainability in the Middle East: Complications and Opportunities" (ECOMENA, January 11 2018) https://www.ecomena.org/sustainability-middle-east/ .

Building Regulation and using RE and recycling strategies to help preserve natural resources and reduce the carbon footprint, fostering sustainability in this region.[819]

Due to the peculiar nature of MENA grouping, there are no group responses to environmental sustainability. However, individual countries, sometimes in collaboration with other intergovernmental or international organisations such as the Organisation for Economic Cooperation and Development (OECD), UNDP, World Bank, and the EU, are making progress in adapting to climate change using sustainable methods, signalling IER influence over regional influence.

Climate justice is also an issue in the MENA region with the increased environmental activism in the past decades.[820] Activists have been detained, and MENA governments have imposed strict restrictions on foreign funding of environmental organizations, successfully cutting off most of them from international environmental NGOs (ENGOs), except in Lebanon, Israel, Palestine, and Turkey.[821] Similar to environmental sustainability concerns, climate justice considerations are not contained in any regional environmental documentation. Although MENA countries have existing partnerships with other countries, such as Finland, for example, to foster gender mainstreaming, this is not directly related to climate change concerns but relates to general policymaking, employment and education concerns.[822]

VII. The IER and Regional Multilateral Financial Institutions

So far, Part I to Part VI have focused on IER interactions with regional actors to determine influence, it is now pertinent to briefly discuss multilateral financial institutions and their engagement with the IER and the various regions. For example, the Paris Agreement and the UNFCCC emphasise that there must be collective action to tackle climate change; these multilateral financial institutional efforts also contribute to emissions reductions efforts. Therefore, it is essential to assess their efforts against the backdrop of IER influence.

The AfDB and the BOAD are two crucial multilateral banks that aid climate change efforts in Africa. The AfDB commits to ensuring that all its investments are climate-proof and not

[819] EcoMENA "Green Building Trends in the Middle East" https://www.ecomena.org/green-building-trends/ .
[820] See Jeannie Sowers "Environmental Activism in the Middle East and North Africa" in Harry Verhoeven (eds) *Environmental Politics in the Middle East* (Oxford University Press, New York, 2018).
[821] Ibid at 43.
[822] Ministry for Foreign Affairs Finland "Strategy for Development Cooperation: The Middle East and North Africa 2017-2020" https://um.fi/documents/35732/48132/strategy_for_development_cooperation_with_the_middle_east_and_north .

designed to cause uncharacteristic damage to the climate.[823] The AfDB board created the Africa Climate Change Fund (ACCF) to assist African countries to access more climate finance to build capacity and green growth.[824] The ACCF received external contributions from Germany, Italy and Belgium, but there is limited available information on the specific countries who benefited from the funds contributed.[825] Some AfDB projects include Côte d'Ivoire's Azito Power Expansion Project to expand an existing 288 megawatt (MW) gas-fired power plant and a 140 MW heat-recovery steam turbine to help reduce emissions while meeting the increased electricity demand.[826] BOAD also finances climate-related projects that increase power generating capacities within member countries. In addition, BOAD and AfDB are UNFCCC observers and actively participate in global negotiations and discussions around the international climate finance framework.[827]

The Asian Development Bank (ADB) has included environmental concerns in its core objectives that previously focused on economic growth and regional security. The ADB finances climate change projects through green bonds and approved a new framework, the "Climate Change Operational Framework 2017–2030", to support regional NDC implementation. The ADB has also pledged to double its climate financing from its resources to US$6 billion per year by 2020.[828] ADB projects include "TA 9191: Building Climate Change Resilience in Asia's Critical Infrastructure", a joint venture initiative with International Centre for Environmental Management (ICEM), the Asian Disaster Preparedness Center (ADPC), and Philkoei International.[829] The project will increase knowledge, promote innovation and good practice within the transport, energy and water sectors, and supports the ADB's identification priorities for scaling up climate-resilient investments in Asia.

IER financial mechanisms and specialised agencies also partner with and support regional multilateral financial institutions. For example, the ADB partners with the CTF and

[823] African Development Bank Group "Climate Change" https://www.afdb.org/en/topics-and-sectors/sectors/climate-change/ .
[824] African Development Bank Group "Africa Climate Change Fund" https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-climate-change-fund/ .
[825] NDC Partnership "Africa Climate Change Fund (ACCF)" http://ndcpartnership.org/funding-and-initiatives-navigator/africa-climate-change-fund-accf .
[826] African Development Bank Group "A Reliable Electricity Supply to Encourage Investment in Côte d'Ivoire" https://www.afdb.org/en/projects-and-operations/selected-projects/a-reliable-electricity-supply-to-encourage-investment-in-cote-divoire-150/.
[827] For more details on BOAD projects, see West African Development Bank "Energy" https://www.boad.org/en/energy/ .
[828] Ibid.
[829] ICEM "Building Climate Change Resilience in Asia's Critical Infrastructure" http://icem.com.au/portfolio-items/building-climate-change-resilience-in-asias-critical-infrastructure-ta-9191/ .

governments within the region and also supports several government applications for funding from the CTF from countries such as India, Philippines, Bangladesh, Thailand and several island countries toward establishing RE projects that develop and increase the capacity of hydropower generation, wind and solar photovoltaic power.[830] In addition, the UN Environment and ADB have collaborated to pilot a climate technology network and finance centre to promote knowledge sharing, public-private partnerships, and institutional capacity development and climate technology policies to enable conditions for market transformation interventions in the region. This initiative will quicken the adoption and deployment of climate technologies and investments in sixteen countries in Asia and the Pacific. UN Environment also manages the network secretariat that delivers workshops that have helped develop seven case studies on adaptation technologies currently implemented in Asia and the Pacific.[831]

The World Bank administers the CTF Trust Fund in the MENA region due to the absence of multilateral financial institutions.[832] The CTF directly funds other regions that have multilateral financial institutions such as ECOWAS, ASEAN and SAARC. The UNFCCC, through the GCF, also funds climate finance investment in low-emission and climate-resilient development, taking into account the needs of nations that are particularly vulnerable to climate change impacts.[833]

VIII. Conclusion

The preceding sections have engaged with climate efforts at the international and regional levels and illustrated how the IER interacts with the regional institutions through its specialised agencies and financial mechanisms. The discussions also revealed cross interactions among the regional institutions, such as those between the EU and ECOWAS, the EU and ASEAN and the EU and MENA. These interactions indicated that the IER and its agencies, as enhancers of cooperation, influenced the four regions differently. The regional institutions also influenced each other, and the EU particularly demonstrated its environmental strategy in its various partnerships with ASEAN, ECOWAS, SAARC and MENA. The IER specialised agencies and multilateral financial institutions were also influential by providing financial assistance,

[830] ADB Climate Change and Disaster Risk Management Division "The Asian Development Bank and The Climate Investment Funds: Country Fact Sheets" https://www.climateinvestmentfunds.org/sites/cif_enc/files/knowledge-documents/adb_and_cif_cfs_fa_web2_0.pdf .

[831] UN Environment "Helping Countries Tackle Climate Change" https://www.unenvironment.org/pt-br/node/18266 .

[832] Climate Funds Update "Clean Technology Fund" https://climatefundsupdate.org/the-funds/clean-technology-fund/.

[833] Green Climate Fund "Who We Are" https://www.greenclimate.fund/who-we-are/about-the-fund .

technical assistance and capacity building. The EU was also influential in these areas, particularly in ECOWAS and MENA.

This chapter used the parameters outlined in chapter three to investigate the regional influence on members, and the findings indicate that the EU had more significant influence over its members than other regional organisations had over theirs. A possible explanation for this result might be because ASEAN has a different approach to influencing its members through dialogue and unanimous consensus, and MENA does not have an overarching regional environmental framework.

Some of the parameters utilised, such as compliance, enforcement and monitoring, may not serve well in ASEAN and MENA regions based on their sovereignty and non-interference principles. In these regions, it was challenging to find a structured and robust regional framework that could ensure cohesiveness in fulfilling environmental objectives that apply equally to all the states. As stated earlier, one must consider cultural and socioeconomic peculiarities when applying the parameters utilised above. The ASEAN region fared well under the cooperation parameter but was less influential because the major emitters within the region are non-core members. In ECOWAS, cooperation was almost non-existent due to the current legal structure that does not impose binding commitments on ECOWAS members which allows each country determine their climate commitment without more. However, ECREEE was slightly influential by being the conduit through which emissions reduction projects were designed and executed.

Overall, the intervention of multilateral financial institutions majorly through the IER by funding climate change mitigation and adaptation initiatives contributed to emissions reduction efforts in countries within the various region discussed. To reiterate, financial institutions play a significant role in advancing climate change action, and the interwoven relationship between the IER and the multilateral financial institutions evidences the influence of the IER. It is also possible that there is a linkage between an organised regional environmental institution and the environmental compliance of members indicating influence. However, chapter six will reveal that some countries may perform exceptionally well even where there are no structured regional environmental institutions, and in this situation, IER influence may be inferred.

One of the significant findings in this chapter was that regional cooperation was impacted by the architectural robustness of the regional environmental framework. The absence of a robust REO translated to uneven climate action. For example, countries bypassed SAARC, the

regional framework, to liaise with the IER, raising questions of the organisation's usefulness. Therefore, it may be beneficial for the South Asian region to have a collective environmental framework that prioritises environmental issues and incorporates both SAARC and ASEAN countries.

Another significant finding was that ECOWAS wielded minimal influence over its members even though it is structured similar to the EU. This may be because ECOWAS does not employ the principle of subsidiarity that works well in the EU. Finally, although the IER, through its financial mechanisms, supports individual country emissions-reductions projects, such efforts would be sporadic, making it challenging to adequately measure regional progress.

CHAPTER SIX

IER INFLUENCE IN EMISSIONS REDUCTIONS: A COUNTRY-LEVEL ANALYSIS

"It is not only government. Government cannot do it alone. The UN cannot do it alone. There should be full partnership… then we should have civil society coming together. Even one normal citizen – they have a role to play."

- Ban Ki-Moon (Former UN Sec. Gen)

I. Introduction

The previous chapter examined the vertical interactions between the IER and its agencies with regional environmental institutions and the horizontal relationships among the REOs. Interactions among multilateral financial institutions and the REOs were also examined to determine IER influence at the regional level. This chapter undertakes a country-level examination of the climate actions of the selected countries to ascertain whether their emissions reductions efforts are influenced by the IER or the regional environmental institutions or self-motivated. The selected countries are: Denmark, Norway, Sweden and Finland in the Nordic region, India and China in the Asian region, Morocco and Nigeria within the MENA and West African region.

First, the chapter offers a brief literature review of the historical interactions between the UNFCCC and the select countries but hones in on accelerated climate actions following the signing of the Paris Agreement in 2015. Next, countries' actions are examined against the backdrop of the parameters set out in the third chapter of the thesis. The purpose of using these parameters is to support the thesis argument that IERs are influential in countries' emission reduction efforts. Some of the parameters have been expanded to include legislation and policies enacted after 2015, court judgments using or referring to the Paris Agreement as a basis for its ruling, through the climate litigation parameter , and increased participation of non-state actors in climate change engagement. Comparative analysis techniques are used while examining countries' efforts using these parameters.

It is also essential to consider the complex historical, cultural, economic and political variables that shape the climate consciousness and action that distinguishes one country from another

and a region from the other.[834] Political variables include government systems juxtaposed against monist and dualist perspectives. These factors may help decipher why countries' mitigation and adaptation actions are intensified or waning.

II. Climate Change Action Engagement in the Nordic Region- Then and Now: A Brief Overview

Environmental cooperation in the Nordic region began in the 1960s within the *Nordic Council* framework that birthed the Nordic strategy. This framework guided Nordic cooperation in the environmental field, focusing on cooperation and protection of the environment within and in the proximity of the Nordic and arctic regions. The framework also liaised with the international regime to advance the common environmental causes of the Nordic region.[835] In terms of climate change engagement, the outlook for the Nordic region is encouraging due to the robust institutions and economies that enable the capacity to adapt and lessen severe climate change impacts. Each of the Nordic countries' engagement with climate change action is discussed, first from a historical perspective and subsequently capturing current climate action.

A. Sweden

Environmental knowledge started to circulate in the Swedish society with an unprecedented intensity in the autumn of 1967, mainly due to scientific investigations into sulphur emissions, mercury poisoning and biocides causing environmental harm.[836] Swedish scientists Hans Palmstierna, Karl-Erik Fichtelius and Georg Borgstrom raised the alarm on gradual environmental degradation proving detrimental to man's survival.[837] Soon after, the Social Democratic government set up the world's first environmental agency, Naturvårdsverket, even though environmental hazards were still perceived as either scientific or technical problems and therefore left to the scientists and technical experts. [838]

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[834] Danielle Catherine Sheppard "Social Solutions for Climate Change Mitigation and Adaptation: Cross Cultural Lessons from Denmark to the United States" (2011) 4 Intersect 1 at 68.

[835] OECD "Environmental Performance Reviews: Denmark (OECD, 1999) 92 https://books.google.co.nz/books?id=uo_WAgAAQBAJ&pg=PA183&lpg=PA183&dq=The+role+of+Denmark+in+the+strengthening+of+the+international+environmental+regime&source=bl&ots=9PKVObcdVC&sig=ACfU3U2k_5ceoK0XpuZN_bx90zOt0mlQTw&hl=en&sa=X&ved=2ahUKEwjP5br2-uzkAhUNf30KHSRjB2YQ6AEwB3oECAgQAQ#v=onepage&q=The%20role%20of%20Denmark%20in%20the%20strengthening%20of%20the%20international%20environmental%20regime&f=false

[836] David Larsson Heidenblad "Mapping a New History of the Ecological Turn: The Circulation of Environmental Knowledge in Sweden 1967" (2018) 24(2) Environment and History 266; Stephen Bocking, *Nature's Experts: Science, Politics, and the Environment* (Rutgers University Press, New Brunswick 2004) at 266.

[837] Ibid at 268.

[838] Ibid at 271.

The media caught up on these warnings and disseminated them globally. These 1967 events may have indirectly connected to the UNCHE emergence, based on the Swedish delegation to the United Nation's proposal to hold an environmental conference.[839] Also, the Swedish scientists' proactiveness may have provided the impetus for producing a certain kind of future-oriented expertise.[840] Sweden is renowned for its ambition to implement a more proactive and ecological vision of environmental law and policy and employ better adaptive methods in restructuring its economy to incorporate ecological limits and principles.[841] Although Sweden has earned a reputation in leading environmental activism at the international and regional level, it has infringed on implementing some EU Directives that have led to infringement cases brought against her by the EU commission. Tallberg suggests that the reason could be the long process of adopting implementing acts that follow the same legislative procedure that applies to national law.[842]

1. Swedish Environmental Framework

The Swedish Environmental Code of 1999 is the central piece of legislation governing the environment.[843] It replaced about fifteen older pieces of legislation by harmonising general rules and principles, such as the precautionary principle, the prevention principle, best available techniques, reuse and recycling and cost-benefit recycling.[844] The EC's purpose is to promote sustainability for present and future generations and keeps Sweden on track to meet its environmental objectives. The Swedish framework also utilises the Environmental Impact Assessment (EIA) to curb environmental harm. The EIA applies to any activities that require permits under the EC.[845] Sweden has also instituted an Environmental Protection Agency (EPA) to regulate environmental activities. The EPA forms a part of the Ministry of Environment and implements climate change and environmental policies. It also reports to the UNFCCC periodically and ensures the annual release of emissions, statistics and tracking data.

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[839] Lars-Åke Engfeldt, From Stockholm to Johannesburg and Beyond: The Evolution of the International System for Sustainable Development Governance and its Implications (Stockholm: Government Offices of Sweden, Ministry of Foreign Affairs, 2009) at 32.

[840] Danielle Catherine Sheppard above n834 at 283.

[841] David R Boyd "Within Limits: Canada's Record on Environmental Protection is a Patchwork of Weak Laws and Even Weaker Enforcement" (2004) 30 Alternatives Journal 1 at 37.

[842] Jonas Tallberg *Sverige och Efterlevnaden av EU:s Regelverk: Ett Samarbetsdilemma.* In Sverige EU, edited by Karl Magnus Johansson, 55-76. Stockholm: SNS Forlag.

[843] Miljöbalk [MB] [Environmental Code] (Swed.)

[844] See generally Ministry of The Environment, The Swedish Environmental Code (2000), available at http://www.sweden.gov.se/content/1/c6/02/05/49/6736cf92.pdf.

[845] Maria Petterson and Carina H. Keskitalo "Forest Invasive Species and Climate Change – EU and Swedish Regulatory Frameworks ' (2012) 42 Environmental Policy and Law 1.

The Swedish government has also established a licensing requirement for many environmentally hazardous operations/activities to ensure compliance with the EC, and the environmental court issues licensing permits for Class A activities that cause significant environmental impacts, such as extensive facilities and factories' activities. For less hazardous activities that cause moderate environmental impact, such as water activities, otherwise referred to as class B activities, a regional or local authority issues the permits for these.[846]

Sweden uses an integrated approach to tackling climate change by incorporating economic instruments in its legislation and policies to foster sustainability. This approach is grounded in market-based initiatives spanning various sectors that encourage climate change mitigation integration through price signals across industries.[847] Sweden's climate strategy includes significant financial support for technological innovation and the introduction of new eco-friendly technologies into the market. Sweden has also demonstrated commitment to implementing global and regional emission reduction targets. The Swedish Parliament (Riksdag) has also adopted sixteen environmental quality objectives, one of which is the Reduced Climate Impact objective that forms the basis for the Swedish climate change policy framework.[848] The reduced climate impact objective is coterminous with the Paris Agreement objective of limiting global warming.[849]

Sweden is one of the few developed countries to cut its use of environmentally harmful chemicals and makes concerted efforts to increase biofuel use to reduce emissions. However, Sweden has yet to successfully incorporate and integrate environmental concerns into the industry, energy, transport, forestry, and agricultural sectors. In her Seventh National Communication on Climate Change, Sweden incorporated a range of measures to meet obligations under the UNFCCC and the Paris Agreement.[850] Some of these measures include energy and carbon dioxide taxes imposition, and has been recently supplemented with other

[846] Ulf Bjällås, "Experiences of Sweden's Environmental Courts, Journal of Court Innovation" (2010) Pace University at 179.
[847] Michal Nachmany & Ors "Climate Change Legislation in Sweden, An excerpt from the 2015 Global Climate Legislation Study: A Review of Climate Change Legislation in 99 Countries" http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/SWEDEN.pdf .
[848] Swedish EPA "Sweden's Environmental Objectives: An Introduction" http://www.swedishepa.se/Documents/publikationer6400/978-91-620-8620-6.pdf .
[849] The objective states "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels. Sweden will work internationally towards global efforts to address this goal."
[850] Government Offices of Sweden "Sweden's Seventh National Communication on Climate Change" (June 8, 2018) https://www.government.se/49c920/contentassets/f947f4f4b7ac4af3baadfc827d97557a/swedens-seventh-national-communication-on-climate-change.pdf .

instruments such as investment grants, technology procurement, public information campaigns, and a differentiated annual vehicle tax and electricity certificates system. Equally important additions are: legislations related to bans, standards and urban planning that have helped reduce emissions. Cross-sectorial policy instruments such as grants towards climate communication, research and development and a local climate investment program were also introduced in 2015.

Since the Paris Agreement's adoption, Sweden, following Articles 4 (5), 9, 10 and 11 of the Agreement on climate financing, provided SEK7.5 billion of public climate finance for developing countries.[851] Sweden is also reputed as the largest per capita donor globally to the financial mechanism (GCF, Global Environmental Facility, Adaptation Fund) under the UNFCCC. Furthermore, in strengthening the institutional and technical capacities of developing countries to meet the enhanced transparency requirements of the Paris Agreement, Sweden provided support to the Capacity Building Initiative for Transparency in 2016.

Sweden's regional and municipal actions on climate change are pace-setting. A wide range of climate activities is being undertaken at the municipal level, where municipalities are obliged to have an energy plan combined with a climate strategy to reduce GHGs. This integrated approach encourages participation at all levels and contributes to Sweden's proactive climate policy. Detailed climate change efforts in Sweden after 2015 will be captured in the comparative analysis section.

B. Norway

Being a small country, Norway is a minor player in global governance issues, even those regarding the environment. However, like Sweden, Norway has very high ambitions in global environmental governance.[852] Norway's foray into the global environmental arena was marked by its environmental enthusiasm in the late 1980s and early 1990s, where the Chernobyl accident and the ozone hole discovery dominated the news.[853] These events set the tone for green activism within and outside Norway. The Norwegian green activism enthusiasm eventually culminated in its bridge-building role to support UNEP's establishment.[854] Norway

[851] Government Offices of Sweden "Sweden Increasing its Contribution to Climate Action in Developing Countries" (Press Release, 2 October, 2020) https://www.government.se/press-releases/2020/10/sweden-increasing-its-contribution-to-climate-action-in-developing-countries/

[852] G. Kristin Rosendal "Norway in UN Environmental Policies: Ambitions and Influence" (2007) 7 Int. Environ Agreements at 440.

[853] Ibid at 442.

[854] Ibid.

is also believed to have deep trust in the UN as a global environmental institution such that it established its Ministry of Environment in the aftermath of the 1972 Stockholm conference.[855] A former Norwegian Prime Minister was also appointed to head the UN World Commission on Environment and sustainable development.[856]

Although Norway has steered political and media attention on global environmental issues and given high priority to international environmental cooperation, it is critiqued to perform poorly on domestic implementation of global environmental objectives.[857]

In terms of emissions, Norway's transport, petroleum and manufacturing sectors are the most significant contributors to its GHG emissions.[858] Norway is highly dependent on oil and gas production for export and has been a major European producer and exporter since the late 1970s.[859] Quite paradoxically, Norway's leadership in international environmental politics coincided with its steady oil and gas production.[860] Heavily criticized for purchasing international CO_2 quotas instead of reducing emissions, Norway is accused of buying itself out of burdensome domestic environmental obligations.[861] This affinity to oil and Norway's desire to pursue international environmental cooperation presents an anomaly. However, Norway updated its NDC in 2020, committing to emissions reductions of at least 50 per cent and up to 55 per cent by 2030 from 1990 levels.[862] This target is ambitious and could be interpreted to show willingness to implement the Paris Agreement targets.

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[855] Ibid at 441; See also Norway's continued support for the UN in Norwegian Ministry of Foreign Affairs "Voluntary National Review 2021 Norway: Report of the Implementation of the 2030 Agenda for Sustainable Development" at 8. https://sustainabledevelopment.un.org/content/documents/28233Voluntary_National_Review_2021_Norway.pdf

[856] Christa Thomsen "Sustainability (World Commission on Environment and Development Definition in Idowu S.O and others (eds) Encyclopedia of Corporate Social Responsibility. Springer, Berlin, Heidelberg.

[857] OECD "Environmental Performance Review of Norway" https://www.oecd.org/environment/country-reviews/2675351.pdf .

[858] Hannah Ritchie and Max Roser "Norway: CO_2 Country Profile" https://ourworldindata.org/co2/country/norway

[859] Florentina Harbo "The European Gas and Oil Market: The Role of Norway" (October 2008) https://inis.iaea.org/collection/NCLCollectionStore/_Public/42/052/42052643.pdf

[860] Jon Birger Skjærseth *International Regimes And Norway's Environmental Policy : Crossfire And Coherence* (Routledge, 2018) at 6.

[861] SGI "Norway" https://www.sgi-network.org/2019/Norway/Environmental_Policies .

[862] UNFCCC "Norway's Long-Term Low-Emission Strategy for 2050" https://unfccc.int/sites/default/files/resource/LTS1_Norway_Oct2020.pdf .

1. Norway's Environmental Framework

Norway has a robust environmental framework covering biodiversity, forestry, petroleum, energy, product control and climate change.[863] The Norwegian Ministry of Climate and the Environment has five departments, including a department for climate change and a communication unit.[864] The climate change department is in charge of five units supervising renewable energy, forests, climate policy analysis, transport, and finance and development issues.[865] Since 2015, Norway has enacted a Climate Change Act, designed a ten-year national transport plan, developed a better growth, lower emissions strategy and delivered a climate action plan.[866] Norway's 2021 climate action plan is quite robust, including policy instruments such as GHG emissions taxation, regulatory measures, climate-related requirements in public procurement processes, information on climate-friendly options, financial support for developing new technology, and initiatives to promote research and innovation.[867] The Ministry of Environment has recently included the transport sector into ENOVA- a state enterprise that promotes environmentally friendly energy consumption and production, and develops energy and climate technology.[868] ENOVA will also aid emissions reductions in the transport sector, which contributes significantly to Norway's GHG emissions. The analysis section will discuss Norway's regulatory framework in more detail.

C. Finland

Some scholars suggest that modern environmentalism in Finland occurred due to Swedish influence and the Finnish scientists' discovery of toxic pollution.[869] This position is not strange as Finland had been part of the Swedish realm for centuries, and the latter has assumed the status of big brother to Finland.[870] Of the four Nordic case studies, Finland has the lowest temperatures necessitating its energy-intensive industry, leading to increased GHG emissions. Although not unique to Finland, this challenge accounted for its slower action in designing robust climate policy actions.

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[863] Government.no "Organisation" https://www.regjeringen.no/en/dep/kld/organisation/id692/ .
[864] Ibid.
[865] Ibid.
[866] LSE Grantham "Climate Change Laws of the World: Laws and Policies- Norway" https://climate-laws.org/legislation_and_policies?geography%5B%5D=132&law_passed_from=2015&law_passed_to=2021 .
[867] Regjeringen. No "Norway's Comprehensive Climate Action Plan" January 8, 2021 https://www.regjeringen.no/en/aktuelt/heilskapeleg-plan-for-a-na-klimamalet/id2827600/ .
[868] Regjeringen.no "Enova" https://www.regjeringen.no/en/dep/kld/organisation/Subordinate-agencies/enova/id2599611/ .
[869] Tuomas Rāsānen "Converging Environmental Knowledge: Re-Evaluating the Birth of Modern Environmentalism in Finland" (2012) 18 Environment and History 2 at 162.
[870] Ibid at 175.

Historically, CH_4 emissions mainly from animal husbandry and landfills were the largest and most significant contribution to Finnish GHG emissions.[871] Emissions from fossil fuel burning accounted for nearly 0.3 per cent of total global emissions, given that energy consumption and GNP per capita were greater in Finland than in most countries.[872] Finland lacks any meaningful domestic coal/gas reserves, and it imports 88 per cent of its crude oil, all of its natural gas and 64 per cent of its coal from the Russian federation.[873] Finland's emission trajectory has fluctuated in the past decades. Emissions rose in 2008 due to a severe economic recession but reduced by about 9 per cent by 2010, where coal and peat consumption was decreased, and net imports of electricity were increased.[874]According to the instant preliminary data of Statistics Finland, the total emissions of GHGs in 2019 equated to about 52.8 million tonnes of CO_2eq, a 26 per cent reduction from 1990 levels and a 38 per cent reduction from 2003 levels where emissions were at the highest.[875]

Finland has set some precedents in global environmental efforts, for example, it was the first country to introduce an energy tax based on CO_2 emissions.[876] Finland is also the first EU country to develop a national adaptation strategy for climate change in 2005. The strategy was collaboratively designed with the input of several top Finnish researchers in climate change, other experts and representatives of various sectors. The strategy provides detailed impacts of climate change in different sectors and highlights measures to combat climate change until 2080.[877] The Finnish government also adopted the adaptation plan and adjusts it once every decade.

In June 2015, Finland's Climate Change Act entered into force. The Act is the premier national statute that lays down provisions on a planning system and defines general long-term climate change policy guidelines.[878] The Act's provisions indicate Finland's commitment to becoming carbon neutral by 2035 and reducing 80 per cent of GHGs by 2050 compared to 1990.

[871] Riitta Pipatti and Others "Greenhouse Impacts of Anthropogenic CH_4 and N_20 Emissions in Finland" (1996) 20 Env Mgt 2 at 219.
[872] Markku Wilenius and Juhani Tirkkonen Building a Regime for Climate Protection: Finland and International Climate Policy" (1998) 8 Global Environmental Change 4 at 295.
[873] See Jaakko J Jääskeläinen and others "Finland's Dependence on Russian Energy- Mutually Beneficial Trade Relations or an Energy Security Threat" (2018) 10 MPDI Sustainability 3445.
[874] William Brittlebank "Finland- Creating a Low Carbon Country" 8 January 2014 ; Statistics Finland "Annual National Accounts" http://www.stat.fi/til/vtp/2016/ .
[875] Statistics Finland "Greenhouse Gas Inventory" https://www.stat.fi/tup/khkinv/index_en.html
[876] Markku Wilenius and Juhani Tirkkonen above n872 at 300.
[877] Finland's National Adaptation Strategy.
[878] Finland Ministry of Environment https://www.ym.fi/en-US/The_environment/Legislation_and_instructions/Climate_change_legislation.

However, a recent study argued that Finland's climate change policy network is less inclusive and consensual than Sweden's, even though Finland's per capita emissions are double those of Sweden.[879] Further, Finland's climate policy output is less ambitious due to the interplay of roles of tripartite organisations (NGOs, businesses and unions). Businesses place highest in all organisational sectors and affect NGOs' playing power to influence environmentally sensitive decisions in Finland. This 'upper hand' that organisations wield is traced to the late nineties, when manufacturing and energy sectors took an active interest in climate policy-making, having understood the significance of climate policy decisions for their operations that coincidentally contributed to large proportions of Finnish emissions.

Interestingly, in 2020, media reports that Finnish industries have done an about-face and are now 'begging' politicians to go green.[880] About seventy-one companies have joined the Climate Leadership Coalition lobby organisation for more ambitious actions for achieving climate goals.[881] Overall, Finland has developed environmental policies that are regarded as reasonably progressive despite the absence of concrete climate policy decisions.[882]

1. Finnish Engagement with International Climate Policy

International conventions and agreements such as the UNFCCC, the Kyoto Protocol and the Paris Agreement form the basis for Finland's climate policy.[883] Interestingly, some authors have also suggested direct linkages between the development of Finland's climate policy and the formation of the IER.[884] These scholars view both developments as occurring in pari passu and mainly focus on Finland's 'compliance' with the environmental propositions of the UNFCCC. Finland, as highlighted earlier, has taken both active and passive stances in engaging with different aspects of climate change. In terms of its engagement with the global climate regime, Finland signed the UNFCCC in 1992 but took almost two years to ratify it, which could be attributed to its insufficient energy policy measures to achieve the required carbon dioxide

[879] Antti Gronow and others "Divergent Neighbors: Corporatism and Climate Policy Networks in Finland and Sweden" (2019) 28 Env Politics 6 at 1062.
[880] Politico "Finland: Where Business Begs Government To Go Climate Neutral" June 3, 2020 https://www.politico.com/news/2020/03/06/finland-where-business-begs-government-to-go-climate-neutral-122385 .
[881] C<C "Key Targets" https://clc.fi/key-targets/#systemic-climate-solution
[882] http://www.climateaction.org/climate-leader-papers/finland_creating_a_low_carbon_country
[883] Ministry of Environment and Statistics Finland "Finland's Seventh National Communication under the UNFCCC" https://www.stat.fi/static/media/uploads/tup/khkinv/VII_Climate_Change_16102017.pdf at 14.
[884] See Antti Gronow and Tuomas Ylä-Anttila "Cooptation of eNGOs or Treadmill of Production? Advocacy Coalitions and Climate Change Policy in Finland" (2016) 47 Policy Studies Journal 4 at 877.

emissions reductions prescribed at the Rio summit.[885] In contrast, when the Kyoto Protocol included carbon sinks to slow climate change, Finland engaged actively in negotiations within the UNFCCC due to its large forest sector.

Finland can implement international agreements through standard EU policies such as the EU 2020 and 2030 Energy Packages.[886] However, Finland's joining the EU bubble has been criticized as it had changed the dynamics of engaging with the UNFCCC process where it could now 'hide' under the umbrella of the EU targets even when it was clear that it could not, for instance, meet up with its Kyoto Protocol requirements. However, Finland ratified the Paris Agreement in November 2016 and has pledged to be carbon neutral by 2035- one of the most ambitious targets recorded.[887]

D. Denmark

The dramatic intervention of a group of biology and architectural students (Naturhistoriske Onsdagsaftene) that hijacked the Natural History Society conference at the University of Copenhagen heralded a new wave of environmental consciousness in Denmark- a country that had previously neglected and lived in denial of environmental problems. [888] The students locked the conference participants in, turned off the ventilation, burnt tobacco and garbage, and poured wastewater into an aquarium of goldfish (killing them) to emphasise the level of pollution in Denmark.[889] The extent to the neglect and denial of environmental issues was showcased in the loopholes of Denmark's environmental legislation, particularly concerning industrial and business interests.[890] Non-state actors played a significant role in the evolution of Denmark's environmental consciousness. This is noteworthy as Denmark's environmental consciousness changes sprung from the grassroots-based radical ecologism to its current ecological modernization.[891] Also, grassroots-initiated green technological innovations have resulted in the large-scale export of Danish RE technology.[892]

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[885] Markku Wilenius and Juhani Tirkkonen above n872 at 297.
[886] Ministry of Environment and Statistics Finland above n883.
[887] Finland Ministry of Environment "Government's Climate Policy: Carbon-Neutral Finland by 2035" https://ym.fi/en/carbon-neutral-finland-2035 .
[888] Asa Wettergren and Linda Soneryd "Denmark- From a Green Economy toward a New Eco-Radicalism?" in Carl Cassegard and Others (eds) *Climate Action in a Globalising World: Comparative Perspectives on the Environmental Movements in the Global North* (Routledge, New York, 2017) at 173.
[889] Ibid.
[890] Andrew Jamison and Erik Baark "National Shades of Green: Comparing the Swedish and Danish Styles of Ecological Modernisation" (1999) Environmental Values 8 pps 199–218.
[891] Asa Wettergren and Linda Soneryd above n888 at 188.
[892] Ibid.

Over the years, Denmark has cooperated on crucial environmental issues at the global and regional levels. An example of Danish cooperation with the United Nations was the adoption and ratification of the Convention on Biological Diversity in 1993.[893] This underscored a desire to see the establishment of a framework convention on chemicals that would integrate and strengthen activities under a range of existing international agreements, such as the Vienna Convention, the Geneva Convention and the Global Action Plan on the Seas. Furthermore, from 1997, the Danish government began to follow up on the United Nations General Assembly (UNGASS) outcome on sustainable development, proposing to increase its financial contributions to poorer countries.[894]

Denmark has one of the most aggressive climate and energy policies globally and is reputed as a forerunner in transforming to a low carbon economy.[895] Hvelplund suggests that Denmark's successful transition to Renewable Energy and Conservation (RECo) development is attributable to Denmark's institutionalisation of an innovative democratic process where political, financial and informational balance was established among critical parties such as the Fossil Fuel Technologies (FFU) and REC lobbyists, RE NGOs, industries, and the public.[896] In addition, NGO based energy offices and independent innovators that had established prototypes of RECo technologies at different locations throughout the country were also allocated funds, highlighting a significant component of the innovative democratic process employed toward the transition from fossil fuels.[897]

Denmark was also strategic during the 1970's energy crisis. Even though it had discovered significant fossil fuel reserves in its waters, it continued to explore alternative energy sources

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[893] The Convention on Biological Diversity 1760 U.N.T.S. 69 (opened for signature June 5 1992, entered into force 29 December 1993).

[894] OECD "Environmental Performance Reviews: Denmark (OECD, 1999) 92 https://books.google.co.nz/books?id=uo_WAgAAQBAJ&pg=PA183&lpg=PA183&dq=The+role+of+Denmark+in+the+strengthening+of+the+international+environmental+regime&source=bl&ots=9PKVObcdVC&sig=ACfU3U2k_5ceoK0XpuZN_bx90zOt0mlQTw&hl=en&sa=X&ved=2ahUKEwjP5br2-uzkAhUNf30KHSRjB2YQ6AEwB3oECAgQAQ#v=onepage&q=The%20role%20of%20Denmark%20in%20the%20strengthening%20of%20the%20international%20environmental%20regime&f=false .

[895] Benjamin K. Sovacool and Pascale L. Blyth "Energy and Environmental Attitudes in the Green State of Denmark: Implications for Energy Democracy, Low Carbon Transitions, and Energy Literacy (2015) at 54. Environmental Science & Policy 304; Lars Christian Lilleholt "A Danish Solution to a Global Challenge?" 24 November 2015 http://www.climateaction.org/climate-leader-papers/a_danish_solution_to_a_global_challenge

[896] Frede Hvelplund "Innovative Democracy, Political Economy, and the Transition to Renewable Energy. A full-Scale Experiment in Denmark 1976-2013" (2013) 66 Environmental Research, Engineering and Management 4 at 19.

[897] Ibid.

resulting in the robust wind industry it developed over time.[898] Although the energy industry was driven from the bottom-up, and supporters influenced the political process, the Danish government provided enabling conditions such as economic incentives and favourable ownership restrictions that boosted the sector's development.[899] The combination of both the bottom-up and top-down approaches contributing to Denmark's RE success story is what Hvelplund referred to as innovative democracy.[900]

Commonalities regarding positive environmentalism have been drawn between Denmark and Sweden regarding the substantial value and importance of nature to both cultures. However, despite the similarity, both countries took a different approach to the environmental movement during the 1970s. Sweden's approach was to put environmental issues on the UN agenda in the early 1970s, making it a pioneer of pollution prevention, while Denmark initially neglected its increased environmental degradation by continuing industrial and agricultural production unabatedly.[901] Over the years, the Danish government has prioritised climate change issues and has become one of the countries with the highest ambitious climate targets with straightforward implementation plans.

III. China's Earliest Climate Change Engagement

Like other developed countries, China perceived and treated climate change as a scientific issue and mandated the State Meteorological Administration to advise the government on relevant policy choices in the UNFCCC.[902] Over the past three decades, China has experienced rapid economic development synchronous with the increased emission of GHGs.[903] Such is the bulk of China's GHGs emissions that it is credited to contribute around 50 per cent of the total global

[898] Miguel Mendonça and others "Stability, Participation and Transparency in Renewable Energy Policy: Lessons from Denmark and the United States" (2009) 27 Policy and Society at 385.

[899] P Dannemand Anderson "Wind Power in Denmark: Technology, Policies and Results" 51171/97-0008. Roskilde, Denmark: (Danish Energy Agency, 1998).

[900] Frede Hvelplund "Denmark" in Danyel Reiche (Ed) *Handbook of Renewable Energies in the European Union: Case studies of the EU-15 States* (Peter Lang, 2005) at 87.

[901] Jeppe Læss⃠e & Johan Öhman "Learning as Democratic Action and Communication: Framing Danish and Swedish Environmental and Sustainability Education" (2010) 16 Environmental Education Research 1 at 3.

[902] Wei Liang "Changing Climate? China's New Interest in Global Climate Change Negotiations" in Joel Jay Kassiola and Sujian Guo (eds) *China's Environmental Crisis : Domestic and Global Political Impacts and Responses* (Palgrave McMillian, 2010) at 75.

[903] Boden, T. A., Marland, G. & Andres, R. J. Global, Regional, and National Fossil-Fuel CO 2 Emissions http://dx.doi.org/10.3334/CDIAC/00001_V2013 (Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, US DOE, 2013).

increase in CO_2 emissions since 2002.[904] Similar to other countries, China is affected by climate change impacts, and while there are different schools of thought regarding China's climate change action and factors responsible for it, China has become a strong voice in global climate change negotiations.

The earliest conscious involvement of the Chinese government in environmental protection is linked to the 1972 Stockholm Conference. A year after its entry into the United Nations, China forayed into environmental diplomacy at the international level. Between 1972 and 1979, China became more aware of its environmental problems that spurred domestic reform attempts and further involvement in international environmental affairs.[905] Some of the earliest reforms domestically were shifting responsibility and authority in climate change-related issues to the National Development and Reform Commission, which was the most powerful government agency.[906] Others involved the initiation of domestic pollution control mechanisms.[907] The Chinese environmental governance system has since developed and transitioned from its previous command and control approach to environmental policy and has now reformed and diversified its environmental approaches, legal regulations and instruments.[908] China has also put some efforts into reducing GHGs that have been discussed extensively by different scholars. For example, some scholars attribute China's emissions reduction between 2012-2016 to the coordination and cooperation of the various regions having the common goal of restructuring the national economy from a high-speed pattern to a high-quality pattern.[909] According to the study, a combination of a regional structure adjustment, better energy efficiency, and improved energy mix through promoting innovative and quality technologies in the industrial sector contributed to reducing China's emissions.[910] It is important to note that emissions reduction in China varied at the regional level, with better performers in the Southeast than the Northwest and Northeast regions that had increased emissions because of poor transformation designs and a history of underdevelopment.[911]

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[904] Jan Christoph Steckel and others "From Carbonization to Decarbonization?—Past Trends and Future Scenarios for China's CO2 emissions" (2011) 39 Energy Policy 6 at 3443.
[905] Cai Shouqui and Mark Voigts "The Development of China's Environmental Diplomacy" (1994) 3 Pacific Rim Law and Policy Journal 19.
[906] Wei Liang above n902 at 74.
[907] Arthur P. J. Mol and Neil T Carter "China's Environmental Governance in Transition" (2006) 15 Env Politics 2 at 152.
[908] Ibid at 149.
[909] Jiali Zheng and Others "Regional Development and Carbon Emissions in China" (2019) 81 Energy Economics at 33.
[910] Ibid at 31.
[911] Ibid at 34.

A. Interactions with the IER

The sending of delegates to the 1972 Stockholm Conference by the Chinese government heralded China's involvement in international diplomacy. [912] Since the establishment of UNEP, China still occupies a seat on its executive board that serves as an important channel for China to enter into negotiations with other countries on global environmental issues. Domestically the development of Chinese environmental institutions was also linked to the 1972 Conference.[913] However, for a long time, China has been observed to have conflicting interests.

The domestic situation in China in the 1970s mirroring China's decision to emphasise economic growth over the environment starkly contrasted China's increasing awareness of environmental problems. Scholars observed that while China intended to lead the global environmental movement, it was reluctant to limit its economic development to clean up its environment.[914] Throughout the 1990s, China maintained a hardliner position in defending its interests at global climate change negotiations and, despite its attendance at many climate negotiations, maintained its perception of global climate negotiations as a western conspiracy to hinder its economic growth.[915]

China's stance on emissions reduction was reiterated at the 2009 Copenhagen Conference on Climate Change, where the Chinese diplomat, He Yafei, categorically refused to give in to Europe's demands, stating, "Thank you for all these suggestions. We have said very clearly that we must not accept the 50 per cent reductions. We cannot accept it".[916] China's argument alongside India was that developed countries in the past 200 years of industrialisation had contributed more than 80 per cent of global emissions. It has also insisted that environmental protection ought not to be achieved at the expense of the economy.[917]

Stakeholders at the Copenhagen conference perceived China's assertive stance on the degree and conditionality to reduce its emissions differently. An appreciable number of scholars from

[912] Kenji Otsuka "Shift in China's Commitment to Regional Governance in Northeast Asia" (2018) 7 Journal of Contemporary East Asia Studies 1 at 18.
[913] Council on Foreign Relations 'China's Environmental Crisis' Available online https://www.cfr.org/backgrounder/chinas-environmental-crisis .
[914] Cai Shouqui and Mark Voigts n above n905 at 18.
[915] Arthur Max "Once the Spoiler, China is now Praised for Positive Role in Climate Talks December 2, 2008, LA Times; Wei Liang above n902 at 69.
[916] Tobias Rapp and others "The Copenhagen Protocol: How China and India Sabotaged the UN Climate Summit" 5 May 2010 Spiegel Online https://www.odu.edu/content/dam/odu/offices/mun/news-archive/article-2010-may-5-spiegel.pdf .
[917] Yu Hongyuan *Global Warming and China's Environmental Diplomacy* (New York: Nova Science, 2008) at 64.

western countries felt that China was uncompromising and contributed to the conference's failure, [918] while scholars from developing countries applauded China's 'constructive negotiating strategy'.[919] Nonetheless, as a rising economic power, China has wanted to shape the global environmental regime and generally exert more influence over rules of international affairs.[920] After the Copenhagen conference, some scholars suggest that China continues to move from passively accommodating existing international institutions to actively engaging in the environmental regime building process.[921]

China has joined both the UNFCCC and its COP and has placed the UNFCCC requirements to meet the potential threats of climate change top on its political agenda. Even though China attended special environmental-related meetings with the US, EU, Japan, India, South Africa, Russia and Brazil, China has insisted that the UNFCCC remains the primary platform for global climate change talks.[922]

Some scholars have suggested that the UNFCCC exerted substantial influence on China in several ways, such as how China coordinated its climate change policies, serving as a catalyst to propel China into setting agendas for environmental causes.[923] The UNFCCC also wielded influence when it presented interest-based offerings through international funds and international environmental aid projects. These resonated with China to the extent that it conditionally placed its commitment to reducing its emissions on receipt of funding and technology transfer from the Global Environmental Facility (GEF) and the Clean Development Mechanism (CDM), respectively.[924]

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[918] Daniel Bodansky, "The International Climate Change Regime: The Road from Copenhagen," Harvard Project on International Climate Agreements, October 2010, https://www.belfercenter.org/sites/default/files/legacy/files/Bodansky-VP-October-2010-3 ; Daniel Bodansky, "The Copenhagen Climate Change Conference: A Post-Mortem," February 12, 2010, p. 10, http://www.fao.org/fileadmin/user upload/rome2007/docs/ Copenhagen Climate Change.pdf ; Stephen Minas, "Crossing the River - China in the International Climate Change Negotiations", Foreign Policy Centre, January 24, 2011, https://fpc.org.uk/wp-content/uploads/2011/01/1315.pdf ; and Gary Clyde Hufbauer and Kim Jisun, "After the Flop in Copenhagen," Peterson Institute for International Economics, March 2010, https://piie.com/sites/default/files/publications/pb/pb10-04.pdf. .

[919] Gao Xiaosheng "China's Evolving Image in International Climate Negotiation: From Copenhagen to Paris" (2018) 4 China Quarterly of International Strategic Studies 2 at 226.

[920] Lichao He "China's Climate-Change Policy from Kyoto To Copenhagen: Domestic Needs and International Aspirations" (2010) 34 Asian Perspective 3 at 7.

[921] Ibid at 31.

[922] Wei Liang above n902 at 67.

[923] Yu Hongyuan above n917 at 4.

[924] Lichao He above n920 at 23.

Interestingly, several Chinese scientists have also become lead authors of IPCC assessment reports (9, 11, 19, 28 and 43), in addition to their involvement in the preparation of five assessment reports.[925] This involvement of these scientists with the endorsement of the Chinese government heightened the attention of the Chinese scientific community on the scientific aspects of climate change. Furthermore, the Chinese government also mobilised scientists to give expert reviews of the IPCC reports and engaged with the IPCC assessment process that has significantly promoted the understanding of climate change and its responses at all strata of the Chinese society.[926]

Between the Copenhagen Conference and COP21, China has made substantial efforts to earn its external recognition as a global player in climate politics.[927] As opposed to the Copenhagen Conference, the attendance of the Chinese supreme leader signalled a remarkable about-face, reflective of China's inclination to incorporate climate change responses into its ecological initiative. At COP21, China solemnly committed to peaking its carbon emissions around 2030, promising to make efforts to achieve this peak before 2030.[928] In fact, at the opening ceremony of COP21, Xi Jinping acknowledged that the rapid growth and development of the economy in the past few decades has taken a toll on the environment and resources and that China is making concerted efforts to promote green, circular and low carbon growth. However, China, the world's largest carbon emitter, faces increasing pressure in international climate negotiations to reduce carbon emissions to achieve the 2^0C temperature goal.[929] Yun suggests that the 'high-level' of the Chinese government participation at the COP21 climate change Conference is attributed to China's recognition and acknowledgement that the lack of complete scientific certainty cannot be used as a reason to postpone climate action.[930]

After the Paris climate conference, one of China's remarkable actions was releasing its 13th Five-Year Plan for national economic and social development in March 2016 that contained requirements for specific action on active control of GHG emissions, international cooperation, and climate change adaptation. This development comes at the heels of its 12th Five-Year plan

[925] Gao Yun "China's Response to Climate Change Issues after Paris Climate Change Conference" (2016) 7 Adv in Clim Change Research at 236.
[926] Ibid at 236.
[927] Gao Xiaosheng above n919 at 238.
[928] Zhu Liu and others "Climate Policy: Steps to China's Carbon Peak" (2015) 522 Nature Climate Change 7556 at 279.
[929] Bin Xu and Boquiang Lin "Assessing the Development of China's New Energy Industry (2018) 70 Energy Econ. 116–131.
[930] Gao Yun above n925 at 236.

of 2010, where China achieved 92.3 per cent of its commitment target by reducing its CO_2 emission per unit gross domestic profit (GDP) by 15.8 per cent instead of its 17 per cent target in 2015.[931] These five-year interval plans constitute avenues for implementing China's climate change targets. Detailed implementation efforts will be discussed further along in the chapter.

IV. India

For almost three decades, India has consistently championed Southern solidarity, differentiated responsibilities and capacity building through technology transfer and finance in its relations with the UNFCCC.[932] Before submitting its Intended Nationally Determined Contributions (INDC), India had argued, alongside other developing countries, that any international environmental pact must be based on historical and per capita carbon emissions, and that developed countries must take the lead by reducing their emissions first and fund mitigation and adaptation in other countries.[933] India is, however, a significant GHG emitter, and unlike other developing countries with insignificant emissions, needed to reduce emissions quickly. According to Carbon Brief, India is the world's third-largest GHG emitter after China and the US, having tripled its carbon dioxide emissions from fuel combustion alone between 1990 and 2011 and predictions of increased emissions by almost 2.5 times between 2008 and 2035.[934]

India, however, began to shift its hard-line position in the late 2000s. This shift encapsulated domestic and international proportions that began with the institutionalisation of a climate change council focusing on energy security in 2007.[935] A few days before the COP15 meeting in Copenhagen in 2009, India voluntarily offered to reduce its GDP emissions intensity by 20 to 25 per cent by 2020 compared to 2005 levels, signalling the first quantified emissions reduction target that the Indian government offered.[936] This shift in position was criticised domestically, as India seemed to have lost its bargaining chip at global climate negotiations. India's earlier bargaining position seemed to falter as there was a steady decline of adherents

[931] National Development and Reform Commission of the People's Republic of China (NDRC) 'China's Policies and Actions on Climate Change (2015).
[932] Susannah Fisher 'India and Climate Change: Energy, Equity and Development' in Ian Bailey and Compston Hugh (eds) *Feeling the Heat: The Politics of Climate Policy in Rapidly Industrialising Countries* (Palgrave McMillian, 2012) at 130.
[933] D. Raghunandan "India's Official Position: A Critical View based on Science in Navroz K. Dubash (ed) *Handbook of Climate Change and India : Development, Politics and Governance* (Earthscan, Oxon, 2012) at 172.
[934] IEA "CO2 Emissions from Fuel Combustion – Highlights" http://www.iea.org/co2highlights/co2highlights. See also Jocelyn Timperley "The Carbon Brief Profile: India" March 14, 2019 https://www.carbonbrief.org/the-carbon-brief-profile-india .
[935] Katharina Michaelowa and Axel Michaelowa "India as an Emerging Power in International Climate Negotiation (2012) 12 Climate Policy.
[936] Susannah Fisher above n932 at 130.

to India's traditional stance, particularly fellow developing countries who did not classify India as 'developing', especially in the face of its growing prosperity.[937]

India was further subjected to mounting pressure, alongside other emerging powers, to support a legally binding agreement by international coalition groups such as AOSIS (Alliance of Small Island States), a group of African countries and India's neighbouring nations.[938] India knew it would be at risk of international isolation if it persisted in its obduracy. In a bid to be perceived as a responsible member of the international community, it had to become flexible and open to binding international climate commitments.

India has high energy demands because of its population and growing economy, and most of these demands have hitherto been met by coal and gradually included oil and gas imports. To date, coal and biomass dominate India's domestic energy production, with coal accounting for nearly half of the total production.[939] However, with the global commitment to reduce GHG emissions, it became imperative for India to explore RE options. According to the 2020 IEA report, India has bridged the gap between energy demand and supply and contemporaneously addresses the environmental externalities linked to energy usage.[940] India's primary strategy to fulfil its Nationally Determined Contributions (NDC) commitments and reduce emissions is to improve its energy sector while ensuring energy security. The IEA reported that between 2000 and 2018, India had progressed significantly in reducing emissions by improving energy efficiency that circumvented an additional 15 per cent of annual energy demand and 300 million tonnes of CO2 emissions.[941] In 2018, the Indian government majorly invested in solar PV above fossil fuel sources of electricity, and by 2019, India had deployed a total of 84 GW of grid-connected renewable electricity capacity.[942]

The Prime Minister of India has proposed that India's electricity mix would futuristically include 450 GW of RE capacity, and currently, India is progressing toward its target of 175GW of renewables by 2022.[943] However, heavy reliance on coal may prove to be a cog in the wheel of India's progressive climate action. According to the 2017 IEA data, coal provides 44 per

[937] Joachim Betz "India's Turn in Climate Policy" GIGA Working Papers, 2012 at 16.
[938] Ibid.
[939] IEA "India 2020: Energy Policy Review" https://niti.gov.in/sites/default/files/2020-01/IEA-India%202020-In-depth-EnergyPolicy_0.pdf accessed June 13, 2020
[940] Ibid at 20.
[941] Ibid at 51.
[942] Ministry of New and Renewable Energy, India "2018-2019 Annual Report"
[943] IEA above n943 at 20 https://mnre.gov.in/img/documents/uploads/file_f-1608040317211.pdf

cent of the total primary energy supply and 74 per cent of electricity generation. Indian coal is generally of inferior quality with high ash content and low calorific value, significantly contributing to GHG emissions. It is predicted that the government of India will have to tackle its future economic growth linked to the coal exploitation for electricity generation and iron, steel and cement production on one part, and balance it with its climate commitments indicated in India's NDC, issues of air pollution and water stress on the other.

Some of the ways India has begun to address the energy constraint challenges to fit with the objectives of the Paris Agreement to reduce GHG emissions include the establishment of the Ministry of New and Renewable Energy (MNRE) at the central level, and India is credited to be one of the first countries to do this.[944] In addition, India recently revised its local air quality policies imposing more stringent environmental norms for air and water pollutants to accompany this development. More of these climate change-related policies and institutions will be discussed further in the chapter.

A. India's Interactions with the IER

Although India has been perceived in the past to be obdurate about any global climate regime that imposes responsibilities for early mitigation on emerging economies, it has nevertheless been active in global negotiations. [945] In 2002, India hosted COP8 in New Delhi. This was a pivotal time when issues about implementing both the UNFCCC and the Kyoto Protocol were discussed. More importantly, issues regarding how developing countries would tackle GHG emissions were raised, although there was no consensus by the end of the conference to resolve them. India had to play dual-level politics due to its inclination to accept responsibility to reduce emissions on the global front and its opposition domestically. Senior members of India's negotiating team disagreed with Minister Ramesh, India's environment Minister at the time, arguing that the Minister would undo years of careful negotiating strategy where India had refused equal responsibility for emissions reductions. Concomitant to India's shift in negotiations was the Indian entrepreneurs' engagement with the Kyoto Protocol's CDM funding for projects in India. Remarkably, up until 2015, India has hosted the second largest number of projects under the CDM.[946]

[944] Lata Tripathi and others "Renewable Energy: An Overview on its Contribution in Current Energy Scenario of India (2016) 60 Renewable and Sustainable Energy Reviews at 233.
[945] Joachim Betz above n941 at 5.
[946] Mayuri R. Naik and others "Role of the Clean Development Mechanism (CDM) in the Development of National Energy Industries" (2014) 25 Energy and Environment 2 at 325.

Under Minister Ramesh, India assumed a prominent role in negotiating compromises on transparency issues and received extensive recognition and appreciation from the COP President during the closing plenary of COP16 in Cancun. However, the following year, a new Environment Minister, Jayanthi Natarajan, attempted to reverse India's climate responsibility acceptance under Ramesh by falling back to previous economic implications and historical GHG contributions arguments. India's refusal to sign a new legally binding framework inclusive of developed and developing countries may have contributed to curbing India's rising positive engagement in global climate negotiations.[947] Despite India's position in COP17, many countries approved the adoption of a bottom-up approach where countries would make pledges for climate action under a system of peer review.[948]

India submitted its NDC in October 2015 and, during the COP21 Paris negotiations, surprisingly accepted the 1.5 degrees goal for climate policy even though it could potentially prevent late industrialising nations such as itself from rapid development.[949] Further, India speedily ratified the Paris Agreement signalling its desire to play a more active role in international climate policy, building on the progress achieved at the domestic level.[950]

It is significant to note that India did not call all the 'shots' before it finally agreed to reduce its emissions. There was international pressure on India to take action on climate change due to the significant rise in India's emissions since the early 1990s.[951] Scholarly contributions suggest that international climate negotiations may have affected Indian climate policy between 2007 and 2009, causing subtle climate change efforts.[952] In addition to the international pressure put on India, the international regime provided tangible incentives for India to subscribe to new climate strategies and helped India transition from the role of global opposition to that of an agenda-setter.[953] India continues to benefit from some of the IER incentives, such as the CDM that has funded over 520 of India's CDM projects, thereby

[947] Jagadish Thaker and Anthony Leiserowitz "Shifting Discourses Of Climate Change in India" (2014) 123 Climactic Change 2, pp.107–119.
[948] Annirudh Mohan "From Rio to Paris: India in Global Climate Politics" (Observer Research Foundation, 2017) https://www.orfonline.org/research/rio-to-paris-india-global-climate-politics/ accessed June 22, 2020.
[949] Navroz K. Dubash "Safeguarding Development and Limiting vulnerability: India's Stakes in the Paris Agreement" (2016) 8 Wiley Online at 6.
[950] Germanwatch "Why did India Ratify the Paris Agreement and What's Next for Indian Climate Policy" October 2, 2016 https://germanwatch.org/en/12865
[951] Annirudh Mohan above n948.
[952] Aaron Atteridge and others "Climate Policy in India: What Shapes International, National and State Policy?" (2012) 41 Ambio at 70-1.
[953] Samir Saran "India's Contemporary Plurilateralis" in David. M. Malone, C. Raja. Mohan, & Srinath Raghavan, (eds) *Oxford Handbook of Indian Foreign Policy* (Oxford University Press, 2015).

increasing the perception of India as a viable and attractive field for green technology investment.[954]

V. Nigeria's Climate Change Regime

Nigeria, regarded as Africa's largest economy, suffers from varying climate change impacts such as drought, flooding and extreme temperatures. Similar to many developing countries, Nigeria is not a significant GHG emitter but suffers unduly from the global effects of climate change. According to the World Resources Institute (WRI) 2014 report, Nigeria contributes 1.01 per cent of the total world emissions cumulated at 492.44 MtCO2e.[955] A more recent report on Nigeria's GHG inventory, covering the year 2000 to 2015, revealed that the combined emissions from agriculture, forestry, and other land use were the leading source of GHG emissions, followed by energy, waste and industrial processes, and product use.[956] Faced with the global consequences of climate change, it became imperative for Nigeria to design strategies to address climate change.

Historically, Nigeria has not shied away from enacting environmental legislation. The Nigerian Constitution expressly provides for the protection of the environment and the rights of its citizens to a clean and healthy environment.[957] Nigeria has also participated with other African nations in meetings on the environment and enacted more environmental laws after discovering petroleum in the late 1950s. Presently, the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act is the primary federal environmental legislation in Nigeria. The Nigerian Federal Ministry for Environment is responsible for coordinating all environmental matters and set up the Department of Climate Change (to provide a sustainable policy framework to aid the implementation of the UNFCCC, Kyoto Protocol, Paris Agreement and any other climate change guidelines, laws and regulation in Nigeria.[958] There is no specific climate change law presently, but Nigeria has designed several policies that impact on emissions reductions that is discussed later in the chapter.

[954] Susannah Fisher above n932 at 132.
[955] WRI/CAIT "Nigeria: Country GHG Emissions" https://www.climatelinks.org/sites/default/files/asset/document/2019_USAID_Nigeria%20GHG%20Emissions%20Factsheet.pdf .
[956] Federal Republic of Nigeria "First Biennial Update Report (BUR1) of the FRN under the UNFCCC" March 2018 https://unfccc.int/sites/default/files/resource/Nigeria%20BUR1_Final%20%282%29.pdf
[957] Section 20 of the Constitution of the Federal Republic of Nigeria, Act. No 24, 1999.
[958] DECC "About Us" https://climatechange.gov.ng/about-us/department-of-climate-change/ .

A. Nigeria's Interaction with the UNFCCC

Since Nigeria became a party to the UNFCCC in 1994, she has actively engaged in international climate policy negotiations and ratified several environmental treaties. Before becoming a party to the UNFCCC, Nigeria participated in the 1972 Stockholm conference and created the Federal Ministry of Environment shortly after, signalling a higher level of environmental awareness.[959] To honour reporting obligations, Nigeria submitted her First National Communication in 2003, the second in 2014 and the third in 2018, although, Nigeria being a Non-Annex 1 party, is required by the Convention to submit her first NC within three years of entering the Convention, and every four years after that. Nigeria also ratified the Kyoto Protocol in 2004 and the Paris Agreement in 2017. An active participant in the annual COP negotiations, Nigeria continues to broaden regional and international connections on environmental issues.

Although Nigeria agreed with developing countries' contestations that developed countries should take responsibility for emissions reductions, it was not as vocal as China, India or the small island nations. Nigeria adopted all the IER Conventions and Protocols with the least resistance. The above does not mean that Nigeria does not raise hesitations about global environmental targets, especially when it may affect national economic considerations, instead, Nigeria demonstrated willingness and openness to negotiating alternatives favourable to all parties.

Nigeria has committed to unconditionally reducing GHG emissions by 20 per cent compared to the Business as Usual scenario (BAU) and 45 per cent compared to BAU by 2030, contingent on international support. However, while Nigeria readily adopts IEA's, its domestic implementation suffers. Some scholars have attributed it to institutional incapacity, citing the efforts of government and environmental agencies as inadequate.[960]

VI. Overview of Moroccan Climate Change Regime Response

Like other North African and Middle Eastern countries, Morocco is vulnerable to climate change impacts in terms of its exposure, sensitivity, and adaptive capacity to adverse climate

[959] Adebola Ogunbola "An Appraisal of the Evolution of Environmental Legislation in Nigeria" (2016) 40 Vermont Law Review pps 683-4; L. Egunjobi "Issues in Environmental Management for Sustainable Development,"(1993) 13 Environmentalist at 33.

[960] Chinwoke C. Ifeanyi-Obi, and Nnadi, F.N. "Climate Change Adaptation Measures Used by Farmers in South-South Nigeria (2014) 8 IOSR Journal of Environmental Science, Toxicology and Food Technology at 4.

change impacts such as extreme precipitation and floods.[961] In addition, Morocco's location in the southern edge of the mid-latitude storm track is affected by different precipitation levels in different seasons of the year, rendering it susceptible to any climate changes that have often led to human losses and economic damages.[962]

A study conducted in 2012 projected that climate change would impact Morocco more than other countries within the subset of the North African region where the reliance on the agricultural sector is most.[963] In terms of coping with climatic changes, the study stated that Morocco was considered to have the lowest generic adaptive capacity due to its low performance in economic resources, health, education and human development.[964] As a result, Morocco has opted to address climate change by prioritising renewables, but this requires external funding. Part of the reasons for the scepticism of Morocco's ability to tackle climate change impacts lies with the relatively low level of concessional development assistance to Morocco in the past.[965] However, it is interesting to note that previous ominous predictions regarding Morocco's incapacitation in climate change mitigation and adaptation capacities have changed, given Morocco's fulfilment of its ambitious targets following COP21.

Morocco submitted its INDC to reduce GHG emissions, including LULUCF, by 13 per cent below BAU by 2030. Further, Morocco aims to increase its commitment to 32 per cent below BAU by 2030 on the condition that it gets international support through access to new sources of finance and enhanced support, compared to that received over the past years, within the context of a new legally binding agreement under the auspices of the UNFCCC.[966] Morocco also passed a Decree to establish the National Climate Change and Biodiversity Commission in 2020. The Commission enables consultation, coordination, monitoring of commitments and is reinforced by a range of committees.[967] In March 2019, Morocco passed its Climate Change

[961] W. Neil Adger "Vulnerability" (2006) 16 Global Environmental Change at 268; R.P. Allan, B.J. Soden "Atmospheric Warming and the Amplification of Precipitation Extremes" (2008) 321 Science at 1481-1483.
[962] Ourika valley in 1995, Mohammadia, El Jadida, Taza, Tétouan, Settat, Berrechid in 2002, Rabat, Tanger, Nador, Casablanca, Khenifra, Tétouan, Agadir, Essaouira in 2009.
[963] Janpeter Schilling and others "Climate Change, Vulnerability and Adaptation in North Africa with Focus on Morocco" (2012) 156 Agriculture, Ecosystems and Environment 1 at 12.
[964] Ibid.
[965] Peter Grant "Climate Change Financing and Aid Effectiveness: Morocco Case Study (Final Report, 13 July 2011) https://www.oecd.org/environment/environment-development/48458464.pdf .
[966] UNFCCC "Morocco: Intended Nationally Determined Contribution under the UNFCCC' https://www4.unfccc.int/sites/submissions/indc/Submission%20Pages/submissions.aspx accessed 7 January 2020.
[967] LSE Grantham UK "Decree N° 2.19.721 Establishing the National Climate Change and Biodiversity Commission" https://climate-laws.org/geographies/morocco/policies/decree-n-2-19-721-establishing-the-national-climate-change-and-biodiversity-commission .

Policy in response to the 2010 Cancun Agreements. This policy aims to mitigate GHG emissions, reduce vulnerabilities, anticipate climate risks, and put adaptation measures for natural environments, economic sectors, and the population. The policy is described as a tool that harmonizes the various measures and initiatives to tackle climate change that can function as a structuring, dynamic, participatory and flexible political instrument for low carbon development impervious to climate change impacts.[968]

Morocco has partially phased out fossil fuel subsidies and committed to ambitious emissions reduction targets for 2030. Although Morocco's climate change report was unanticipated, the country has steadily made strategic efforts in aligning with the global targets for emissions reduction toward the Paris Agreement goal of keeping temperatures below 1.5 degrees Celsius.

A. Moroccan Interaction with the IER

Historically, there is little to no information on Morocco's earliest involvement in global climate change negotiations. Morocco's active participation within the climate change framework at the international level can be traced to its hosting of COP7 in 2001 at Marrakech.[969] Very little was achieved at this conference as the US decided to remain an observer, thereby stalling the ratification of the Kyoto Protocol. Nonetheless, critical issues around operational rules for international emissions trading among Parties to the Protocol, the CDM and JI were decided at COP7. Other vital outcomes from COP7 included accounting procedures for the flexibility mechanisms and further considerations on achieving commitment- adequacy reviews that might move toward discussions of future developing country commitments at COP8.[970]

Stringent environmental resolutions require tough bargaining, and this was evident at Marrakech in the bid to come to a unanimous deal on the Kyoto Protocol. While COP7 was not a significant success, there was substantial compromise because the initial intransigence of parties such as the Russian Federation, Japan, and Canada eased up. These countries were able to secure favourable deals as a precondition for their ratification.[971] In 2002, Morocco ratified

[968] GRICCE "Climate Change Policy of Morocco" https://climate-laws.org/cclow/geographies/120/policies/9344 .
[969] Michal Nachmany and Others "Climate Change Legislation In Morocco: An Excerpt From The 2015 Global Climate Legislation Study A Review of Climate Change Legislation in 99 Countries" http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/MOROCCO.pdf .
[970] John R. Justus and Susan R. Fletcher "CRS Issue Brief for Congress: Global Climate Change" March 21, 2006 pp 12 https://digital.library.unt.edu/ark:/67531/metacrs8752/m1/1/high_res_d/IB89005_2006Mar21.pdf .
[971] Earth Negotiations Bulletin "Summary of the Seventh Conference of the Parties to the UNFCCC: 29 October - 10 November 2001.

the Kyoto Protocol. Again, Morocco went on to host COP 22 in 2016, at the heels of the widely lauded Paris Agreement in 2015. COP22 Marrakech has been dubbed as the 'implementation COP" by some, and others have referred to it as the "COP of the action" that must open the way to adopting the technical means and conduits to enable the Paris Agreement implementation.[972] Despite the pressure and uncertainty preceding and during the COP 22 negotiations, under the Presidency of former Moroccan Foreign Affairs Minister Salaheddine Mezouar, a few positive outcomes were recorded.

Some of the outcomes were that the GCF announced its approval to fund two proposals from Liberia and Nepal and committed to approving the proposals of twenty other countries. The GEF also announced a Capacity Building Initiative for Transparency supported by eleven developed country- donors, up to US$50 million in funding. In addition, a new five-year framework relating to loss and damage was initiated to address the impacts that are not taken into account by planned adaptation, including displacement, migration and human mobility, and overall risk management. The most significant and concrete outcome of COP22 was Morocco's presentation of the "Marrakech Proclamation for Action, Climate and Sustainable Development" that called for total political commitment to combat climate change.[973] This commitment would birth future dramatic changes within Morocco's climate change regime.

The literature review of the selected case studies reveals an engagement with the IER where some countries had a robust historical engagement with the IER and others only engaged with the IER in the last three decades. Interactions between the IER and the selected countries were sometimes symbiotic, as in the case of Sweden, Morocco and Norway, which helped promote the institutional framework of the IER and at other times one-sided as in the Nigerian, China, Finland and India cases that had no significant contribution to the IER institutionalisation. Part VII to Part IX analyses the climate actions of the selected countries against the parameters highlighted in chapter three to determine whether the IER substantially influenced countries' GHG emissions reductions and the implementation of their NDCs.

[972] A. Ghezloun and others "The COP22: New Commitment in support of the Paris Agreement" (2017) 119 Energy Procedia at 15.
[973] Ibid.

VII. Analysis against Selected Parameters

A. Implementation

1. Legislative and Regulatory Framework Post 2015

Relying on Young's evaluation of IER effectiveness, an IER is influential where the regime's objectives are domestically implemented, or there is a radical change in Parties' behaviour, traceable to the regime's objectives.[974] Implementation has been referred to as "measures that states take to make international accords effective in their domestic law."[975] Countries with a robust governance system can transpose international environmental obligations into their domestic environmental laws, policies and regulations. Therefore, it is vital to assess the current regulatory framework of the case studies against this backdrop to determine whether they facilitate the implementation of the IER environmental objectives. Accordingly, this section will capture countries' legislation and policies introduced after 2015 and examine whether the implementation measures taken reflect the Paris Agreement's climate change objectives. These actions include but are not limited to enacting legislation, implementing NDC commitments, and designing and implementing climate change mitigation and adaptation policies and programmes. Additionally, this section will investigate improvisations to the environmental regulatory structure of the case studies linking to the UNFCCC objectives and the Paris Agreement.

The Danish government recently signed an ambitious and binding climate law that obligates the government to ensure a 70 per cent emissions reduction target by 2030. Further, the role of the Danish Climate Council has been strengthened by the grant of additional funding to better serve as an independent climate watchdog.[976] The Climate Council must give a professional assessment on whether the government is on the right track towards achieving the goals contained in the Climate Act. Interestingly, provision is made for mandatory training of the Climate Minister for a climate examination in the Danish Parliament at the end of the year, and the parliament assesses whether the government has complied with the Climate Act or if it needs to act further. The Danish Climate Act also binds current and future climate Ministers to

[974] See generally Oran R. Young "Effectiveness of International Environmental Regimes: Existing Knowledge, Cutting-edge Themes, and Research Strategies" PNAS, 2011 https://www.pnas.org/content/108/50/19853 .
[975] Harold K. Jacobson & Edith Brown Weiss, "Strengthening Compliance with International Environmental Accords: Preliminary Observations from a Collaborative Project" (1995) 1 Global Governance 119 at 123–124
[976] https://kefm.dk/media/12965/aftale-om-klimalov-af-6-december-2019.pdf .

concrete action.[977] This move is laudable as climate commitments tend to either fizzle or gain momentum with each successive government.

The Climate Act also makes it compulsory for the government to make a separate global report on the international effects of Danish climate action and the effects of its imports and consumption. The government is also required to create an annual global strategy on how its foreign development and trade policy supports Denmark's drive to be a global driver in international climate policy. It is conceded that Denmark enacted its climate change legislation after the Paris Agreement, indicating IER influence, however, Denmark has a robust environmental legislative framework that is self-influenced. Recall that Denmark was self-motivated as early as the 1970s to build its renewable energy sector even though it had fossil reserves. This internal motivation has translated to its legislative framework that protects Danish emissions reductions plans from successive governments that may be opposed to it.

Like Denmark, Finland's Climate Change Act[978] provides that the Government report annually to the Parliament to implement its plans in the Annual Climate Report.[979] Finland's Climate Change Act that entered into force in 2015 is currently undergoing reform to incorporate carbon neutrality target by 2035, an ambitious addendum to its commitment to an 80 per cent emissions reduction by 2050 compared with 1990 levels.[980] The reform also aims to revise medium and long-term climate plans and prepare a new climate programme for the land-use sector.[981] The Finnish government proposal on its climate change reform has been submitted in March 2022 and the new law is expected to come into force in July 2022. It is vital to note that Finland's Climate Change Act entered into force before the Paris Agreement was signed in 2015, suggesting that IER influence was minimal or non-existent. The recent climate change reforms in Finland targeted at meeting international and EU climate neutrality targets,[982] however, points to external motivations by both the IER and the EU.

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[977] Klima-, Energi-og Forsyningsministeriet "Broad Agreement on Ambitious and Binding Climate Law" https://kefm.dk/aktuelt/nyheder/2019/dec/klimalov/ .

[978] The Climate Change Act (609/2015).

[979] https://www.ym.fi/en-US/The_environment/Legislation_and_instructions/Environmental_protection_legislation_in_preparation/The_reform_of_the_Climate_Change_Act

[980] Section 6(3) Climate Change Act 609/2015.

[981] https://www.ym.fi/en-US/The_environment/Legislation_and_instructions/Environmental_protection_legislation_in_preparation/The_reform_of_the_Climate_Change_Act .

[982] Finland Ministry of Environment "Reform of the Climate Change Act" https://ym.fi/en/the-reform-of-the-climate-change-

In terms of its regulatory structure, Finnish state and municipal authorities regulate environmental policies. Although the Finnish Ministry of Environment defines these environmental policies, strategic plans and sets targets and administrative control for environmental protection, the state and municipal authorities are tasked with the day-to-day enforcement. Not much is written on the Finnish overarching climate change regulatory structure, but some scholars note that Finland's energy sector is poorly regulated as some policies are prepared in a hurry or too technological to aid implementation.[983] However, this criticism is sector-specific and not reflective of the entire regulatory framework.

Sweden's climate ambition in terms of targets is slightly behind Denmark and Finland as its recently adopted climate policy framework sets 2045 as the target year for its long-term objective of achieving zero net GHG emissions.[984] In Sweden's high level statement at COP 25, Sweden indicated that it began its journey to incorporating the Paris Agreement to its national laws by enacting a climate law obliging Sweden to reach net-zero emissions by 2045.[985] Sweden began implementing the Paris Agreement in 2017 by introducing a tripartite climate policy framework consisting of a Climate Act, new national climate targets and a Climate Policy Council (CPC). This framework is reputed as the most important and ambitious climate reform in the history of Sweden. It is important to note that the Swedish Climate Act sets long-term conditions for the business sector and society, imposes responsibility on the current and future governments to pursue a climate policy that is premised on national climate targets and provides clear feedback on the process.[986] Finally, the CPC supports the Swedish government by providing an independent assessment of the government's overall policy compatibility with global climate goals.[987] The Council also evaluates whether the direction taken in various policy areas will increase or reduce the likelihood of achieving these climate

act#:~:text=Finland%20aims%20to%20be%20carbon%20neutral%20by%202035.&text=Emission%20reduction%20targets%20for%202030,to%202050%20will%20be%20updated.

[983] Hanna-Liisa Kangas and others "Technical Skills, Disinterest And Non-Functional Regulation: Barriers To building Energy Efficiency In Finland Viewed By Energy Service Companies" (2018) 114 Energy Policy at 71.

[984] LSE UK "The Swedish Climate Policy Framework" https://www.climate-laws.org/geographies/sweden/policies/the-swedish-climate-policy-framework .

[985] UNFCCC "Sweden- High-Level Segment Statement COP25" https://unfccc.int/sites/default/files/resource/SWEDEN_cop25cmp15cma2_HLS_EN.pdf

[986] Regeringen och Regeringskansliet "Sweden's Seventh National Communication on Climate Change" (1 June 2018) Regeringskansliet https://www.government.se/reports/2018/06/swedens-seventh-national-communication-on-climate-change/

[987] Ministry of the Environment and Energy "The Swedish Climate Policy Framework" https://www.government.se/495f60/contentassets/883ae8e123bc4e42aa8d59296ebe0478/the-swedish-climate-policy-framework.pdf .

goals. The reform is regarded as a key component of Sweden's effort to live up to the Paris Agreement.[988]

Norway's Climate Change Act of 2017 aims to promote Norway's climate goal implementation as part of the transition to a low-emission society in 2050.[989] The Act proposes to reduce GHG emissions by at least 40 per cent by 2030 compared with 1990 levels. However, unlike Denmark and Finland, Norway's target is not as ambitious as it only proposes to become a low-emission society by 2050 instead of carbon neutrality. In addition to Norway's Climate Change Act, it passed a Pollution Control Act in 2017 that has been amended in 2019, that targets pollution in a general way and requires industrial actors to seek permits before emitting GHGs.[990] Norway's executive also approved a 'Better Growth, Lower Emissions Strategy' that focuses on green markets, green and innovative procurement, climate risk, circular economy and export of green solutions. Further, the executive passed a White Paper in 2017 concerning the 2030 Climate Strategy[991] and the National Transport Plan covering sectoral emissions reduction targets and public transport and transport infrastructure matters.

Like the other Nordic case studies, Sweden's Climate Act requires annual climate reporting in its yearly budget bill. The Act seeks to create seamless alignment of the government's climate policy to its long-term climate targets and the available climate science. In addition, the yearly report seeks to achieve the twin purposes of serving as a compliance check in addition to informing public debate on climate action. Apart from Finland that operates a purely parliamentary system of government, Sweden, Denmark and Norway all operate a constitutional monarchy alongside a parliamentary system of government. There is also no evidence to suggest that the system of government impacts their implementation efforts. Therefore, one can see that even though Denmark, Sweden and Norway all have a constitutional monarchy, Denmark's implementation efforts through legislation, policy and regulation, is impressive. Again, although there are no direct linkages between the enacted climate change legislation and the IER, a closer look at all the legislation in the four countries

[988] UN ORG "Sweden On Target For SDG 13: Global Action On Climate Change For A Sustainable Planet" https://sustainabledevelopment.un.org/content/documents/23838rk_27117_global_agenda_goal_13_webb.pdf .
[989] Act relating to Norway's Climate Targets (Climate Change Act) LOV-2017-06-16-60
[990] The Act on Protection against Pollution and Waste LOV-2019-06-21-54.
[991] Meld St.41 (2016-17)

reveal that they were all enacted from 2015 onwards. It is possible that countries may have influenced each other, for example, Sweden and Finland, but this is not clear either.

It is useful to indicate that provisions within the climate legislation of the countries discussed above are in agreement with the Paris Agreement objectives and support the various NDC commitments that were drafted based on the global negotiations within the IER. For example, the Swedish Climate Act obligates the government to draw up a climate policy action plan every four years that should address "Sweden's EU and international climate commitments and any further measures or decisions that may be needed to achieve the national and global climate targets." The Danish Climate Act also uses the UN accounting rules to calculate its GHG emissions and reductions against its target. While enactments of legislation and robust regulatory systems are strong indicators of implementation, there is the question of its protection, especially where successive governments are not pro-environment. The Danish Climate Change Act addresses this loophole as discussed above but, Norway, Sweden and Finland do not have provisions that can legally prevent future political majorities from reversing the current framework. Such provisions can help concretise countries' climate ambition and IER objectives.

In the global south, India has yet to enact any climate change specific legislation despite increasing climate legislation worldwide. The absence of any specific climate change legislation is telling, especially in the face of rising climate litigation cases in India. India has however projected itself as a guardian of nature, invoking Indic cultural elements that symbolise nature as sacrosanct and not to be destroyed.[992] India's cultural perception of nature enabled its proactiveness in hammering out of the Paris Agreement. India's dualist system may explain why India is not time-bound to enact domestic climate legislation that can give effect to the IEA's provisions on climate change. Also, India operates a federal structure where each state has the autonomy to create its state-action plans. These issues may be the reason why India is yet to enact any national climate change legislation.

The absence of specific climate change legislation does not suggest that laws are more effective than executive decrees in tackling climate change, as eight national missions dictate a significant portion of the government's response to climate change under the National Action Plan on Climate Change (NAPCC). The relevant missions directly linked to emissions

[992] Rajnish Saryal "Climate Change Policy of India: Modifying the Environment" (2018) 38 South Asia Research 1 at 13.

reduction are the National Solar Mission, National Mission for Enhanced Energy Efficiency, Green India Mission, and National Mission on Strategic Knowledge for Climate Change.[993] When combined, these missions improve energy efficiency, improve power generation using alternatives to fossil fuel and promote (R&D) for developing mitigation and adaptation strategies to combat climate change. Based on the preceding, IER influence on India's climate change legislative implementation is absent and there is no evidence of obvious regional or self-motivated influences.

The UNFCCC has not played any prominent role in India's regulatory structure, even though India plans to restructure its energy sector to achieve its global commitments under the UNFCCC regime as its power sector contributes to nearly half of carbon emissions.[994] As environmental governance and administration are mainly decentralised, there is a possibility for self-influence when states execute renewable energy policies as a way to compete with other states.[995] The NAPCC enables these forms of competition as it does not specify the national form that actions should take, thus leaving the states with discretion to design and implement their State Action Plan on Climate Change (SAPCC).[996] To conclude, the progress of India's climate change efforts have been mostly recorded at the subnational rather than national levels, and it is challenging to specify what factors are responsible for its implementation efforts.

China, like India, has not enacted any specific legislation governing climate change even though the Chinese government began drafting the Climate Change Law in early 2009.[997] Instead, for the first time in the last few decades, China has amended its Environmental Protection Law to signal its fight against pollution. The Environmental Protection Law is the most important environmental legislation in China that establishes foundations for

[993] India Today "8 Government Missions under National Action Plan on Climate Change (NAPCC) to Heal India" October 26, 2018 https://www.indiatoday.in/education-today/gk-current-affairs/story/8-missions-govt-napcc-1375346-2018-10-25

[994] Shiyam S. Chandel and Others "Overview of The Initiatives In Renewable Energy Sector Under The National Action Plan On Climate Change in India" (2016) 54 Renewable and Sustainable Energy Reviews at 866.

[995] See Kirsten Jörgensen and others "Multi-Level Climate Governance In India: The Role Of The States In Climate Action Planning And Renewable Energies" (2015) 12 Journal of Integrative Environmental Sciences) 4 at 279.

[996] Anu Jogesh and Navroz K. Dubash "State-Led Experimentation Or Centrally-Motivated Replication? A Study Of State Action Plans On Climate Change In India" (2015) 12 Journal of Integrative Environmental Sciences 4 pps 247–266.

[997] Jianwei Zhang and Others "Regional Legislation to Address Climate Change in China: Necessity and Feasibility" (2019) 11 IJCCSM 4 at 537.

environmental civil liabilities, particularly in Article 64.[998] In 2014, China issued its 2014-2020 National Plan for Tackling Climate Change. The Plan states that China is to: cut carbon emissions per unit of GDP by 40 to 50 per cent from 2005 levels, increase the percentage of non-fossil fuels in primary energy consumption to 15 per cent, and increase the proportion of forest area and stock volume by 40m ha and 1.3m m3 respectively from a 2005 baseline.[999] The continuous smog that afflicted many parts of China in 2013 primarily influenced China's National Plan. There is no supporting evidence that international influence contributed to China's Climate Change National Plan. China also revised its 1986 Law on the Prevention and Control of Atmospheric Pollution in 2015 to promote the clean and efficient use of coal, obliging local governments to ban low-quality coal for residential use.[1000] Some scholars suggest that China's policy changes since 2000 are closely linked to the National Advisory Committee on Climate Change scientists' proximity to China's decision-makers.[1001]

Since the signing of the Paris Agreement, Morocco has not passed any specific climate change legislation, however, it has enacted two pieces of legislation relating to the environment viz Law No. 36-15 on water and Law No. 48-15 on the regulation of the electricity sector and the creation of the National Electricity Regulatory Authority.[1002] In addition, the executive arm of the Moroccan government has also rolled out several plans and policies to combat climate change. These policies will be discussed in the next section. The closest influence to the rapid development of Morocco's climate policy is 4C Maroc. The project supports the development of Morocco's climate change policy by developing tools for sustainable knowledge management, including climate databases, indicators of vulnerability to the negative impacts of climate change and monitoring GHG emissions. GIZ implements 4C Maroc on behalf of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety that is within the scope of the International Climate Initiative.[1003] The above implies that

[998] Those who caused environmental pollution and ecological damages, should bear tortious liabilities according to the relevant provisions of Tort Law of P.R.C.
[999] LSE Grantham UK "China: National Plan for Tackling Climate Change 2014-20" https://climate-laws.org/geographies/china/policies/national-plan-for-tackling-climate-change-2014-2020 .
[1000] (Chapter IV, Section 1).
[1001] Solveig Aamodt and Iselin Stensdal "Seizing Policy Windows: Policy Influence of Climate Advocacy Coalitions in Brazil, China, and India, 2000–2015 (2017) 46 Global Environmental Change at 120.
[1002] Law No. 36-15 on Water and Law No. 48-15 on the Regulation of the Electricity Sector and the Creation of the National Electricity Regulatory Authority.
[1003] GIZ "Establishment of a Climate Change Competence Centre (4C Maroc) https://www.giz.de/en/worldwide/27018.html .

Morocco had external influence in developing its climate change regulatory framework but not from the IER.

Nigeria recently promulgated its Climate Change Act in 2021. It is the first standalone comprehensive climate change legislation in West Africa and among the few enacted globally.[1004] To encourage private investment in RE technologies, the Nigerian legislature passed a feed-in tariff regulation in 2015.[1005] While this regulation does not expressly refer to climate change, the consequences of its establishment will lean towards emissions reductions and energy efficiency. There is no information to suggest that the IER has contributed any technical or financial assistance to develop Nigeria's climate change legislative and environmental framework.

So far, we have discussed countries' implementation efforts and attempted to infer IER influence where there were causal linkages between the dates of countries' legislative and regulatory changes and the signing of the Paris Agreement. Relying on Young's strand of regime influence, the IER has directly influenced legislation and regulation in the Nordic countries. Using the length of the causal chain connecting the IER with the enactment of climate change legislation, most of the climate change legislation were either enacted or amended between 2015 and 2017. Further some of the legislation directly refer to the Paris Agreement objectives. In China, India, Morocco, the causal chain of connection is longer, suggesting indirect influence, because no climate change legislation or regulation was enacted closer to the timeline of the Paris Agreement even though some legislation has been amended to reduce pollution as in the case of China. Nigeria was in the process of enacting a climate change legislation since the signing of the Paris Agreement and just concluded the process in 2021. This comes at the heels of Nigeria's renewed commitment to implement its commitments under the Paris Agreement.

Chapter three discussed how the IER could also foster members' implementation of its objectives through a robust compliance and implementation mechanisms.[1006] Where countries fail to comply with the regime's objectives, the regime can provide incentives through technical

[1004] IUCN "A Review of Nigeria's 2021 Climate Change Act: Potential for Increased Climate Litigation" March 28,2022 https://www.iucn.org/news/commission-environmental-economic-and-social-policy/202203/a-review-nigerias-2021-climate-change-act-potential-increased-climate-litigation .
[1005] Nigerian Electricity Regulatory Commission: Regulations on FIT for Renewable Energy Sourced Electricity in Nigeria.
[1006] JØrgen Wettestad above n270 at 320.

and financial assistance to support and improve their implementation. This chapter argues that the UNFCCC has promising potential to influence members by providing incentives for implementation. It is now essential to examine UNFCCC and Paris Agreement implementation internal mechanisms, and IER influenced state implementation.

Article 15 of the Paris Agreement provides for implementation and compliance mechanisms that seek to prevent cases of non-compliance in addition to facilitating the fulfilment of Parties' obligations. The compliance mechanism consists of an expert-based committee with members that have recognised competence in relevant fields. The setting up of the committee is considered essential in operationalising the compliance and implementation mechanism.[1007] Moreover, as a crucial building block of the Paris Agreement architecture, the Committee can enhance the proper functioning of the Agreement the trust and confidence among Parties that could enable them to comply with and implement the Agreement.[1008]

The Paris Agreement Implementation and Compliance Committee (PAICC) held its first meeting from 2 to 5 June 2020. It had five meetings with the sixth scheduled for March 2022. So far, the Committee has adopted its interim organizational arrangements and work plan for 2020-21 and is currently finalising draft rules of procedure for the Committee's functioning.[1009] It has taken seven years for the culmination of this expert committee, but it is hoped that with the Committee's firm establishment, accelerated momentum towards addressing compliance and implementation issues would be realised. Accelerated momentum could take the form of specifying trigger measures- who can bring complaints before the Committee, and separation of the Committee into the compliance and implementation branch to delineate duties and avoid duplication of tasks.[1010]

The operation of the Paris Agreement internal implementation mechanism has been delayed due to the coronavirus pandemic. However, the Committee has made some progress by adopting a work plan and developing rules for its functioning. It is expected that in 2022, the Committee will be fully operational. During COP26, the guidance for operationalizing the MPGs for the ETF referred to in Article 13 of the Paris Agreement was adopted. These

[1007] Christina Voigt above n244 at 165.
[1008] UNFCCC "Key Paris Agreement Implementation and Compliance Work Initiated" June 26, 2020 https://unfccc.int/news/key-paris-agreement-implementation-and-compliance-work-initiated .
[1009] UNFCCC "Committee to Facilitate Implementation and Promote Compliance Referred to in Article 15, Paragraph 2 of the Paris Agreement (PAICC)" https://unfccc.int/sites/default/files/resource/PAICC_2020M_2_7_Meeting%20report%20with%20annexes_final.pdf .
[1010] Christina Voigt above n244 at 169.

guidelines have set dates for tracking progress made in implementing and achieving NDCs. The SBSTA is to report its progress in the development of its reporting tools by November 2022.[1011] Parties are to submit their views on the test reporting tools for electronic reporting of part of their NDC obligations (tables, tabular formats) by December 2023. Training courses on the ETF will also be available from March 2023, to enable Parties understand the operation of the ETF.[1012] As Parties are to submit their National Inventory Reports (NIR) from December 2024, it is premature to measure Parties' implementation using either NDCs or related information such as NIRs. Also the first global stocktake for the implementation of the Paris Agreement will be in 2023. Further research will benefit from an assessment of the global stocktake as an indicator of IER influence.

2. Policy and Programmes

It is helpful to examine implemented policies within its lifetime to measure countries' implementation of their commitments to reduce emissions. To be clear, implementing reported policies and measures could mean any of the following: a) national legislation in force; b) one or more voluntary agreements have been established; c) financial resources have been allocated; or d) human resources mobilized.[1013] It is helpful to signal that some policies, plans and programmes may be country-initiated, IER-initiated or a combination of both. In the examination of the IER influence from policies and programmes of the government in the selected countries, statements of relevant government officials that link the Paris Agreement or IPCC reports and to new climate policies or programmes could be considered to infer IER influence.

It is vital to signal that Norway, Denmark, Finland and Sweden have designed several policies and measures that may have expired or were initiated before the Paris Agreement was signed but are consistent with the Paris Agreement; all these policies are essential and may still have a long-term impact on GHG emissions savings. However, this examination will only engage with policies made on or after 2015. It is important to note that this section will not appraise the adequacy of these policies against the global climate requirements.

The Danish Minister of Energy, Utilities and Climate, Lars Christian Lilleholt at COP23 noted that "It is now more important than ever to show our support for the Paris Agreement…. A

[1011] FCCC/PA/CMA/2021/L.21, para 9
[1012] FCCC/PA/CMA/2021/L.21, para 33
[1013] Tom Dauwe and others "Overview of Reported National Policies and Measures on Climate Change Mitigation in Europe in 2019" (Eionet Report - ETC/CME 5/2019 November 2019) at 11.

strong implementation of the Paris Agreement and the 2030 Agenda is not only a necessity - it is also a great opportunity. It is an opportunity for more resilient and sustainable societies. And for growth and job creation. Now is the time to act."[1014] Denmark has set some strong goals for reducing emissions and facilitating its green transition. The Danish government proposed the Subsidy Programme for Bio covers on Landfills to target CH_4 GHGs emissions, with an implementation start date in 2016 and a finish date in 2019. It was expected to improve waste management and reduce about 300kt CO2 per year by 2020 and an additional 170 kt CO2 by 2030.[1015] As of the implementation end date, the 2020 target has been met. Denmark also introduced other economic and regulatory policies to facilitate an energy market, increase biodiversity and improve agriculture while reducing CO_2, CH_4 and N_2O, however, although it is reported as implemented, it is unclear if the specific targets for reduction were actualised.[1016] Denmark's report to the UNFCCC on its climate policy objectives and achievements expressly states that the progress made in its policies is an endeavour to fulfil its international climate objectives.[1017] Also, Denmark's 2020 Climate Change Programme highlights that its climate commitments relate to its national targets, international commitments from the Paris Agreement's global temperature targets and its EU commitments.[1018]

Several Danish environmental programmes are implemented to fulfil the Paris Agreement's objectives, for example, Denmark contributes to the Green Climate Fund and has used its Climate Envelope to support several climate change initiatives.[1019] In addition, the Danish government also utilises the GCF, an IER financial mechanism, to channel its funding to benefit developing country climate change programmes. Therefore, it can be inferred that the IER has a catalytic effect on Danish climate policies and plans implementation.

[1014] Danish Ministry of Energy Utilities and Climate "Denmark's National Statement to the COP23" https://unfccc.int/files/meetings/bonn_nov_2017/statements/application/pdf/denmark_cop23cmp13cma1-2_hls.pdf

[1015] European Environment Agency "EEA Database on Climate Change Mitigation Policies and Measures in Europe" http://pam.apps.eea.europa.eu/.

[1016] HO-6 (new): Heat pumps as an energy service; AG-13(new): Agreement on Nature (the Nature Package)

[1017] Danish Ministry of the Environment " Denmark's Climate Policy Objectives and Achievements: Report on Demonstrable Progress in 2005 under the Kyoto Protocol" https://unfccc.int/resource/docs/dpr/den1.pdf .

[1018] UNFCCC "Climate Programme 2020: Denmark's Mid-century, Long-term Low Greenhouse Gas Emission Development Strategy – submitted under the Paris Agreement" https://unfccc.int/sites/default/files/resource/ClimateProgramme2020-Denmarks-LTS-under-the%20ParisAgreement_December2020_.pdf .

[1019] Austrian Presidency of the Council of the European Union "Submission by Austria and the European Commission on behalf of the European Union and its Member States" https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201810041701---AT-10-04-EU%20Submission%20on%20Strategies%20and%20Approaches.pdf .

Finland has reported 24 climate policies and measures between 2015 and 2020 that cover various GHGs such as CO_2, N_2O, CH_4, HFC, PFC and SF_6. A number of these policies and measures are at the planning stage and futuristic, for example, the flexibility measures of the effort sharing decisions, improving the energy efficiency of cars and promoting RE, while many are at the implementation stage, such as the Nearly Zero Energy Regulation for buildings, the Revised Environmental Protection Act and the New Decree on Landfills.[1020] Similar to Denmark, Finland explicitly stated that its policy is based on international agreements: the UNFCCC, the Kyoto Protocol and the Paris Agreement.[1021] Finland also supports developing countries' climate action as part of development cooperation pursuant to the requirements of Article 14(3) of the Paris Agreement.[1022] Finland also uses the UNFCCC funding channels such as the GEF and the GCF to support its climate finance and advocacy work in third countries.[1023] Recently, at COP 26, the Minister for Development Cooperation and Foreign Trade, Ville Skinnari commented "Climate finance is one of our obligations under the Paris Agreement. We will take determined action to increase climate finance until 2026 and focus on comprehensive solutions. With this public finance plan, we emphasize the importance of different funding channels."[1024] This new plan to support international climate finance is indicative of Finland government's decision to ramp up ambition to fulfil Finland's obligation under Article 9 of the Paris Agreement, highlighting the Paris Agreement influence on decision-making in Finland.

Unlike other EU countries, Sweden had an early start in planning and implementing many policies relating to energy efficiency in buildings and cars, some of which have expired. Nonetheless, between 2015 and 2020, Sweden has added nineteen climate policies and measures that incentivise residents' eco-friendly actions, such as rebate of up to 50 per cent of costs for buying or installing charge stations for electric vehicles at home and introducing a tax

[1020] EEA "EEA Database on Climate Change Mitigation Policies and Measures in Europe" http://pam.apps.eea.europa.eu/ .
[1021] UNFCCC "Finland's Seventh National Communication under the United Nations Framework Convention on Climate Change" https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/952371_Finland-NC7-1-fi_nc7_final.pdf .
[1022] Ministry of Foreign Affairs of Finland "Finland's Climate Finance and Advocacy Work" https://um.fi/climate-finance-and-advocacy-work .
[1023] Ibid.
[1024] Ministry of Foreign Affairs Finland "Finland Publishes its Plan for International Climate Finance: Nearly Twofold Increase in Funding" (Press Release, March 21, 2022) https://um.fi/press-releases/-/asset_publisher/ued5t2wDmr1C/content/suomi-julkistaa-kansainvalisen-ilmastorahoitussuunnitelmansa-rahoitus-lahes-kaksinkertaistuu/35732

on air travel to reduce the climate impact of aviation.[1025] Other policies include support for biogas production in the agricultural sector and support for developing technologies and processes that significantly reduce process-related GHGs emissions in the Swedish industry.[1026] In addition, Sweden reformed its climate policy framework in 2017, putting climate policies into national law to fulfil the Paris Agreement objectives.[1027] Sweden has recently decided to increase its financial support to three UNFCCC climate funding mechanisms: the GCF, the Adaptation Fund, and the Least Developed Countries Fund (LDCF). At COP 26, Prime Minister Stefan Löfven stated that Sweden decided to double its climate finance to USD 1.75 billion in 2025 and 'will continue to respond to developing countries' priorities, allocating roughly half of our bilateral climate finance to adaptation." This commitment is in response to its obligations under Article 9 of the Paris Agreement signalling the influence of the Paris Agreement on national decision making.[1028] It is important to signal that Sweden has strongly supported the IER and developed its national climate regime as the IER was emerging. Sweden's commitment to climate finance also aligns with Article 14(3) of the Paris Agreement discussed above. Sweden's desire to blaze the trail in sustainability is complemented by the IER's ambitious goals for emissions reductions. A symbiotic relationship can be inferred between Sweden and the IER, where both influence each other.

Norway is remarkably the first country to ban fossil fuel to heat building and is credited with the highest share of electric vehicles globally.[1029] In addition, Norway also prohibits flaring from petroleum facilities and has an emissions-free electrical system. Undoubtedly, Norway is among the global leaders championing climate emergency concerns and concretises its aspiration by leading in donations to the GCF, responsible for financing mitigation and adaptation in developing countries. However, surprisingly, the source of Norway's wealth

[1025] http://cdr.eionet.europa.eu/Converters/run_conversion?file=/se/eu/mmr/art04-13-14_lcds_pams_projections/pams/pams/envxxdmzg/SE_20190830.xml&conv=524&source=remote#pam70 .
[1026] The Government of Sweden "The Swedish Government's Climate Initiatives- Three Years into the Electoral Period" January 20, 2019 https://www.government.se/articles/2017/10/the-swedish-governments-climate-initiatives--three-years-into-the-electoral-period/ .
[1027] CIDCE "Sweden's New Climate Policy Framework: Sets The World's Most Ambitious Climate Goals And Puts Climate Policies In National Law" (Report to Centre International de Droit Comparé de l'Environnement/CIDCE, July 11, 2017) https://cidce.org/wp-content/uploads/2017/01/report-CIDCE-climate-policy-framwork-1.pdf .
[1028] Government Offices of Sweden "Speech by Prime Minister Stefan Löfven at UN Climate Change Conference COP26" (Speech from the Prime Minister's Office November 1, 2021) https://www.government.se/speeches/2021/11/speech-by-prime-minister-stefan-lofven-at-un-climate-change-conference-cop26/
[1029] OHCHR "Norway: End of Mission Statement" (A Report by the United Nations Special Rapporteur on Human Rights and the Environment, September 23, 2019) https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25032&LangID=E .

enabling its generosity comes from the large petroleum industry. After Russia, Norway is the world's second-largest exporter of natural gas and the fifteenth largest oil exporter, and it has not committed to leaving fossils in the ground to date, at least not until 2030.[1030]

Further, although Norway was one of the first countries to establish a carbon tax, the mechanism has not successfully prevented the rise in Norwegian emissions.[1031] Conversely, Norway has been successful in pioneering the Carbon Capture and Storage (CCS) in 2016 and is considering a major multi-billion-dollar CCS pilot project involving either the cement industry or a waste incineration facility, with an investment decision anticipated in 2020 or 2021.[1032] Norway has designed three policies since 2015 to reduce GHG emissions.[1033] In addition, Norway is also a significant donor to IER multilateral organisations such as the GCF, GEF, UNEP and the Climate Investments Fund (CIF).

The four Nordic countries have the common denominator of contributing to the IER multilateral organisations guided by Article 14(3) of the Paris Agreement. They also refer to the Paris Agreement and the UNFCCC as the basis for their climate commitment. Sweden and Denmark share some similarities where they are self-motivated but are also subtly influenced by the IER. Finland and Norway are, however, externally motivated, either by the EU or the IER.

China's decision making has been influenced by the IPCC scientific assessments. China has participated in the IPCC assessment preparation since its inception and this has heightened the attention of the Chinese scientific community on the scientific issues related to climate change.[1034] The engagement of the Chinese government in the IPCC assessment process enabled the speedy presentation of the interpretation and analysis of its conclusions to the members of China National Leading Group on Climate Change chaired by the Premier. The conclusions from the IPCC assessment reports that have been presented with the contribution of Chinese scientists have provided a solid scientific basis for its domestic policymaking in responding to climate change.[1035] In Xi Jinping's speech at COP26, the Chinese leader affirmed

[1030] Norsk Petroleum "Exports of Oil and Gas 2019" https://www.norskpetroleum.no/en/production-and-exports/exports-of-oil-and-gas/ .
[1031] Ibid.
[1032] Ibid.
[1033] Norway's Climate Action Plan (Meld. St. 13 2020-2021), Better growth, lower emissions Strategy, and National Transport Plan 2018-2029 (Meld. St. 33 2016-2017).
[1034] Gao Yun above n925 at 237.
[1035] Ibid.

the UNFCCC and the Paris Agreement as the fundamental legal basis for international cooperation on climate change and emphasised on the need for concrete actions.[1036] He emphasised continuing to prioritise ecological conservation and pursue a green and low-carbon path to development.

China has designed several plans since 2015 channelled toward emissions reductions. It has published its 2021-2035 Medium and Long Term Plan for the Development of the hydrogen energy industry aimed primarily at decarbonising high-energy-consuming and high-emission industries. China's 14th Five-Year Plan has been comprehensively designed to include several plans: a plan on Modern Energy System Planning which seeks to coordinate measures to improve national energy security and achieve carbon peaking by 2030 and carbon neutrality by 2060; a New Energy Storage Development Implementation plan to promote high quality and large-scale development of new energy storage to accelerate the construction of a clean, low-carbon, safe and efficient energy system; and a comprehensive workplan for Energy Saving and Emission Reduction 2021-2025 that promotes energy conservation and emission reduction and aims to enhance pollution prevention and control efforts.[1037] Other plans include the Action Plan for Carbon Dioxide Peaking before 2030 aimed at achieving climate neutrality and Notice 655/2021 aimed at strengthening and standardising the special central budget for pollution control, energy conservation and carbon reduction.[1038]

Since 2015, Morocco has created five policies related to RE, water, sustainable development, and climate change. Commenting on Morocco's 2020-30 National Climate Plan, which aims to accelerate transformation to a low emissions economy and implement national climate policies at the local level, the Head of Government in Morocco maintained that the Paris Climate Agreement and the 2030 SDG Agenda are two key factors needed to strengthen global climate action.[1039]

In alignment with its goal to improve its energy sector, by exploring RE alternatives, Morocco's legislative arm amended its RE law of 2010 in December 2015. In addition, to avoid

[1036] Nikkei Asia "Full Text of Xi Jinping's Statement at COP26 Climate Summit" November 2, 2021 https://asia.nikkei.com/Spotlight/Environment/Climate-Change/COP26/Full-text-of-Xi-Jinping-s-statement-at-COP26-climate-summit

[1037] LSE Grantham "China: Laws and Policies" https://climate-laws.org/legislation_and_policies?geography%5B%5D=36&last_change_from=2015&last_change_to=2022&responses%5B%5D=732 .

[1038] Ibid

[1039] Kingdom of Morocco "His Majesty the King Sends Speech to 26th UN Climate Change" https://www.diplomatie.ma/en/his-majesty-king-sends-speech-26th-un-climate-change

2,874 kT CO_2 emissions through energy efficiency by 2030 against a 2009 baseline and other related objectives, Morocco also passed the Energy Security Plan and National Energy Strategy Vision 2030 into law in 2015. One of the ways Morocco has begun to implement its transition towards low-carbon development and climate resilience is by launching the Noor 1 concentrated solar energy project with a capacity of 160MW. At the end of 2018, Morocco had installed 1.2 GW of wind, 0.7 GW of solar and 1.8 GW of hydropower, causing the country to be on track to reach the 2020 objectives for installed RE capacity and at the same time compatible with the Paris Agreement recommendation to keep global warming below 1.5ºC.[1040]

Morocco has benefitted tremendously from the implementation mechanisms of the UNFCCC in terms of technical and financial assistance. The World Bank has notably been involved in financing Morocco's RE plans. In 2011, it approved $297 million in loans to help finance the 500 megawatts (MW) Ouarzazate Concentrated Solar Power Plant Project, one of the first large-scale plants of this kind in North Africa.[1041] The NDC Support Facility (NDC-SF), managed by the World Bank, has also helped to elucidate the impacts of climate policies in different sectors of the economy to the Moroccan government.[1042] The NDC-SF is a multi-donor trust fund created to facilitate the implementation of country-pledged NDCs under the Paris Agreement in 2015. The support by the NDC-SF has served to enhance technical capabilities and cross-sectoral coordination to implement Morocco's NDC. In other words, the NDC-SF worked with Morocco on analytical studies and capacity building initiatives for cross-sectoral climate policy planning and coordination to aid the achievement of the country's climate commitment.

The World Bank has also funded an initiative in 2002 called Programme National de Développement du Marché de Chauffe-eau Solaire (PROMASOL), also known as Development of the National Market for Solar Water-Heaters after a funding agreement was signed in 2001 between the UNDP and the Moroccan Ministry of Energy and Mines. The initiative was aimed at double solar water heating capacity in three years to 40000 m²/year. Since its inception, PROMASOL has cut carbon emissions by 1.3 million tons and is expected

[1040] Climate Action Tracker "Morocco" https://climateactiontracker.org/countries/morocco/ .
[1041] The World Bank "World Bank Supports Morocco's Bold Solar Power Plans" November 17, 2011 https://www.worldbank.org/en/news/press-release/2011/11/17/world-bank-supports-moroccos-bold-solar-power-plans .
[1042] The World Bank "NDC Support Facility" https://www.worldbank.org/en/programs/ndc-support-facilicolototy .

to reduce around 920,000 tons of CO_2 a year until 2020.[1043] In sum the UNFCCC through its funding mechanisms and technical support has influenced Morocco's climate policy, programmes and projects.

Nigeria has designed some policies and issued regulations concerning emissions reduction. Although Nigeria's National Policy on Climate Change was issued in 2013, it is only beginning to gain traction. Nigeria revised its National Climate Change Policy in 2021 to cover for the 2021 – 2030 period with the financial and strategic support of the UNDP provided in the various stages of the revision process and final production of the NCCP.[1044] The government has also approved the amendment of Nigeria Climate Change Policy Response and Strategy (NCCPRS) in 2021, to promote low-carbon, high-growth economic development and build a climate-resilient society.[1045] Between 2015 and 2020, Nigeria has issued four policies to combat climate change. They are the National Gas Policy 2017,[1046] the Flare Gas (Prevention of Waste and Pollution) Regulations 2018,[1047] the National Renewable Energy and Energy Efficiency Policy (NREEEP) 2015 to strengthen RE and energy efficiency, and the Nigeria Economic Sustainability Plan 2020.[1048] In addition, in its third national communication to the UNFCCC, Nigeria expressed its unwavering decision to comply with its climate change commitments to the UNFCCC. Nigeria has also benefited from the funding mechanisms of the IER. The GCF has supported projects in Nigeria by funding projects such as the Nigeria Solar IPP Support Programme, Universal Green Energy Access Programme and the Programme for Integrated Development and Adaptation to Climate Change in the Niger Basin (PIDACC/NB), to mention a few. The above indicates IER influence on Nigeria's climate change policy and programmes.

India recently issued an order to create the Apex Committee for the Implementation of the Paris Agreement.[1049] The Committee is to develop policies and programs to make India's domestic actions compliant with its international obligation. In this document, India refers severally to

[1043] Ibid.
[1044] Federal Ministry of Environment "National Climate Change Policy for Nigeria 2021-2030 https://climatechange.gov.ng/wp-content/uploads/2021/08/NCCP_NIGERIA_REVISED_2-JUNE-2021.pdf
[1045] Ibid
[1046] The policy promotes the use of LPG to combat climate change.
[1047] It establishes a legal framework to pursue efforts to reduce the GHG emissions emanating from gas flaring
[1048] Economic Recovery and Growth Plan (2017-2020); National Policy on Climate Change and Response Strategy (NPCC-RS) Nigeria.
[1049] Gazette of India "Ministry of Environment, Forest and Climate Change Notification" November 27, 2020 https://climate-laws.org/geographies/india/policies/notification-s-o-4259-e-creating-the-apex-committee-for-implementation-of-paris-agreement

the Paris Agreement and its desire to fulfil its climate change commitment.[1050] Like the Nordic countries, India's inclination toward fulfilling the Paris Agreement has some elements of IER influence. India is also one of the largest recipients of IER facilitated climate change assistance.[1051] According to Carbon Brief 2016 data,[1052] India received about US$2.5 billion out of the US$75 billion raised in climate funds.[1053] The Clean Technology Fund (CTF) has also approved over US$750 million for RE projects in India. In addition, the GCF financed US$38 million of the US$166 million earmarked for the solar micro-irrigation initiative in Odisha.[1054]

To conclude, IER influence in India, Morocco and Nigeria's climate policy programmes and projects were more active and evident than in China or the Nordic countries due to the direct technical and financial support offered in the development of policies and implementation of programmes. The IER also had some influence in the Nordic countries, particularly in the structuring of their policies and plans to meet the Paris Agreement goals, sometimes with direct references to the Paris Agreement in those policies. The Nordic countries also relied on IER funding channels to fulfil their climate funding obligations under the Paris Agreement . In terms of the process of decision-making, research indicates that China's decision making was influenced by the IPCC scientific assessment reports which Chinese scientists were considerably involved in.[1055] Overall, the findings in this section reveal IER influence on the policy and programmes of majority of the countries selected.

3. Fulfilment of NDC Targets

The NDCs represent commitments made by countries to reduce global GHG emissions. Article 4 paragraph 2 of the Paris Agreement requires each Party to prepare, communicate and maintain successive NDCs that it intends to achieve. According to CAT, if fully implemented, the current set of NDCs alone are estimated to limit global warming to about 2.4°C above pre-

[1050] Ibid
[1051] G. Seetharaman "India Among the Largest Recipients of Climate Change Assistance, but a Few Key Questions Remain Unanswered" (The Economic Times, November 25, 2017) https://economictimes.indiatimes.com/news/politics-and-nation/india-among-the-largest-recipients-of-climate-change-grants-but-few-key-questions-remain-unanswered/articleshow/60343313.cms .
[1052] Jocelyn Timperly "Interactive: How Climate Finance 'Flows' Around the World" (Carbon Brief, December 6, 2018) https://www.carbonbrief.org/interactive-how-climate-finance-flows-around-the-world .
[1053] Valshnavi Rathore "Budget 2020: How Well is India Financing its Fight Against Climate Change?" (The Bastion ,February 2, 2020) https://thebastion.co.in/politics-and/environment/budget-2020-how-well-is-india-financing-its-fight-against-climate-change/ .
[1054] G. Seetharaman n1055above.
[1055] Gao Yun n929.

industrial levels.[1056] It also predicts that when binding net-zero targets are included, warming would be limited to 2.1°C above pre-industrial levels. Article 3 of the Paris Agreement provides that Parties' efforts in executing their NDCs should be ambitious in line with Articles 4, 7, 9, 10, 11 and 13 of the Agreement. Therefore, it is vital to weigh the current efforts of these countries against their NDCs in addition to the role the IER has played so far in motivating countries to reduce emissions.

On a general note, it is argued that despite the 2015 Paris Agreement, global carbon emissions increased by 1.7 per cent in 2017 and 2.7 per cent in 2018.[1057] However, carbon emissions flattened in 2019 at around 33 gigatonnes.[1058] The levelling is attributed to a sharp decline in CO_2 emissions from the power sector in advanced economies due to the expansion of RE technologies.[1059] A 2020 report has, however, indicated an increase in global emissions, particularly that of HFC-23, which was expected to have near-total reductions.[1060] HFC-23 has the highest global warming potential (GWP) among HFCs[1061] and is argued to be higher than at any other point in history. This observation-based report contrasts sharply with the inventory based report that emissions are at the lowest in the past seventeen years as of 2017.

As EU members, Denmark, Sweden and Finland have made commitments, under the most recent EU NDC, to a binding target of a net domestic reduction of at least 55 per cent in GHG emissions by 2030 compared to 1990.[1062] Norway has updated and enhanced its NDC under the Paris Agreement to reduce emissions by at least 50 per cent and towards 55 per cent compared to 1990 levels by 2030.[1063] This is a step up from its earlier INDC to reduce

[1056] Climate Action Tracker "2100 Warming Projections" https://climateactiontracker.org/global/temperatures/
[1057] Kieran Mulvaney "Climate Change Report Card: These Countries are Reaching Targets" (September 19, 2019, National Geographic) https://www.nationalgeographic.com/environment/2019/09/climate-change-report-card-co2-emissions/ .
[1058] IEA "Global CO2 Emissions in 2019" February 11 2019 https://www.iea.org/articles/global-co2-emissions-in-2019 .
[1059] IEA "Global CO2 Emissions in 2019" February 11 2019 https://www.iea.org/articles/global-co2-emissions-in-2019
[1060] Kieran M. Stanley and others "Increase in Global Emissions of HFC-23 Despite near total Expected Reductions" (2020) 11 Nature Communications 1 DOI: 10.1038/s41467-019-13899-4 https://www.nature.com/articles/s41467-019-13899-4.pdf
[1061] Stephen A. Montzka, and others "Hydrofluorocarbons (HFCs) in Scientific Assessment of Ozone Depletion: 2018" Global Ozone Research and Monitoring Project— Report No. 58 (World Meteorological Organization, Geneva, Switzerland, 2019).
[1062] UNFCCC "NDC Registry" https://unfccc.int/NDCREG
[1063] UNFCCC "Update of Norway's Nationally Determined Contribution" https://unfccc.int/sites/default/files/NDC/2022-06/Norway_updatedNDC_2020%20%28Updated%20submission%29.pdf

emissions by at least 40 per cent compared to 1990 by 2030. To examine whether the countries have performed well, it is essential to examine climate change performance indexes such as the EPI and the CCPI. It is also important to signal that where IER influence has been established in a country's climate policy and programme implementation, it may be unnecessary to point it out again in NDC target achievement except where such influences were not highlighted. Countries that have subscribed to and submitted NDCs have already been influenced by the IER dynamics, and the implementation of the targets only substantiates that influence. According to the most recent CCPI results of 2021, Denmark is ranked fourth and Sweden fifth in their overall climate change performance, while Norway and Finland rank sixth and fourteenth respectively.[1064] Morocco and India place eight and tenth positions while China places 38th. [1065] These results are compiled for three categories: GHG Emissions, Renewable Energy, Energy Use, and Climate Policy.

On the other hand, the EPI rates Denmark first and Sweden eighth in their overall environmental performance while Finland and Norway rank seventh and ninth positions. The EPI uses health, ecosystem vitality, including biodiversity, as indicators for assessment, while the CCPI uses GHG emissions, renewable energy uptake, energy use and climate policy as a basis for its ranking. Another helpful tool is the CAT (Climate Action Tracker) which is an independent scientific analysis that tracks government climate action and measures it against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.[1066] It assesses NDCs, pledges, policies and long-term targets and its scope covers the largest emitters. [1067] Interestingly, of all the selected countries, CAT rates only Morocco and Nigeria as almost sufficient to meet with the compatibility of the Paris Agreement 1.5°C target. [1068] CAT rates all EU countries' targets as insufficient and incompatible with the Paris Agreement as any reductions using these current NDC targets would result in global warming greater than 3°C. Finally, CAT rates China and India's NDC as highly insufficient and would result in global warming greater than 4°C.

In terms of assessing the NDCs, the EU has not updated its NDC, CAT suggests that this delay risks undermining the EU's position as a leader in climate action and is a wasted opportunity

[1064] Jan Burck and others "CCPI Results: 2022" https://ccpi.org/wp-content/uploads/CCPI-2022-Results_neu.pdf
[1065] Ibid at 9.
[1066] Climate Action Tracker "What is CAT" https://climateactiontracker.org/about/
[1067] Ibid
[1068] Climate Action Tracker "Countries" https://climateactiontracker.org/countries/ .

to embolden other governments to increase their ambition.[1069] The EU needs to ensure that its delayed NDC goes significantly beyond the "at least 55%" emissions reduction goal

Going back to CCPI results, Sweden and Denmark, India, Morocco and Norway perform well in GHG emissions reductions while Finland's performance is medium and China's performance very low.[1070] Nigeria is not ranked. In the renewable energy category that comprises of share of RE in Energy Use (TPES), RE current trend excluding hydro, share of RE in Energy Use excluding hydro and RE 2030 target including hydro, Norway, scores very high while Sweden, Denmark and Finland score high.[1071] Morocco's and India's RE ranking is medium as Morocco scores low in both TPES categories and the RE2030 target, and India scores low in TPES excluding hydro and medium in others. China and Nigeria are not ranked.

In the Energy Use or Efficiency category, Morocco scores very high in three sub-categories and low in its TPES per capita energy use. [1072] India scores very high in two sub-categories but very low TPES per capita energy use which places India's overall performance in this category as high. On the other hand, Denmark scores medium and Norway scores low, while Finland and China score very low. Finally, in the Climate Policy category comprising national climate policy performance and international climate policy performance, all the case studies score high overall except Nigeria, which is not ranked.

As developed countries, Norway, Finland, Denmark and Sweden do not require IER financial support to implement their NDCs. They may, however, require technical assistance from the IER to guide their implementation efforts. As discussed in the previous sections, IER internal implementation and compliance mechanisms are not fully operational, therefore, does not influence NDC fulfilment in the Nordic countries. It is also significant to reiterate that the Nordic countries designed their NDCs' per the Paris Agreement objectives and are on track to meet their commitments, although more ambitious actions and targets are advised.

Conversely, IER influence is more tangible in developing countries. For example, Morocco committed to a 42 per cent GHG emissions reduction below BAU levels by 2030, on the condition that it accesses new sources of finance and additional support relative to support

[1069] Climate Action Tracker "EU" https://climateactiontracker.org/countries/eu/
[1070] Jan Burck above n1060 above at 9.
[1071] Ibid at 11.
[1072] Ibid at 13.

received in recent years.[1073] The total cost for the support is estimated at US$50 billion, and US$24 billion is expected to come from international climate finance mechanisms in addition to the GCF. Morocco has received funding from the GEF to implement its NDC by developing an integrated transparency framework for NDC planning and monitoring and has also benefited from training sessions for local consultants on energy efficiency.[1074] Morocco has also received a loan from the GCF to support its uptake of low-carbon technology in the industrial sector.[1075] The above indicates IER influence on Morocco's NDC implementation.

China made four vital commitments in its updated NDC communication to the UNFCCC.[1076] The commitments are as follows: to achieve carbon dioxide emissions peak around 2030 and achieve carbon neutrality before 2060, lower carbon dioxide emissions per unit of GDP by sixty to over 65 per cent from the 2005 level, increase the share of non-fossil fuels in primary energy consumption to around 25 per cent, and, to increase forest stock volume by around 6 billion cubic metres on the 2005 level.[1077] However, CAT rated China's 2030 timeline commitment as insufficient due to increased fossil fuel consumption that drove up Chinese CO_2 emissions by 4 per cent in the first half of 2019.[1078] CAT notes that while China's updated NDC was an improvement on previous targets, it leaves room for further target-raising ambition. CAT projects that China would probably comfortably overachieve its targets without substantially increasing its current mitigation efforts, despite increasing emissions in the short-term.

Further, China's construction of 28GW coal-fired power capacity in 2018 and the lift of a previous construction ban bringing the total coal capacity to 245GW is inconsistent with the

[1073] UNFCCC " Morocco: Nationally Determined Contribution under the UNFCCC" https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Morocco%20First/Morocco%20First%20NDC-English.pdf .

[1074] Global Environment Facility "Report Of The Global Environment Facility To The Twenty-Fourth Session Of The Conference Of The Parties To The United Nations Framework Convention On Climate Change" August 31, 2018 https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.55.Inf_.XX_UNFCCC_CoP_Report.pdf .

[1075] Charlene Watson and Liane Schalatek "Climate Finance Thematic Briefing: Mitigation Finance" (Climate Funds Update, February 2021) https://climatefundsupdate.org/wp-content/uploads/2021/03/CFF4-ENG-2020-Digital.pdf .

[1076] UNFCCC "China's Achievements, New Goals and New Measures for Nationally Determined Contributions" https://unfccc.int/sites/default/files/NDC/2022-06/China%E2%80%99s%20Achievements%2C%20New%20Goals%20and%20New%20Measures%20for%20Nationally%20Determined%20Contributions.pdf

[1077] Ibid

[1078] Climate Action Tracker "China" https://climateactiontracker.org/countries/china/ .

Paris Agreement's goals.[1079] China's updated NDC has however committed to strictly control coal-fired power generation projects, and strictly limit the increase in coal consumption over the 14th Five-Year Plan (FYP) period and phase it down in the 15th FYP period.[1080]

Chinese national experts, however, maintain that although China exerted considerable efforts to cut fossil fuels and emissions in a coordinated way, the turbulence of economy and trade contributed to its performing below the expectation of the international community. It is significant to point out that China is one of the largest RE technologies developers and one of the largest coal consumers. However, as of 2018, China had phased out more than 800 million tonnes of coal production capacity and closed down over 110 GW of small coal-fired power units with high pollution and low efficiency in recent years.[1081] China had also decreased its carbon emission intensity by 45.8 per cent at the end of 2018 compared to its 2005 levels.[1082]

Chinese major cities have implemented the green building standards, and as of 2018, 56 per cent of new urban buildings met the green building standards, completing the target of the 13th Five-Year Plan ahead of schedule.[1083] There has also been an acceleration in China's development of electric vehicle charging infrastructure, and as of 2019, the number of all kinds of charging piles in the country had reached 976,000, including 401,000 public charging piles, making China the largest charging infrastructure network in the world.[1084]

The IER, through the GEF, is influential in helping China implement its NDCs. China has benefited from the GEF, which has supported over 148 projects and provided over US$1.14 billion as new and additional grants in China.[1085] UNIDO's Industrial Energy Accelerator is also working with the Chinese government to identify low-carbon financial incentives such as loans or tax relief to drive China's energy efficiency goals.[1086] China is also the first to receive

[1079] Ibid.
[1080] UNFCCC above n1084 at 2.
[1081] Ministry of Ecology and Environment of the PRC "China's Polies and Actions for Addressing Climate Change 2019" (November, 2019). http://english.mee.gov.cn/Resources/Reports/reports/201912/P020191204495763994956.pdf .
[1082] Ibid.
[1083] Ibid.
[1084] Ibid.
[1085] Shi Yaobin "China and GEF: 25 years of collaboration for sustainable development" Aug 18, 2016 https://www.thegef.org/news/china-and-gef-25-years-collaboration-sustainable-development#:~:text=The%20GEF%20has%20to%20date,and%20additional%20grants%20in%20China.&text=China's%20success%20in%20implementing%20GEF,of%20maximum%20global%20environmental%20benefits.
[1086] Tareq Emtairah "Industrial Energy Efficiency: The Invisible Climate Solution" March 25, 2020 https://www.thegef.org/blog/industrial-energy-efficiency-invisible-climate-solution .

the GCF's fund through the ADB to establish the Shandong Green Development Fund to support projects that reduce GHGs.[1087]

The Indian government has designed robust policies to support the expansion of RE technologies but is yet to develop a roadmap for fossil fuel subsidy phase-out that could ultimately reduce the country's high dependence on coal.[1088] India committed to reduce its GDP emissions intensity by 20 to 25 per cent over 2005 levels by 2020, and a further reduction of thirty-three to 35 per cent by 2030 from the 2005 level.[1089] It aims to achieve about 40 per cent of the cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030 through technology transfer and low-cost international finance. Some of India's climate goals include the mobilisation of new and additional domestic funds to implement mitigation and adaptation actions, climate change adaptation enhancement through development programmes investment in regions most susceptible to climate change, and capacity building for the quick diffusion of innovative climate technology and collaborative R&D.[1090] The GCF has funded four of India's climate change projects relating to climate change mitigation and adaptation.[1091] The GEF has also funded twelve climate change projects in India between 2015 and 2020.[1092]

The various international funding that India has received has enabled its deployment of renewable energy technology and its improved performance in emissions reductions and energy use. The IEA reports that CO_2 emissions from India's power sector declined slightly as strong renewables growth prompted coal-fired electricity generation to fall for the first time since 1973, in addition to the broadly stable electricity demand.[1093]

Nigeria is not as significant an emitter as the countries mentioned above, however, it is presently ranked forty-fourth position out of over 200 countries and is projected to emit more

[1087] Green Climate Fund "China" https://www.greenclimate.fund/countries/china .
[1088] CCPI "India" https://www.climate-change-performance-index.org/country/india .
[1089] UNFCCC "India's Intended Nationally Determined Contribution" https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/India%20First/INDIA%20INDC%20TO%20UNFCCC.pdf .
[1090] Ministry of Environment, Forest and Climate Change "Environment" http://moef.gov.in/environment/climate-change/ .
[1091] Green Climate Fund "India" https://www.greenclimate.fund/countries/india
[1092] Global Environment Facility "Projects: India" https://www.thegef.org/projects-faceted?f[]=field_country:77&f[]=field_p_focalareas:2207&f[]=field_p_trustfundname:153
[1093] IEA "Global CO_2 Emissions in 2019" February 11, 2020 https://www.iea.org/articles/global-co2-emissions-in-2019.

GHGs as the population increases.[1094] Nigeria's initial NDC proposed to do the following to reduce emissions: end gas flaring by 2030, generate off-grid solar PV of 13GW, increase energy efficiency by 2 per cent annually to result in a 30 per cent increase by 2030 and promote the use of climate-smart agriculture and reforestation.[1095] Cumulatively, Nigeria aims to achieve a 20 per cent GHG reduction target without external support for implementation and a conditional 47 per cent GHG emissions reduction contingent on international support through climate finance, smart technology development and transfer, and capacity building.[1096] Nigeria's updated NDC represents significantly enhanced climate ambition and includes emissions reductions from the waste sector in addition to its increased conditional contribution from 40 to 47 per cent.[1097]

Nigeria has received seven GEF grants between 2015 and 2020 for climate change projects. These projects aim to provide sustainable and clean energy technology solutions and promote energy efficiency. The GCF is also supporting eight climate projects in Nigeria to attract private climate finance by overcoming project level barriers, improving climate resilience for agricultural productivity and providing technical assistance to create self-sustaining markets in energy efficiency, renewable energy and climate resilience.[1098]

Some scholars have criticised countries' NDCs as a tool for strengthening climate ambition citing transparency issues.[1099] They also argue that countries' progress cannot be efficiently tracked due to heterogeneous, qualitative and conditional NDCs. In addition, Parties choose the indicators they prefer to track their progress, and it may be challenging to objectively measure the progress or compare it with other country efforts. Although the Paris Agreement ETF is designed to report on and review Parties' progress in implementing their NDCs, its functions will commence after Parties have submitted their various national communications and reports. Some of these reports have deadlines for December 2022, for example,

[1094] Chindo Sulaiman and A.S. Abdul-Rahim "Population Growth and CO2 Emission in Nigeria: A Recursive ARDL Approach" 2018 SAGE Open. https://doi.org/10.1177/2158244018765916 .
[1095] Nigeria's Intended Nationally Determined Contributions accessible from <https://www4.unfccc.int/sites/NDCStaging/pages/Party.aspx?party=NGA >.
[1096] UNFCCC "Nigeria's First Nationally Determined Contribution- 2021 Update" https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Nigeria%20First/NDC_File%20Amended%20_11222.pdf
[1097] Ibid
[1098] Green Climate Fund "Nigeria" https://www.greenclimate.fund/countries/nigeria .
[1099] Romain Weikmans and others "Transparency Requirements under the Paris Agreement and their (UN) Likely Impact on Strengthening the Ambition of Nationally Determined Contributions" (2020) 20 Climate Policy 4 at 512.

transparency reports while other communications have a deadline of December 2024 for example NIRs. There will also be training provided on the ETF processes to Parties in 2023. The ETF is apolitical and not equipped to deal with cases of political unwillingness to participate in the ETF procedures.[1100] It is significant to note that although the ETF process is still evolving, its mechanisms are quite robust and it is a step in the right direction to report and review NDCs and other national communications that could result in higher ambition where the findings on countries' progress are made public.

In summary, the IER has influenced NDC implementation in four out of eight countries. It is essential to highlight that all the funds were contributed to the global climate funds by developed countries were done with reference to the mandate of the UNFCCC and the Paris Agreement. While these funds may not be sufficient, developed countries' contributions demonstrate the subtle influence of the IER through its Agreements and negotiating forums.

B. Enforcement

1. Environmental Courts

While there is a doctrinal distinction between implementing and enforcement measures, there is a functional overlap between enforcement powers and implementing tools. [1101] Implementation of the Paris Agreement can be achieved by transposing, domesticating, and adjudicating the Agreement's objectives.[1102] Adjudication requires the use of courts, and it is in this context that the equipping of environmental courts becomes significant. Judiciaries globally are embedded in the world's struggle to prevent the earth from reaching the two degrees of global warming that will be catastrophic for the human race. Although environmental courts have existed for decades, scholars suggest a recent accelerated increase in the number of courts.[1103] Only a handful of environmental courts and tribunals existed in the eighteenth and nineteenth century, but in the late 2000's up until 2012 (although the exact numbers remain to be determined), Pring and Pring observe that over 350 of these specialized fora for resolving environmental disputes were found globally. [1104] By 2016, over 1200

[1100] Ibid at 523.
[1101] Stine Anderson "The Functional Overlap of Enforcement and Implementation Tools" (2007) Croatian Yearbook of European Law and Policy at 193.
[1102] George (Rock) Pring and Catherine Pring "Environmental Courts & Tribunals: A Guide for Policy Makers (UN Environment Programme 2016) at 1.
[1103] Ibid
[1104] George Pring and Catherine Pring, Greening Justice: Creating and Improving Environmental Courts and Tribunals (The Access Initiative 2009) 1. Cf Nicholas Robinson, "Ensuring Access to Justice through

environment courts and tribunals, with some 20 additional countries discussing or planning Environmental Courts and Tribunals (ECTs) are now operating worldwide, and this does not include those at the local or municipal level.[1105] Scholars suggest that this explosion of environmental courts and tribunals are driven by several factors such as 'the development of new international and national environmental laws and principles, growing recognition of the linkage between human rights and environmental protection, threats of climate change, and by public dissatisfaction with the existing general judicial forums".[1106]

Since 2015, a number of countries have created or are in the process of creating specialised environmental courts.[1107] A UNEP Report notes that specialised ECTs have 'sprawled around the world' and in some cases, it was as a result of the 'engagement of the highest level of national judiciary representatives in UNEP led judicial colloquia.[1108] While the thesis is impeded in directly connecting the establishment of ECTs after 2015 to the Paris Agreement, the thesis suggests that the IER through UNEP has been influential in equipping judges with the right tools to improve their adjudication on environmental issues through its trainings and publication. This will be discussed in detail further along the section.

Generally, environmental courts give teeth to environmental legislation through interpretation and judicial enforcement that guarantees consistency and stability to the environmental normative framework. Enforcement of the rule of law applies to both domestic legislation and international treaties. In terms of climate change and the Paris Agreement mandate for emissions reductions, environmental courts can be instrumental for delivering on the Paris Agreement, especially where countries have ratified the Agreement. The Court's decisions must be based on command of rapidly developing science and a complete understanding of accelerating changes in judicial precedent.[1109] The judges therefore have a duty to decide the manner in which environmental rule of law is applied to the most important issue facing

Environmental Courts" (2012) 29 Pace Envtl. L Rev 363, 381 (noting that informal estimates suggest there are over 400 ECTs throughout the world).

[1105] Don C. Smith "Environmental Courts and Tribunals: Changing Environmental and Natural Resources Law around the Globe" (2018) 36 Journal of Energy & Natural Resources Law 2 at 138; These were personal conversations between Rock Pring and Don Smith.

[1106] George (Rock) Pring and Catherine Pring above n1102.

[1107] Some examples of countries that announced creation of ECTs in 2015 are Argentina, Bahamas, Bhutan, Malaysia and Uganda. Other countries sought to add to their existing ECTs or strengthen the ECTs in existence. A more detailed list is in Appendix C of the UNEP's Guide for Policy Makers; Ibid at 92.

[1108] Ibid at 40.

[1109] Michael D. Wilson "Climate Change: The Role of Judges" https://www.eufje.org/images/docConf/ox2017/wilson.pdf

humanity- climate change.[1110] Recently, there has been a surge in environmental suits against governments for inaction on climate change, and individuals and NGOs are more aware of the role and power of 'justitia'. Judges have also begun to recognise the courts' instrumental role in combating climate issues[1111] and are increasingly applying the climate science presented in the IPCC reports and the Paris Agreement mandate to recent climate change lawsuits.[1112]

Principle 10 of the Rio Declaration lays an excellent foundation for the functioning of environment courts. It provides that environmental issues are best addressed with "the participation of all citizens, appropriate access to information, the opportunity to participate in decision-making processes, and effective access to judicial and administrative proceedings, including redress and remedy."

Historically, the IER has played a significant role in the creation and equipping of ECTs in diverse ways. First, the 1992 Rio Declaration on Environment and Development principles, notably Principle 10, created an impetus for the conception of environmental courts. The United Nations Environment Programme (UNEP) recognised the central role of the judiciary in promoting environmental governance developed and implemented a program to engage judiciaries in all countries to pursue the rule of law in terms of the environment and sustainable development.[1113] UNEP partnered with various groups such as the International Union for the Conservation of Nature (IUCN) to develop environmental resources for the judiciary in the form of regional symposia on the judiciary's role in promoting sustainable development from 1996-2002.[1114] Between 2003 and 2005 UNEP Governing Council adopted a decision to improve the capacity of those involved in developing and enforcing national and local environmental law and this decision resulted in the creation of a UNEP alliance of Chief Justices from over 100 countries. UNEP also helped organise a meeting for European judges to establish an EU Forum for the Environment.[1115]

[1110] Ibid.

[1111] Robert Carnwath "Climate- Conscious Courts: Reflections on the Role of the Judge in Addressing Climate Change (LSE Grantham Research Institute on Climate Change Jan, 19, 2022) https://www.lse.ac.uk/granthaminstitute/news/climate-conscious-courts-reflections-on-the-role-of-the-judge-in-addressing-climate-change/

[1112] The section on climate litigation discusses this in broader detail.

[1113] Lal Kurukulasuriya and Kristen A. Powell "History of Environmental Courts and UNEP's Role" (2010) 3 J.Ct. Innovation 269 at 270.

[1114] U.N. Env't Programme, UNEP Global Judges Programme vi (2004), available at www.unep.org/law/PDF/UNEP_Global_Judges_Prog_New.pdf at 18.

[1115] Ibid at 60.

Scholars predicted that the Paris Agreement and the UN's 2030 agenda for Sustainable Development commitments will give rise to environmental disputes that need the expertise that specialised ECTs can provide.[1116] This prediction has been actualised in the past five years, requiring the improvement of ECTs and the equipping of judicial officers to expertly adjudicate on climate change issues. UNEP has contributed to capacity building of judges by providing resources which have significantly increased their grasp of environmental law, improved adjudication of environmental issues, and reinforced understanding of the concept of environmental rule of law.[1117] An example of such contribution is UNEP's 2016 publication titled "Environmental Courts and Tribunals: A Guide for Policymakers. The publication has been used in training programmes for tribunal members. UNEP also partners with and supports the GJIE and Asian Judges Network on the Environment(AJNE)[1118] to enhance judges capacity building.[1119] These organisations aim to develop and enhance the capacity of judges, courts, and tribunals to exercise their role in environmental matters through the effective implementation, compliance, and enforcement of the law.[1120] UNEP has also organised a training curriculum and manual for judges and magistrates in Africa.[1121] The manual is a generic guide for judicial training institutions and programmes while the curriculum provides a generic regional curriculum with principles, norms, procedural requirements and guidelines that judiciary institutions can develop to better suit their country circumstances.

Within the case studies only Sweden and India have specialised environment courts. In Finland, some of the administrative courts are developing a certain degree of specialization in environmental law. In the Supreme Administrative Court, there is a chamber where environmental issues are referred to and the judges in that chamber have either been professors of environmental law or have wide experience in environmental law.[1122] Morocco and Nigeria

[1116] George (Rock) Pring and Catherine Pring n1102 above at 5.
[1117] UNEP "Draft Mapping Report and Preliminary Findings of the Assessment of the Fourth Programme for the Development and Review of Environmental law (Montevideo IV) - Discussion draft UNEP/ENV.LAW/MTV.4/FP.2 August 27, 2018 at 36, 39.
[1118] The updated online directory of the Asian Judges Network on the Environment is unavailable currently. https://www.ajne.org/judiciaries
[1119] UNEP "Strengthening Environmental Rule of Law for Sustainable Development" May 26, 2021 https://www.unep.org/es/node/29437
[1120] IUCN "046 - Strengthening the Global Judicial Institute on the Environment and the Global Institute of Prosecutors for the Environment " (IUCN World Conservation Congress, 3-11 September 2021) https://www.iucncongress2020.org/motion/046
[1121] UNEP "Training Curriculum on Environmental Law for Judges and Magistrates in Africa: A Guide for Judicial Training Institutions" (November 15, 2018) https://www.unep.org/resources/toolkits-manuals-and-guides/training-curriculum-environmental-law-judges-and-magistrates
[1122] Kari Kuusiniemi "Training and Specialisation of Members of the Judiciary in Environmental Law" (EUFJE Conference, 2018) https://www.eufje.org/images/docConf/so2018/EUFJE-Questionnaire-2018-Finland.pdf

do not have specialised environment courts although in Nigeria, environmental disputes are instituted in the Federal High Court (FHC) but the FHC adjudicates on other matters that do not pertain to the environment. China also does not have a specialised environment court but it collaborates with other Asian chief justices and judges from the AJNE. In 2017 Senior Judge Zhang Hua of the Supreme People's Court of the People's Republic of China attended the second meeting of the GJIE to draft and approve the bylaws of the Institute and to develop an Action Plan of the GJIE.[1123]

UNEP in partnership with United Nations Economic Commission for Europe (UNECE) has also organised a judicial colloquium titled "Adjudication of Cases Related to Climate Change and Air Quality" that took place on the 26th and 27th of April 2022, in Geneva.[1124] The colloquium's objective is to strengthen capacity of judiciary to effectively handle cases related to climate change and air quality and explore trends and good practices related to adjudication of these cases, in particular with regard to standing, scope of review and remedies.[1125]

As Courts, whether specialised or not, increasingly adjudicate on climate change issues, the IER, through UNEP, can play a useful role in fostering climate literacy among judges and structuring trainings to inform as much as possible on all the issues surrounding climate change. For example, training can equip judges with knowledge to tackle some technical issues such as assessment and calculation of environmental damage. Although courts can engage with the services of technical experts to determine these, it may be less costly and useful for environmental courts with leaner budget.[1126]

The IER through UNEP has been influential globally in creating and making accessible judicial training modules on environment to all judges and organising environmental seminars and colloquiums on topical environmental challenges such as climate change that judges can benefit from. However, it has not kept the data of which judges have benefited from such tools of knowledge. In terms of participation with IER supported forums such as the GJIE, judges from India and Norway are part of the governing members. Inference can be drawn from the association of judges as members of the GJIE or the AJNE or their participation in the

[1123] AJNE "Second Meeting of the Global Judicial Institute for the Environment (GJIE) https://www.ajne.org/event/second-meeting-global-judicial-institute-environment-gjie#quicktabs-event_tabs=0

[1124] UNECE "2022 Judicial Colloquium" https://unece.org/environmental-policy/events/2022-judicial-colloquium

[1125] Ibid

[1126] UNEP above n1113 above at 40.

programmes of both networks. At the IUCN World Conservation Congress, UNEP was urged to continue to collaborate with GJIE to develop a judicial portal that can provide access to environmental information, public participation in environmental decision-making, and access to justice.[1127] It is anticipated that the portal can enable better tracking of judges access to the information in order to provide more substantial data can point to IER influence.

Other than the linkages indicated above between the judges of the selected countries and their association with IER supported networks that seek to equip the judiciary, there is scant evidence of direct IER influence on the judges or courts within the selected countries. In addition to the judicial portal, the IER through UNEP should continue to provide or collaborate with national and sub-national judicial institutes and administrative offices of the courts in countries to provide continuing judicial education and programmes to build judicial capacity.

2. Climate Change Litigation

Litigation is progressively viewed as an effective tool to influence public policy and corporate behaviour. [1128] Where international commitments are the subject of litigation, national legislatures have the primary responsibility for giving legal effects to those international commitments. The monist and dualist theories come into play in the way they incorporate international treaties they have signed up to. Scholars are of the view that monist and dualist legal systems may be less important where the treaty obligations are procedural and not substantive, such as is the case under the Paris Agreement. Further, the Paris Agreement has been ratified by all the selected countries discussed within the thesis.

The Paris Agreement has begun to influence domestic climate litigation in ways that states never envisaged.[1129] Environmental activism leading to the Paris Agreement has continued to gain momentum after the signing of the Agreement. Further, with the increase in national laws codifying international responses to climate change that recognise new rights and create new duties, there has been a corresponding increase in litigation seeking to challenge their 'facial validity and application.' [1130] Environmental NGOs and individuals worldwide have filed

[1127] IUCN above n1114.
[1128] Jacqueline Peel and Hari M Osofsky, Climate Change Litigation: Regulatory Pathways to Cleaner Energy (CUP 2015) 10;
[1129] David Hunter and Others "The Paris Agreement and Global Climate Litigation after the Trump Withdrawal" (2019) 34 Maryland Journal of International Law 1 at 247.
[1130] UN Environment "The Status of Climate Change Litigation: A Global Review" (UNEP and Sabin Center for Climate Change Law, New York, May 2017)

lawsuits against corporations and the government for environmental degradation, pollution and inadequate climate action. The influence of the Paris Agreement in domestic climate change litigation centres on how the courts refer to the Paris Agreement and its norms in interpreting domestic legislation.[1131] So while the Paris Agreement does not compel a country to reduce emissions in a certain way or to a certain amount, it has influenced domestic law and policies, which litigants base their lawsuits on. Further, the Paris Agreement norms, one of which requires all member states to take climate action, has been recognised in prominent instances of climate litigation such as the Urgenda case.[1132]

This case is historic as the first in the world where citizens held the government accountable for non-reduction of emissions, and the court mandated the government to reduce emissions forthwith. Although the Paris Agreement is referred to as soft law and non-binding, the Supreme Court referred multiple times to the Agreement's objective that the states must strive to limit warming to 1.5ºC as a rationale for upholding Urgenda's claim for urgent emissions reduction by the Dutch government. This judgment influenced and transformed domestic climate change policy and further inspired more climate change cases in some of the selected countries as well as in Australia, [1133] Belgium, Canada, Colombia, India, Ireland, [1134] Germany,[1135] France, New Zealand,[1136] the UK, South Africa and Switzerland.[1137]

In a pending climate change case in Sweden, [1138] an environmental NGO, PUSH Sweden, alongside other interested parties, challenged the sale of several coal-fired power plants and associated mining assets by Vattenfall, an energy firm in which the Swedish government owns a controlling stake, to the German subsidiary of a Czech holding company. The sale was partly prompted by an environmental review that recommended Swedish divestment from fossil assets. However, the NGO argued that the sale would encourage continued exploitation of

https://wedocs.unep.org/bitstream/handle/20.500.11822/20767/climate-change-litigation.pdf?sequence=1&isAllowed=y

[1131] Brian J. Preston above n258 at 2.

[1132] Urgenda Foundation (on behalf of 886 individuals) v The State of the Netherlands (Ministry of Infrastructure and the Environment) HA ZA 13-1396, C/09/456689, ECLI:NL:RBDHA:2015:7145, ILDC 2456 (NL 2015); The State of the Netherlands (Ministry of Economic Affairs and Climate Policy) v Urgenda Foundation ECLI:NL:HR:2019:2007.

[1133] Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7.

[1134] Friends of the Irish Environment v. Ireland [2020] IESCDET 13.

[1135] Neubauer and others. v. Germany above n401.

[1136] Smith v Fonterra Co-operative Group Ltd [2020] NZHC 419.

[1137] Verein KlimaSeniorinnen Schweiz et al. v. Federal Department of the Environment, Transport, Energy and Communications (DETEC) 1C_37/2019.

[1138] Push Sverige, Fältbiologerna et al v Staten, Magnolia (Stockholm Court of Appeal, 2018) Unreported .

lignite coal assets, amounting to increased GHGs emissions above limits, and the illegality of the sale premised on failure to disclose information regarding the environmental impact assessment.[1139] The group's claim emphasised that the Swedish Government had failed its duty of care to its citizens.

As grounds for its lawsuit, PUSH Sweden relied on the UNFCCC's Kyoto Protocol and the Paris Agreement, among other international environmental treaties, that recommend international cooperation on climate change. The group referred to an acceleration of climate changes than was predicted in the IPCC 2013 report and that national commitments under the Kyoto Protocol are insufficient to keep us below a 2°C average temperature increase, with the ambition to try to limit temperature increase to as close to 1.5°C as possible over pre-industrial levels.[1140] The group also emphasised that the global average temperature increase should be kept below 2°C, with the aim of limiting it to 1.5°C to significantly reduce the risks and effects of climate change.[1141] Akin to the reasoning in the Norwegian case discussed below, the applicants argued that even though Vattenfall's lignite operations occur in another country, it is irrelevant because they will also impact Swedish territory and Swedish nationals. They also argued that the State has a responsibility under the Kyoto Protocol and the Paris Agreement to ensure that government policies that reduce Swedish emissions levels do not increase emissions in other countries.[1142] The court denied the requests of the claimants to find that the State has failed in its duty of care towards the claimants by allowing or not preventing the sale of Vattenfall's lignite operations to Energetický A Prumyslový Holding and PPF Investments and to find the sale illegal, determining that the claimants had not experienced an injury from the governmental decisions at issue.[1143]

In Norway, the 2018 Climate Change Act incorporated Norway's NDC into domestic law. The Act includes a five yearly review process consistent with the Paris Agreement. Section 5 of the Act provides that subsequent climate targets must represent a progression from preceding targets and be consistent with Norway's NDC.[1144] Norwegian youth environmental

[1139] <http://futureroundtable.org/documents/2238847/0/Magnolia-Final+17.05.17.pdf/5dc06e88-f831-60de-3ba5-06c8147e8fde >.
[1140] Push Sverige, Fältbiologerna et al v Staten, above 1138 at 3.
[1141] Ibid at 7.
[1142] Ibid. Para [107] at 20.
[1143] LSE Grantham Research Institute on Climate Change and the Environment "https://climate-laws.org/geographies/sweden/litigation_cases/push-sweden-nature-youth-sweden-et-al-v-government-of-sweden
[1144] Lov om klimama˚l (klimaloven) 2018 [Climate Change Act] (Norway) s 5.

organisation, Nature and Youth, also instituted an action [1145] against the Norwegian government, claiming that the Norwegian government acted in breach of Article 112[1146] of its Constitution when it awarded production licences pursuant to Section 3-3 of the Petroleum Act, by Royal Decree, for development of deep-sea oil and gas extraction. The petition highlighted that the licenses would allow access to as-yet undeveloped fossil fuel deposits, and such development is inconsistent with the climate change mitigation required to avert global warming of 1.5°C and possibly even 2°C in excess of pre-industrial levels. The plaintiffs argued that this action would contravene their right to a healthy environment and potentially jeopardises future generations. They also argued that the effect of the decision on the climate was inadequately assessed and should be declared invalid. The District Court dismissed the claim favouring the Norwegian government and directed the plaintiffs to pay the sum of NKR580,000 in legal costs to the Norwegian Government through the Ministry of Petroleum and Energy. Surprisingly, the court also declared that, "[e]missions of CO2 abroad from oil and gas exported from Norway are irrelevant when assessing whether the Decision entails a violation of Article 112. It is ironic because climate change is a global issue and scope 3 emissions from exports to third countries contribute to the emissions that the Paris Agreement, which Norway is signatory to, obliges Parties to reduce. The plaintiffs appealed, tendering arguments principally on the Paris Agreement objectives, the IPCC scientific reports, IPCC's carbon budget which the court paid attention to, albeit with a degree of scepticism[1147]

The Borgating Court of Appeal dismissed the appeal but did not award any costs for the District Court or the Court of Appeal. The Court of Appeal observed that: "International agreements will be crucial for solving global environmental problems…International agreements will therefore be able to contribute to clarifying what is an acceptable tolerance limit and appropriate measures. Whether a decision or measure will be contrary to such agreements could therefore be an important element in the overall assessment".[1148]

The Court also held that Norway's exploitation of new oil and gas reserves contradicted the principles and goals under the Paris Agreement.[1149] It placed Norway's emissions and ambition

[1145] Greenpeace Nordic Association and Nature and Youth v. Ministry of Petroleum and Energy (2016); Greenpeace Norway v Government of Norway [2020] 18-060499ASD-BORG/03.
[1146] Article 112 is a constitutional provision guaranteeing the right to an environment conducive to health amongst other things.
[1147] Ibid pps 25-26.
[1148] Greenpeace Norway v Ministry of Petroleum and Energy (Borgarting Court of Appeal, No 18-060499ASDBORG/03, 23 January 2020) at 24.
[1149] Ibid at 27.

against the backdrop of the Paris Agreement's temperature and time targets in Articles 2 and 4, respectively. It also referred to the IPCC's carbon budget, noting room for only fifteen years of present day emissions before a compulsory global transition to net zero emissions. The Court noted that Norwegian emissions were approximately 10 tonnes per year per inhabitant, exceeding the global average of 5 tonnes per year, and also that emissions from Norwegian oil and gas combustion were far greater and represented approximately 1 per cent of global emissions. The Court conceded that fulfilment of the Paris Agreement targets required drastic cuts in emissions and Norway's total reported national contributions were too low to meet the Paris Agreement's targets and, therefore, a progression must occur in its contributions. This decision is remarkable because of the rationale of the Appeal Court for releasing the environmental organisations from liability of costs. The reasons were that the case involved fundamental values relating to the environment and future generations, in addition to the need for a clear interpretation of Article 112 of the Norwegian Constitution as to whether it grants substantive rights to individuals that the courts can enforce. The Court was unwilling to restrict the interpretation of Article 112, ruling that it must be interpreted autonomously at the outset with respect to intergovernmental agreements. To answer the question about whether it was only the effects of the climate change in Norway that were relevant or also global effects, the Court held that the Norwegian Constitution does not grant global rights but instead has a limited scope of application – jurisdiction, both personal and territorial, as such the claimants could not rely on Article 112 for third country rights arising out of scope 3 emissions. On further appeal to the Supreme Court, the Court rejected the appeal and upheld the licenses for deep-sea extraction. Eleven of the 15 judge panel upheld the lower court's ruling reasoning that although the Norwegian constitution protects citizens from environmental and climate harms, the future emissions from exported oil are too uncertain to bar the granting of these petroleum exploration licenses.[1150]

The Appeal Court had acknowledged that Section 5 and 6 of the Norwegian Climate Change Act requires a review of climate targets every five years, and annual accounts must be prepared in the budget propositions on how the climate targets are to be reached. These provisions in the Climate Change Act is in accordance with the Paris Agreement requirement for stringent national monitoring.[1151] The case attests to the surge of climate activism from non-state actors-

[1150] http://climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2020/20201222_HR-2020-846-J_judgment.pdf
[1151] Ibid at 43.

individuals and environmental NGOs post-Paris 2015, who challenge government actions. The impetus for these litigation cases is directly linked to the IER and IEA.

It is significant to note that while the Norwegian courts were reluctant to consider emissions generated from its oil and gas exports in third countries, the New South Wales Australian court has taken a radical departure from this approach. The Court in *Gloucester* considered the argument that Parties to the Paris Agreement are to account for GHG emissions in its country and not outside it to support its application for the Rocky Hill Coal Project. The court held that the impact of scope 3 emissions of a proposed project on the environment and public interest should be considered as all emissions impact the environment.[1152] The Court concluded that approving the coal project would not assist in the deep reductions of GHG emissions required by the Paris Agreement to limit the increase in global average temperature.[1153]

In India, a 9-year-old girl, Pandey, instituted a petition against the Indian government on its inadequate environmental laws and climate change policies.[1154] Personally affected by adverse climate change impacts, Pandey argued that the government failed to take any effective science-based measure to mitigate the adverse impacts of climate change in India and that there is a huge gap in the implementation of the environmental legislations. The petition urged the court to order the national government to include climate change considerations in environmental impact assessments, prepare a national GHGs emissions inventory and prepare a national carbon budget against which projects' emissions impacts can be assessed. The petitioner in paragraphs 7 to 12 of the petition highlighted the Indian government's obligation toward the Paris Agreement, specifically referring to Article 2, 5, 21[1155] and India's ratification of the Paris Agreement.[1156] Article 5 of the Agreement provides for Parties to conserve and enhance forests and take into account the existing framework (for example, the REDD+) to inform policy approaches. The petitioner also referred to India's INDC and its commitment to creating an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover by 2030.[1157] The petitioner argued that the large scale diversion of forest land contravened the targets set forth in India's INDC and there was a need to restrict

[1152] Gloucester Resources Limited v Minister for Planning [2019] NSWLEC 7 at paragraph [513] and [514].
[1153] Ibid at paragraph 697
[1154] Ridhima Pandey v Union of India and Central Pollution Control Board Original Application No. 187/2017.
[1155] Article 21 provides for the ratification of the Paris Agreement and the conditions for its entry into force. The petitioner relied on the Indian government's ratification of the Paris Agreement
[1156] Ibid, para 7-12.
[1157] Ridhima Pandey v Union of India and Central Pollution Control Board, paragraph 18

the diversion of land for non-forest purposes. Among other prayers, the petitioner asked the court to direct the environment ministry to undertake a detailed assessment of every single case of forest diversion and its impact on the climate and also for the forestry advisory committee to ensure that compliance of compensatory afforestation is conducted for past approved forest clearing in the light of India's obligations under the Paris Agreement and its INDC.[1158]

However, the National Green Tribunal (NGT) quashed the application stating that there was "no reason to presume that Paris Agreement and other international protocols are not reflected in the policies of the Government of India or are not taken into consideration in granting environment clearances."[1159]

The Tribunal did not engage with pertinent issues that the application raised, such as the need to prepare targets for the total amount of CO_2 emissions that can be released until 2050 to ensure India remains true to its global commitment to reduce atmospheric CO_2 and limit the long-term average global temperature increase to no more than 1°C. It also did not remark on the application for preparation for a fixed-time national climate recovery plan within the existing legislative framework to align mitigation actions and reduction targets with achieving India's carbon budget. Thus, this case in form was successful in the sense that it encourages environmental activism of youth non-state actors to demand environmental justice, on the other hand, it was unsuccessful in substance as the Tribunal failed to address critical questions that could aid in the implementation and enforcement of India's climate change commitments.

More recently, in the *Aroksar* case,[1160] The appellants in their claim challenging the grant of an Environmental Clearance for the development of a greenfield international airport at Mopa in Goa, stating that the EIA report used to obtain the consent was grossly deficient failing to notice the wildlife in the surrounding forests. The appellants contended that the NGT did not apply the international principles of sustainable development, precautionary principle and polluter pays principle. [1161] The Supreme Court considered several international legal instruments such as the SDGs (13 and 16), the Paris Agreement, and India's commitments in its NDC, stating that they were vital aspects of India's environmental rule of law and that the government was required to balance environmental concerns with airport development goals

[1158] Ibid at paragraph iii on page 50
[1159] Ibid. Order No. 3
[1160] Hanuman Laxman Aroskar v. UoI & Others, MANU/SC/0444/2019.
[1161] Ibid at para 18.

adequately. Specifically the Court referred to Article 5 of the Paris Agreement that encourages Parties to conserve and enhance sinks and reservoirs of greenhouse gases, which includes forests.[1162] The Court added that India had ratified the Paris Agreement and its NDC under the Paris Agreement, commits to: reducing its GHG emission intensity of its Gross Domestic Product to 33-35% below 2005 levels by 2030, (ii) 40% of India's power capacity would be based on non-fossil fuel sources, and (iii) An additional 'carbon sink' of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover will be created by 2030.[1163] As a result, the court suspended the approval for constructing a new airport for failure to follow the statutory process for approvals properly. However, the suspension was lifted in 2020 only after additional environmental impact information was provided, including a commitment to make the airport a "zero-carbon airport operation."

Similarly, in *Association for Protection of Democratic Rights v. The State of West Bengal and others,*[1164] the Supreme Court considered the impact of tree-felling on climate change noting India's climate change commitment to increase tree cover from 23 per cent to 33 per cent. In addition, the court considered whether the Plan was consistent with India's sustainable development commitment and ordered that an expert committee be established to develop scientifically accurate policy guidelines to govern decision-making regarding tree-felling for developmental purposes. While *Pandey's* outcome differs from *Aroksar* and *Association for Protection of Democratic Rights*, all the judges referred to the Paris Agreement, particularly pointing to India's ratification of the Paris Agreement and India's commitment to international obligations such as the SDGs and through its NDCs.

Going back to the court's reasoning in *Greenpeace Norway*, IEAs are crucial for solving environmental problems, and even though some countries have not transposed IER objectives into domestic laws, as long as they are parties to IEAs and the IER and have submitted NDCs, courts will be bound to give decisions considering country's pledges under the IEA. These cases are remarkable because climate litigation would increase to challenge seeming decline in environmental quality indicators, especially regarding emissions [1165]

[1162] Ibid at para 138.
[1163] Ibid.
[1164] Special Leave Petition (Civil) NO. 25047 OF 2018
[1165] Shibani Ghosh "Litigating Climate Claims in India in Jacqueline Peel & Jolene Lin Symposium "Transnational Climate Litigation: The Contribution of the Global South" (2020) 114 AJIL Unbound.

In the traditional sense, China has not recorded a single climate change litigation case, according to a study conducted that analysed 177 Chinese environmental cases.[1166] Climate change litigation in China takes a different approach from other jurisdictions discussed above because the cases are contract-based civil disputes. The issues for determination do not strictly address climate change-related issues despite the majority of Chinese environmental cases targeting companies that are mostly carbon emitters. Chinese courts have been criticised as having limited power because they are 'rule-interpreting bureaucrats' rather than 'value-driven lawmakers'.[1167] Compared with the People's Congress and the executive government, the existing power arrangements in China indicate that the judiciary is the weakest branch of government.[1168]

The prospects for the success of climate change litigation against the Chinese government is opined as quite bleak at the moment, and this may be traced to the strength of the government on the one hand and the seeming insignificant role of Chinese civil society on the other.[1169] The future of climate change litigation in China is unclear as the government's five-year plan does not refer to the Paris Agreement, neither does any of its policies. Therefore, it may be challenging for litigants to rely on the Paris Agreement without a corresponding domestic policy that expressly applies to the Paris Agreement's objectives. It may be helpful for litigants to rely on China's NDC as a basis for the lawsuit, but it remains to be seen.

Neither Morocco nor Nigeria has recorded any climate change litigation cases. It is not clear why the recorded environmental protests in Morocco have not resulted in lawsuits. Protests by civil society are reported to be silenced and climate justice activists contained by the Moroccan Coalition for Climate Justice.[1170] Thus, while environmental protests continue, climate change litigation appears distant.[1171]

[1166] Yue Zhao and others "Prospects for Climate Change Litigation in China" (2019) 8 Transnational Environmental Law 2 at 377.

[1167] Rachel E. Stern "Environmental Litigation in China: A Study in Political Ambivalence" (Cambridge University Press, 2015) at 2.

[1168] Yue Zhao and others above n1160 at 364.

[1169] Ibid at 353.

[1170] Fayrouz Yousfi "COP22 in Morocco: Between Greenwashing and Environmental Injustice" (Middle East Eye, November 16, 2016) <https://www.middleeasteye.net/opinion/cop22-morocco-between-greenwashing-and-environmental-injustice >.

[1171] Protests by "Movement on the Road '96' challenging the mining impacts of the Imider Mine, operated by La Societe Metallurgique d'Imider (SMI) and owned by Societe Nationale d'Investissement (SNI), a private holding company owned by the Moroccan royal family.

From the initial analysis, there has been a rise in environmental lawsuits, particularly relating to climate change. The Grantham Research Institute policy reports that since 2015 the cumulative number of climate change related cases has doubled. While between 1986 and 2014, there were just 800 cases, in the last six years alone, there have been just over 1,000.[1172] Many of these cases focus on the inadequacy of government environmental regulation and policies, and a handful of cases are instituted against corporate emitters for actions exacerbating climate change.[1173] Courts have also begun to balance citizens climate change concerns against climate change policies and the governments' international climate obligations. The Paris Agreement has enabled litigants to "place the actions of their governments or private entities into an international climate change policy context."[1174] Additionally, some courts have found that climate change, GHG emissions and the Paris Agreement are relevant considerations in administrative decision-making in setting policy and approving projects.[1175] It is significant to highlight that many climate change cases that involve private interest litigation are usually ignored and not added to the pile of 'famous' climate change cases. However, they are as important as sensational climate change cases that persuade governments to strengthen global climate commitments. Again, the Paris Agreement has opened the door to more litigation around climate issues for public and private interests.[1176] It is also important to note that this section limited itself to climate change lawsuits in the selected countries but there have been remarkable climate lawsuits in other countries that reflect the influence of the Paris Agreement on judicial decision making.

3. Enforcement outside the Courts

Two facilitators to positive climate outcomes in any jurisdiction are adequate monitoring and regulatory enforcement mechanisms. A country may have a plethora of environmental legislation and an established regulatory body, but if its monitoring mechanisms are weak or its regulatory bodies are not well equipped to enforce regulations, environmental harm may

[1172] Joana Setzer and Catherine Higham "Global Trends in Climate Change Litigation: 2021 Snapshot" Grantham Research Institute Policy Report, July 2021 https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2021/07/Global-trends-in-climate-change-litigation_2021-snapshot.pdf

[1173] See United Nations Environment Program (UNEP), The Status of Climate Change Litigation: A Global Review (UNEP, 2017) at 34, <http://columbiaclimatelaw.com/files/2017/05/BurgerGundlach-2017-05-UN-Envt-CC-Litigation.pdf >.

[1174] United Nations Environment Programme, 'The Status of Climate Change Litigation – A Global Review' (May 2017)

[1175] Brian J. Preston above n258 at 32; Cases such as Heathrow Third Runway case and EarthLife Africa.

[1176] See Kim Bouwer "The Unsexy Future of Climate Change Litigation" (2018) 30 Journal of Environmental Law 3 at 486.

continually occur. There are three ways to draw out IER or IEA influence in monitoring and regulatory enforcement. First, where the IER has its independent monitoring and enforcement mechanisms that can compel its members to comply with the IER objectives, influence can be inferred. Second, if the IER has contributed to strengthening the regulatory enforcement mechanisms through financing or technical assistance, the IER can be deemed influential. Third, indirect IER influence can also be inferred where causal links can demonstrate that countries reviewed their regulatory enforcement mechanisms to reflect the Paris Agreement objectives. This section does not engage with the third branch as some countries' regulatory mechanisms are still emerging, and there is no previous established mechanism to measure any changes that reflect the Paris Agreement objectives.

According to some scholars, regulatory environmental monitoring and enforcement are not only credited to generate both specific and general deterrence; there is evidence that they encourage compliance behaviour.[1177] Against this backdrop, this section looks at the first branch of IER influence through its internal monitoring and enforcement mechanism. It is important to note that monitoring can be a bottom-up method of self-reporting or top-down monitoring, verification and publishing of collated information.[1178] The Paris Agreement, true to its hybrid approach, utilises the bottom-up method where Parties periodically submit a national inventory report and every other necessary information to help the UNFCCC track Parties' progress.[1179] This means that the IER is not conducting its independent monitoring but requiring Parties to supply the information needed to track progress. So, the IER's monitoring task would be to evaluate each party's performance in relation to their submitted NDCs and utilise its mechanisms to facilitate emissions reductions and the implementation of the IER's objectives and not to review the accuracy of the data that they receive.[1180]

Now, there is a risk that countries may not submit accurate information regarding emissions reductions and mitigation and adaptation efforts, however, the IER and the Paris Agreement are designed so that evaluation is done at the international level to avoid sovereignty issues and variant methods of climate change mitigation and adaptation evaluation. The Paris Agreement

[1177] See Jay P. Shimshack, and Michael B. Ward, "Enforcement and Over-Compliance" (2008) 55 J. Env. Econ. & Mgt.at 90.
[1178] Ronald B. Mitchell, 'Regime Design Matters: International Oil Pollution and Treaty Compliance', (1994) 48 International Organization at 430.
[1179] The Paris Agreement above n37, art 13.
[1180] Gregory Rose and others "Compliance Mechanisms Under Selected Multilateral Environmental Agreements" (UNEP Division of Environmental Law and Conventions, 2007) at 21.

provides for support to be provided to Parties to prepare their NDCs, national communications and other relevant supporting information. The SBSTA is currently designing the tools that can enable Parties to report their climate actions in line with the MPGs of the ETF contained in Decision 18/ CMA 1. The Paris Agreement also complements the bottom-up approach by providing an enhanced transparency framework where countries can discuss their challenges with implementing the IEA's emissions reductions objectives and get the necessary assistance.[1181] Article 13 also provides a facilitative enforcement function of the IER, which is not punitive but collaborative, a method that differed from that of the Kyoto Protocol.

Turning to the second branch, it is needful to examine whether the IER has contributed to monitoring and regulatory enforcement in the selected countries. The term 'contribution' could refer to the IER's technical or financial assistance to develop Parties' regulatory framework or set up monitoring mechanisms within their regulatory bodies. As developed countries, Denmark, Finland and Sweden are arguably more directly influenced by the EU's monitoring and regulatory framework than the IER. This is arguable because, similar to the IER process, the EU member states, based on their internal monitoring, submit data to the EC, which analyses these national reports and presents its findings. The EU has also influenced the enforcement mechanisms of Denmark, Norway, Sweden, and Finland through the EIR, discussed in the previous chapter.

The EC noted that weak enforcement policies and practices and insufficient capacity in the organisations responsible for environmental regulation hindered the implementation of environmental law in the EU countries. Therefore, the EIR has set benchmarks that reflect the existing agreed on policy objectives and primary obligations defined by the EU environmental legislation and created the opportunity for a structured dialogue with each member on the achievements and challenges in tackling the implementation gaps and the actions needed.[1182]

Another vital point to note is that the UNFCCC requires developed countries to submit national communications to the UN every four years, containing emissions reduction policies and measures, actual emissions and removals and other activities to implement the Paris Agreement. All the Nordic countries have complied and submitted their detailed

[1181] The Paris Agreement above n37, art 13.
[1182] Eur Lex "Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions: Delivering the benefits of EU environmental policies through a regular Environmental Implementation Review https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2016:316:FIN .

communications. The UNFCCC helped developed countries to design their national communications by providing a review practice guidance to guide Annex 1 Parties on areas where they had challenges reporting.[1183] The IER, in this case, has monitored Parties by reviewing their national communication and offered them guidance.

The UN environmental review reports that Morocco's legislative framework is not coherent to support environmental monitoring and assessment because the current environmental laws do not provide explicit powers of enforcement and inspection to environmental authorities.[1184] Although there are environmental inspectors in Morocco, they perform their duties in an ad-hoc manner driven by complaints or requests. Because there is no robust regulation outlining procedural and substantive obligations of the regulatory authorities, there are limited opportunities to produce concrete results.[1185] The United Nations Economic Commission for Europe (UNECE), in collaboration with the United Nations Economic Commission for Africa, provided some recommendations in the review document to guide Morocco's implementation of IEAs.[1186] This report was published in 2016, and Morocco has asked the UNECE to review its performance again.[1187] The UNDP has pledged to support the Ministry of Energy, Water, Mines and Environment to integrate mitigation and adaptation measures that meet national targets for reduced emissions. It has also pledged to support the Government in meeting its commitments on national evaluation capacities, focusing on developing transparent and results-based monitoring and evaluation, and managing tracking systems.[1188]

In India, environmental monitoring has upscaled to include continuous online emissions/effluents monitoring systems.[1189] With these systems, the State Pollution Control Boards can objectively monitor industry compliance in their jurisdiction. Also, all the courts will have access to monitor the implementation and enforcement of environmental laws. It is important to reiterate that India's environmental regulatory system is decentralised and

[1183] UNFCCC "Preparation of NCs and BRs" https://unfccc.int/preparation-of-ncs-and-brs .
[1184] United Nations Economic Commission for Europe "Environmental Performance Reviews: Morocco Synopsis" https://unece.org/DAM/env/epr/epr_studies/Synopsis/ECE.CEP.170_Synopsis_English.pdf at 6.
[1185] Ibid at 6-7.
[1186] Ibid at 17.
[1187] UNECE "UNECE leads Second Environmental Performance Review of Morocco" December 3, 2020 https://unece.org/info/media/news/environment/2020/unece-leads-second-environmental-performance-review-of-morocco/doc .
[1188] United Nations "Country Programme Document for the Kingdom of Morocco (2017-2021)" http://www.undp.org/content/dam/rbas/doc/CPD/CPD%20Morocco%202017-2021.pdf at 8.
[1189] Els Reynaers and others "Environmental Law and Practice in India" Overview" April 1, 2020 https://uk.practicallaw.thomsonreuters.com/0-503-2029?transitionType=Default&contextData=(sc.Default)&firstPage=true .

different studies are conducted in various sub-regions. However, what is significant is that there is no evidence to suggest that the UNFCCC or any of its specialised agencies have funded or technically assisted India's monitoring and regulatory enforcement mechanisms.

The UNFCCC has been influential in enabling India to submit its third national communication. Decision 17/CP.8 of the UNFCCC provides that all Parties submit national communications within three years of entering the Convention. In addition, the UNDP has provided more than US$100,000, funds to support India submit its national Communication on emissions reductions.[1190]China and Nigeria also received funds from the GEF and the UNDP to prepare their third national communication for the UNFCCC.[1191] These funding mechanisms facilitatively enforce IER obligations.

Turning to Nigeria's domestic enforcement and monitoring mechanisms, the National Environmental Standards and Regulations Enforcement Agency (NESREA) monitors and enforces environmental laws, standards, and regulations. Section 7 (c) of the NESREA Act empowers the agency to enforce compliance with international agreements, conventions, and treaties on the environment, including climate change. Section 7 (h) and (l) also provide that NESREA shall develop environmental monitoring networks and engage in compliance monitoring of environmental regulations and standards. This regulation has not been amended since 2007, and the available literature does not establish any IER influence in reforming or amending the Act.

In China, the Ministry of Ecology and Environment is the chief environmental regulatory agency. In addition, the Chinese government has set up an integrated law enforcement team dedicated to environmental protection, much like Morocco's environmental police. However, as with other selected countries, there are gaps in environmental monitoring, and administrative penalties are inadequate. Furthermore, there is no available literature on current UN funding to strengthen environmental monitoring and regulatory enforcement bodies between 2015 and 2020. Therefore, there is no evident financial or technical assistance between the IER and

[1190] UNDP "Preparation of Third National Communication (TNC) and Other New Information to the UNFCCC: What is the Project About" https://www.in.undp.org/content/india/en/home/operations/projects/environment_and_energy/tnc.html#:~:text=In%20partnership%20with%20Ministry%20of,Conference%20of%20Parties%20(COP)%20for .

[1191] UNFCCC "The People's Republic of China Third National Communication on Climate Change" December 2018 https://unfccc.int/sites/default/files/resource/China%203NC_English_0.pdf ; UNFCCC "Nigeria's Third National Communication on Climate Change" March, 2020 https://unfccc.int/sites/default/files/resource/China%203NC_English_0.pdf .

China and Nigeria's monitoring and regulatory enforcement bodies in the past five years to indicate IER influence.

To conclude this section, the literature and analysis suggest that the IER has been marginally influential in the selected countries' monitoring and regulatory enforcement. The Nordic countries were influenced by UNFCCC and the EU, while the other countries were only slightly influenced by the UNFCCC alone. It is important to emphasise that the IER's enforcement strategy is facilitative and not punitive. Finally, as indicated in the fourth chapter that discussed the Paris Agreement, the enforcement and compliance committee functions are still in progress, and that is why this section does not engage with enforcement through the Paris Agreement compliance and implementation mechanism.

C. Behavioural Effects on State and Non-State Actors

1. Shifting the Political Will

Chapter three set out political will as a parameter for measuring IER influence. This section seeks to apply this parameter to determine whether the IER has influenced the political will of the governments of the selected case studies toward emissions reduction. To reiterate, political will can be narrowly defined as "the determination of an individual political actor to do and say things that will produce a desired outcome".[1192] However, it will be erroneous to dismiss other factors that can affect a leader's political will, such as incapacity or lack of administrative instruments, insufficiency of material resources or opposition from interest groups.

This section highlights that the IER, through its various mechanisms and special agencies, can help sustain the political will of leaders to pursue environmental objectives. It will also illustrate how the IER has influenced the political will of some of the selected countries. It is significant to note that where the IER contributes to providing technical or financial capacity to a country's environmental framework, it could be considered influential to a leader's political will. This type of influence is active. On the other hand, an IER can be passively influential where its members seek to become more influential within the regime.[1193] It is overt that political leaders will most likely apply their political will to enhance their influence and reputation domestically and abroad. Through the thesis, academic and political statements have

[1192] Gov.UK n242 above.

[1193] Robert O. Keohane and Michael Oppenheimer "Paris: Beyond the Climate Dead End through Pledge and Review?" (2016) 4 Politics and Governance 3 at 147.

referred to the selected countries' desire to lead in climate change efforts and be global players within the IER.

In India, for instance, concerns about development, equity and justice, particularly in the distribution of responsibilities for emissions reductions, have created political obstacles to more robust action on climate change mitigation and contributed to a general lack of trust in the international system.[1194] India had been previously known to champion the concerns of developing countries by seeking to occupy the moral high ground for emerging countries' rights.[1195] India had also vehemently refused to commit to any emissions reduction targets and maintained that developed countries should finance mitigation and adaptation activities in developing countries. Many years down the line, India still prioritises economic development and financing obligations of developed countries, however, there has been a subtle shift where India softened its stance to assume some responsibility for reducing emissions.[1196] India's position has moved from the argument of sole responsibility of developed countries for emissions reductions to accepting that it will ensure that its emissions do not exceed that of industrialised countries at any point in time.[1197] India also presented the co-benefit approach to reduce emissions provided developed countries would contribute financially and transfer technology.[1198] Some scholars suggest that international negotiations and pressure, most notably the UN climate regime, may have been responsible for these changes and fundamentally impacted Indian policymaking.[1199]

Some scholars have noted that international relationships are an incentive for India to engage more in the global climate regime, and the UNFCCC provides the perfect platform to foster these international relationships.[1200] All 187 Parties acknowledge climate change as a concern and seek to foster international relations; platforms that the UNFCCC provides through its annual COPs and periodic committee meetings. Some scholars also suggest that India's climate policy is woven into its broader foreign policy agenda, reflecting its desire to achieve

[1194] Susannah Fisher above n932 at 133.
[1195] Antto Vihma "India and the Global Climate Governance: Between Principles and Pragmatism" (2011) 20 Journal of Environment and Development 1 at 70.
[1196] Ibid at 75.
[1197] Ramachandran, R. 'Climate Change and the Indian Stand', July 28, 2009 The Hindu, New Delhi Edition <https://www.thehindu.com/todays-paper/tp-opinion/Climate-change-and-the-Indian-stand/article16564157.ece >.
[1198] Rajnish Saryal above n992 at 10.
[1199] Ibid at 87.
[1200] Antto Vihma above n1195 at 87.

international status. It is argued that this goal motivates a shift in India's previous traditional approach to climate negotiations.[1201]

The UNFCCC had also prescribed that countries would need to upscale their renewable energy uptake, and today India's government is supporting India's RE uptake and is doing quite well. It is also argued that India's willingness to integrate RE technologies can be linked to IER influence, where the IER provides the platform for technology transfer and financial contributions.[1202] Because these concessions are made at the government level, it can be inferred that there is a shift in the political will of India to balance economic interests with environmental consideration through the influence of the IER.

Some scholars argue against exaggerating the role of the IER in China's shift in climate policy, as the change in China's position in global climate change negotiations is largely domestic-driven.[1203] Moreover, they argue that it is not the 'narrow negative impacts of global warming' that cause China to pause for concern, rather, the adverse social, economic, foreign policy and environmental impacts that an unprecedented 30 years of economic growth produced.[1204] It is agreed that the Chinese government saw the need to solve its pollution problems, but these pollution issues were already on the IER's agenda, in which China has historically participated. Thus, it will be erroneous to dismiss the subtle international pressure, through IER negotiating platforms, put on China to address its domestic pollution concerns. It has been suggested that thirty years of China's economic development empowered her with the financial capacity and political willingness to face the challenges of its environmental problems.[1205] Liang overlooks the various technical and financial support from developed countries that China had insisted on as a condition precedent to commit to emissions reductions. The fulfilment of that condition through Articles 9 and 11 of the Paris Agreement and the establishment of IER funding mechanisms arguably influenced China's determination to commit to reducing emissions.

Other scholars suggest that China was convinced to change its traditional reluctant attitude towards global climate change when President Obama acknowledged its special responsibility

[1201] Stockholm Environment Institute "Shifting Sands: India's New Approach to the Politics of Climate Change" https://mediamanager.sei.org/documents/Publications/Climate-mitigation-adaptation/Atteridge%20-%20India%20PB%20101122c%20web.pdf .
[1202] The Paris Agreement n37 above, art 4(5).
[1203] Wei Liang above n914 at 70.
[1204] Ibid.
[1205] Ibid.

for climate change.[1206] Other motivations for China's positive political approach to climate change in global climate change negotiations may be enmeshed in its recognition of the economic opportunities in clean technologies in addition to utilizing the 'rare opportunity to make moral claims and prove to the world its great power responsibility.'[1207]

While some merit can be drawn from the scholarly contributions above, they do not consider or acknowledge the IER influence in refocusing China's coal exploitation to include renewable energy. The IPCC and the UNFCCC emphasised incorporating alternative energy sources, mainly renewable energy, to combat climate change, and China has now become the undisputable global leader of renewable energy expansion worldwide.[1208] Other scholars suggest that climate leadership may offer China an opportunity to build a positive reputation within the UN system.[1209] If this is to be attributed merit, it would mean that the IER has passively influenced China's political will to commit to emissions reductions.

It is unclear whether Morocco's lead, particularly in Africa, in pursuing RE alternatives can be attributed to an aspiration to attain world power or a high seat at global negotiating tables, such as China or India. However, Morocco states clearly in its NDC that its political will to make its territory more resilient to climate change is rooted in its 2011 constitution and enshrined in its Framework Law on the National Charter for Environment and Sustainable Development (NCESD).[1210] Another reason that caused Morocco to shift toward RE alternatives was the energy crisis it experienced. Because it had abundant RE sources such as solar and wind, Moroccan public authorities made RE a top priority to achieve energy security, sustainable development and job creation through RE investments.[1211]

As there was no international pressure put on Morocco, being a developing country with insignificant emissions, it is challenging to infer IER influence. However, it can be argued that

[1206] Sanna Kopra "China, Great Power Management, and Climate Change: Negotiating Great Power Climate Responsibility in the UN" in T. Brems Knudsen, C. Navari (eds.) *International Organization in the Anarchical Society* (Palgrave Studies in International Relations, 2019) at 166.
[1207] Ibid at 167.
[1208] IEA "A New Era of Shared Clean Energy Leadership Begins in China" https://www.iea.org/commentaries/a-new-era-of-shared-clean-energy-leadership-begins-in-china .
[1209] Anita Engels "Understanding How China is Championing Climate Change Mitigation" (2018) 4 Palgrave Communication 101 at 3.
[1210] UNFCCC "Morocco: Nationally Determined Contribution under the UNFCCC" https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Morocco%20First/Morocco%20First%20NDC-English.pdf .
[1211] Tarik Kousksou and others "Renewable Energy Potential and National Policy Directions for Sustainable Development in Morocco" (2015) 47 Renewable and Sustainable Energy Reviews at 55.

the IER has sustained Morocco's political determination to expand its RE sources in order to make it less dependent on energy imports. The IER has managed this through fund contributions from the international and regional agencies such as the World Bank, GEF and AfDB to Morocco to harness its RE potentials and become a leader in RE in the Middle East and Africa.

There is scarcely any scholarship on the influence behind the Nordic political shift to emissions reductions. As three of the selected Nordic countries belong to the EU and Norway affiliated to the EU, it may be less challenging to examine the driving force behind the EU's political commitment to emissions reductions. The EU's political will is derived, arguably, from its desire to achieve dominance in global governance within the IER and lay a firm foundation for the future economy. Undoubtedly, Nordic countries have bounteous RE sources that facilitate a quicker transition and have developed an enviable cross-border electricity market, thus facilitating more significant use of RE, but this may not be the sole reason behind political support for reducing emissions in the region.[1212]

Nordic countries have historically cooperated for decades to ensure that economic growth and welfare improvements align with ambitious environmental policies, to facilitate environmental improvements within the region and beyond. The Paris Agreement has, however, influenced Sweden's Fossil Free Initiative. Since its inception in 2015, the initiative has been expanded and reinforced to include collaboration among companies, industries, municipalities and regions.[1213] This initiative recognises and implements Articles 4 and 6 of the Paris Agreement, which requires participation across multiple sectors. While it might be surmised that Nordic political will toward emissions reductions may be internally motivated, previous sections have demonstrated that Nordic emissions reductions targets and policies are usually designed to include IER objectives. Thus, it is suggested that the IER indirectly influences the political will of the selected Nordic countries to reduce emissions.

Drawing from Young's expanded regime theory discussed in chapter two, an influential environmental regime 'causes changes in the behaviour of actors, in the interests of actors, or in the policies and performance of institutions in ways that contribute to positive management

[1212] Norden "Nordic Action on Climate Change" (Nordic Council of Ministers, 2014) <https://norden.diva-portal.org/smash/get/diva2:768493/FULLTEXT01.pdf > at 6.
[1213] Fossilfritt Sverige "About Fossil Free Sweden" https://fossilfrittsverige.se/en/about-us/#:~:text=Fossil%20Free%20Sweden%20was%20started,of%20the%20first%20fossil%20free .

of the targeted problem'.[1214] In sum, internal and external factors influenced the determination of political leaders in the selected countries to reduce their emissions. For example, in some countries, political leaders wanted to ensure the citizens' economic welfare first and protect the environment, which informed the earlier opposition to IER objectives on emissions reductions. However, as time progressed, the IER has actively and passively shifted the political will of countries over time, however, this shift is more evident in some countries than others.

2. Increased Participation of Non-State Actors in the Global Environmental Framework

Distinct from the political will examined in the previous section, this section highlights the influence of the IER on non-state actors. Prior to the current climate change regime, non-state actors were seen as an alternative or complementary to the UNFCCC process, but today they are considered a core element under the catalytic and facilitative post-Paris regime.[1215] NGOs, for example, have better and widened access as observers at UNFCCC conferences, enabling them play various significant roles at international climate change negotiations whether it is through workshops and seminar presentations related directly to items under negotiation at the COP's side events.[1216] To reiterate, non-state actors include NGOs, interest groups and businesses. Businesses are vital non-state actors because corporate economic activity can contribute to climate change, and climate change can also affect corporate economic activity. Therefore, it will be helpful to explore whether the Paris Agreement has influenced corporate activities toward emissions reductions in the selected countries. It is also valuable to examine the climate change activities of environmental organisations and whether the Paris Agreement and the IER influences these activities. The section will not discuss whether climate change activities from NGOs have led to emissions reductions in the selected countries.

Article 4 (i) of the UNFCCC provides that all Parties "promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-governmental organizations". Furthermore, Article 6 of the UNFCCC also provides for Parties to promote and facilitate "public participation in addressing climate change and its effects and developing adequate responses". Article 7(6) of

[1214] Oran Young and Marc A. Levy 'The Effectiveness of IERs' in Oran Young (ed) *The Effectiveness of IERs: Causal Connections and Behavioural Mechanisms* (MIT Press, Boston, 1999) at 5.
[1215] Thomas Hale "All Hands on Deck: The Paris Agreement and Nonstate Climate Action" (2016) 16 Global Environmental Politics 3 at 18.
[1216] Chandra Lal Pandey "Managing Climate Change: Shifting Roles for NGOs in the Climate Negotiations" (2015) 24 Environmental Values 799 at 800.

the UNFCCC also opened the door for NGOs to be observers and the UNFCCC climate change secretariat highlighted that NGOs participation is a fundamental element of the Convention's process.[1217] At a high level, these provisions protect the participation of civil society in global climate governance. The IER, through these provisions, has empowered civil society to demand climate action from governments. Additionally, non-state actors, for example, environmental NGOs and climate activists have relied on IPCC scientific reports to call for accelerated action on climate change.

Article 6 subsection 8 of the Paris Agreement provided a holistic, integrated and balanced approach to mitigate and adapt to climate change impacts. It expressly states that the Parties are to enhance private and public sector participation in the implementation of NDCs. Article 12 also states that Parties are to cooperatively utilise mechanisms such as public participation, public awareness and climate change education to enhance adaptation and mitigation actions under the Agreement.[1218]

After the signing of the Paris Agreement, non-state actors have increased and are driving climate action on the international and domestic front. For example, non-state actors have become active on the international front during UNFCCC COPs, now participating in previously closed settings. [1219] The UNFCCC, through the COP, has also influenced collaborative dialogues among state and non-state actors toward emissions reductions. For example, statistics from the recently concluded UNFCCC COP25 revealed that 26,706 participants attended, 13,643 people representing specific parties, 9,987 from observer organisations – such as scientists, business groups and various non–governmental organisations, and 3,076 journalists.[1220]

Going back to the IER's influence on non-state actors through its IPCC assessment reports, the IPCC provides unbiased reports compiled from expert research globally. The reports provide a comprehensive summary of what is known about the drivers of climate change, its impacts and future risks, and how adaptation and mitigation can reduce those risks.[1221] These reports are

[1217] UNFCCC 'Promoting Effective Participation in the Convention Process' (New York, 2004)
[1218] The Paris Agreement above n37, art 12.
[1219] Naghmeh Nasiritousi and Bjorn-Ola Linner "Open or Closed Meetings? Explaining Nonstate Actor Involvement In The International Climate Change Negotiations" (2016) 16 Int Environ Agreements at 141.
[1220] Robert McSweeney "Analysis: Which Countries Have Sent the Most Delegates to COP25" (Carbon Brief, December 3, 2019) https://www.carbonbrief.org/analysis-which-countries-have-sent-the-most-delegates-to-cop25 .
[1221] IPCC "About the IPCC" https://www.ipcc.ch/about/ .

culminated from the assessment of thousands of scientific reports that are reviewed by experts and governments around the world. Hulme and Mahoney comment on the extensive agreement of commentators and critics on the significant influence of the IPCC on climate change knowledge, climate policy development and public discourse about climate change.[1222]

Regarding the status of the IPCC within non-governmental organisation, Gough and Shackley emphasised the significance of the IPCC in helping to fashion and consolidate a global climate change epistemic community by mobilising science that support campaigning agendas.[1223] Epistemic community in this sense is what Haas refers to as culminating from building a community identity- in the case of climate change, a scientific consensus, especially about the role of humans in climate change.[1224] Put differently, according to Hulme and Mahony, the IPCC has legitimised the scientific vocabulary that NGOs have been able to deploy in public spaces.[1225] As the most authoritative source of scientific knowledge and advice on international and national climate policy,[1226] non-state actors have come to rely on the IPCC assessment reports to demand climate action from governments. For example, some NGOs have made powerful statements regarding the importance of the IPCC reports captured in a 2016 IPCC survey.

The Greenpeace, one of the largest and most recognised environmental NGOs have also made public statements, on the basis of the scientific evidence of the IPCC scientific reports, calling on governments to act. For example, Kaisa Kosonen, Senior Political Advisor from the Greenpeace Nordic chapter referring to the IPCC AR6 report and the urgency of action by governments remarked, "……We're not going to let this report be shelved by further inaction. Instead, we'll be taking it with us to the courts. By strengthening the scientific evidence between human emissions and extreme weather the IPCC has provided new, powerful means for everyone everywhere to hold the fossil fuel industry and governments directly responsible

[1222] Mike Hulme and Martin Mahony "Climate Change: What do we Know about the IPCC" (2010) 34 Progress in Physical Geography 5, 705 at 712.

[1223] Clair Gough and Simon Shackley " The Respectable Politics of Climate Change: The Epistemic Communities and NGOs" (2001) International Affairs 2, 329-346. See also

[1224] Mike Hulme and Martin Mahony n1222 above at 711.

[1225] Ibid at 713.

[1226] Maximilian Mayer and Friedrich J. Arndt "The Politics of Socionatures: Images of Environmental Foreign Policy. In: Harris PG (ed) *Environmental Change and Foreign Policy: Theory And Practice*. (London: Routledge, 2009) 74–89.

for the climate emergency. One only needs to look at the recent court victory secured by NGOs against Shell to realise how powerful IPCC science can be…."[1227]

Li Shuo of the Greenpeace East Asia commenting on China's recent floods remarked,

"The scientific evidence of climate change and its impact is clear. This summer's floods have just made it real for China. There is no reason to shy away from urgent action. Stopping the construction of China's coal-fired power plants will greatly contribute to global climate momentum. Doing so is economically sound and is ultimately for China's self-interest."[1228]

Non-state actors also influence the agenda of several COP sessions and raise awareness by organising seminars and workshops during COP events. NGOs for example, use the information they have gathered and processed from the publication of IPCC reports and their observations during negotiations to lobby governments by presenting their requests to them during meetings at the negotiation or in their various capitals.[1229] Non-state actors also share their expertise and propose solutions to climate change issues. The annual COP designates areas of the COP venue for non-state actors to interact with each other and deliver presentations, formal speech interventions at side events or exhibits.[1230] They also establish cross-national networks to encourage partnerships and funding initiatives for emissions reductions, mitigation and adaptation projects.

The IER has also influenced businesses. Businesses are pledging to reduce their emissions. In some cases, governments support emissions reduction efforts through initiatives and in other cases, businesses elect to reduce their emissions. They could declare their intentions in the media or set targets with Science Based Target Initiative (SBTi) which partners with CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). These targets show companies and financial institutions how much and how quickly they need to reduce their GHG emissions to prevent the worst effects of climate

[1227] Greenpeace International "IPCC Report Signals Decisive Moment for Humanity: Urgent Climate Action Needed" August 9, 2021 https://www.greenpeace.org/international/press-release/49125/ipcc-report-signals-decisive-moment-for-humanity-urgent-climate-action-needed/

[1228] Ibid

[1229] Katharina Rietig "The Power of Strategy: Environmental NGO Influence in International Climate Negotiations" (2016) 22 Global Governance 269 at 270.

[1230] Heike Schroeder and Heather Lovell "The Role of Non- State Actors and Side Events in International Climate Negotiations (2012) 12 Climate Policy 1 at 23-37.

change. All the selected countries have companies registered under the initiative, however, the numbers of companies relative to the population size is small.

Businesses are also registered with the UN Global Climate Action Portal (UNGCAP). It was launched by the UN Climate Change in 2014 with the realisation that addressing climate change requires take ambitious, broad-based action from all segments of society, public and private. The Portal launched the tracking of voluntary climate action progress made by individual actors and cooperative initiatives that are registered in the portal.[1231] Currently the platform receives climate action data of companies, organisations, investors in 196 countries.[1232] By registering under the UNGCAP database to scale up climate action, these businesses are committing to facilitate the achievement of the Paris Agreement.[1233]

The Swedish business sector is also showing growing support for climate transition and eighteen industries developing roadmaps for fossil-fuel competitiveness under the Fossil Free Sweden initiative.[1234] The Swedish Climate Policy Council has also offered recommendations for the Swedish government to provide a stable climate for businesses with emissions-reductions goals to thrive. [1235] The Swedish government is supporting private sector decarbonisation through its 2015 Fossil Free Sweden initiative. The initiative is geared toward increasing the pace of climate transition toward a fossil free Sweden. So far the platform has drawn up 21 roadmaps showing how different sectors can decarbonize to meet targets set out in Sweden's climate policy framework that was adopted by its parliament in 2017.[1236]

In July 2021, Swedish financial services leader, Klarna committed to reducing its total emissions by 50% by 2030. As a signatory to the Climate Pledge, Klarna is now among more than 100 companies across 25 industries in 16 countries committed to reaching the Paris Agreement 10 years early.[1237] Signatories to the Climate Pledge agree to measure and report GHG emissions on a regular basis, as well as implement decarbonisation strategies in line with

[1231] Global Climate Action "About" https://climateaction.unfccc.int/About .
[1232] Global Climate Action "26,309 Actors Engaging in Climate Actions" https://climateaction.unfccc.int/ .
[1233] UNFCCC "Actor Tracking" https://climateaction.unfccc.int/Actors
[1234] Fossil Free Sweden "Politik för fossilfri konkurrenskraft" October 28, 2019 https://fossilfrittsverige.se/2019/10/28/politik-for-fossilfri-konkurrenskraft/
[1235] Swedish Climate Policy Council "2020: Report of the Swedish Climate Policy Council" https://www.klimatpolitiskaradet.se/wp-content/uploads/2020/05/2020reportoftheswedishclimatepolicycouncil.pdf .
[1236] Fossilfritt Sverige "About Fossil Free Sweden" https://fossilfrittsverige.se/en/about-us/
[1237] Amazon News "Swedish Financial Services Leader Klarna Joins the Climate Pledge" July 2, 2021 https://www.aboutamazon.eu/news/sustainability/swedish-financial-services-leader-klarna-joins-the-climate-pledge .

the Paris Agreement through real business changes and innovations. Signatories also commit to neutralising any remaining emissions with additional, quantifiable, real, permanent, and socially beneficial offsets to achieve net-zero annual carbon emissions by 2040—a decade ahead of the Paris Agreement's goal of 2050.

In a research project[1238] funded by the Swedish Research Council for Sustainable Development (Formas) between 2018-2021, empirical data from 19 interviews, suggested that the motives for Swedish businesses' climate action included national policy and legislation as well as international environmental agreements such as the Paris Agreement.[1239] Over 31 companies with headquarters in Sweden, in sectors such as real estate, retailing and construction, have also adopted science based targets to reduce their climate impact. Other companies, such as pulp and paper manufacturers, home appliance manufacturers and telecommunications companies have registered voluntary climate targets in UN's Global Climate Action database.[1240] Some of the companies on the Fossil Free Sweden platform have also registered with the UNGCAP.

In Denmark, leading businesses such as Lego- the giant toy company and Maersk have committed to reducing emissions and using more sustainable material for production.[1241] In the case of LEGO, it committed to reducing its absolute carbon emissions by 37% by 2032 to ensure the company plays its part in limiting the effects of climate change. The target has been approved by the Science Based Target initiative (SBTi) as consistent with levels required to keep global warming to below 1.5°C, the most ambitious goal of the Paris Agreement.[1242] Maersk has recently announced further emissions targets expected to align the company with the Net Zero criteria of the Science Based Targets initiative (SBTi) pathway to limit global warming to 1.5°C. [1243] The targets go beyond previous efforts to reduce emissions related to

[1238] The research project is titled 'Climate action in the post-Paris context. The role of Non-state initiatives in the transformation of Sweden into a fossil-free welfare state'.
[1239] Cornelia Fast and others "Addressing Climate Change the Nordic way: Motives of Swedish Companies for Taking Action" (Nordics Info, Aarhus University, June 23, 2020) https://nordics.info/show/artikel/addressing-climate-change-the-nordic-way-motives-of-swedish-companies-for-taking-climate-action
[1240] Ibid
[1241] Maersk "Leading Danish Companies Join Forces on an Ambitious Sustainable Fuel Project" May 26,2020 https://www.maersk.com/news/articles/2020/05/26/leading-danish-companies-join-forces-on-an-ambitious-sustainable-fuel-project ; LEGO "Reducing Our CO2 Impact" https://www.lego.com/en-it/aboutus/co2-impact/ .
[1242] LEGO "The LEGO Group's Carbon Goal approved by Science Based Targets initiative" December 7, 2020 https://www.lego.com/en-gb/aboutus/news/2020/december/science-based-targets-initiative/
[1243] Maersk "A.P. Moller - Maersk accelerates Net Zero emission targets to 2040 and sets milestone 2030 targets" January 12, 2022 https://www.maersk.com/news/articles/2022/01/12/apmm-accelerates-net-zero-emission-targets-to-2040-and-sets-milestone-2030-targets

the ocean fleet as they cover all direct and indirect emissions across the entire Maersk business.[1244]

Lego and Maersk are 2 out of 126 companies that have registered with the UNGCAP to scale up climate action, signalling their commitment to the Paris Agreement goals. Unlike Sweden, the Danish government has not established any climate change collaboration initiative with businesses at the national level. Unlike Swedish business that have motivations for emissions reductions from both government and the IER, Danish businesses' motivation can be linked to the IER through the UNGCAP registration in the absence of direct government/business collaboration in Denmark.

Similar to Denmark, Finland's businesses have pledged to reduce emissions. Surprisingly, Finnish businesses are 'begging' the government to go climate neutral. Under the Climate Leadership Coalition, the Finnish industries have argued that the world benefits better where environmental standards are higher. The Finnish industries decisive move to put pressure on the government leads back to the Paris Agreement and provides a reference point for non-state actors to demand climate action from their host countries. The Finnish business community has also been on the international vanguard of promoting ambitious climate targets and accelerating their practical implementation. Finnish businesses have also been keen on the finalisation of the Paris rulebook so that companies can trade in emission reduction units transparently and internationally."[1245] At the just concluded COP 26 conference, Jyri Häkämies, Director General of the Confederation of Finnish Industries (EK) commented, "Our companies are committed to the Paris Agreement targets. Now the same is expected from political decision-makers."[1246]

Indian businesses are also taking climate action and increasingly setting targets to reduce emissions through energy efficiency and RE deployment for business operations, expected to help India meet its commitments made under the Paris Agreement on climate change.[1247] About sixty-four Indian companies have set or committed to setting science-based targets under the SBTi which provide companies with a clearly defined path to reduce emissions in line with the

[1244] Ibid
[1245] Confederation of Finnish Industries "COP26 Summit: Finnish Business Calls for High Ambition and Clear Outlook for Green Investments" October 29, 2021 https://ek.fi/en/current/bulletins/cop26-summit-finnish-business-calls-for-high-ambition-and-clear-outlook-for-green-investments/
[1246] Ibid
[1247] Soumya Sarkar "Indian Companies Raise Bar on Climate Action" (India Climate Dialogue) https://indiaclimatedialogue.net/2017/10/24/indian-companies-raise-bar-climate-action/ .

Paris Agreement goals.[1248] The SBTi is the lead partner of the Business Ambition for 1.5°C campaign - an urgent call to action from a global coalition of UN agencies, business and industry leaders, mobilizing companies to set net-zero science-based targets in line with the 1.5°C future. [1249] These targets are in line with the Paris Agreement and IPCC recommendations.[1250] 217 companies have also joined the UNGCAP and carbon intensive companies such as the Adani Group and Ambuja Cements, have pledged ambitious climate targets in line with the Paris Agreement goal.[1251] Although the Indian government has not set any initiatives to galvanise the acceleration of emissions reductions by businesses, similar to Sweden, the Prime Minister announcement of India's commitment to achieve net zero emissions by 2070 may spur more businesses to reduce their emissions.

Norwegian Airlines launched its environmental sustainability strategy in 2020, committing to cut carbon emissions by 45 percent by 2030 in line with the 1.5°C target set forth in the Paris Agreement.[1252] 99 Norwegian companies have joined the UNGCAP and prominent companies such as Aker solutions, Statoil and Oslo Airports have either pledged to reduce emissions or emissions intensity or are participating in cooperative activities to mitigate emissions in line with the Paris Agreement goal. The Norwegian government has pledged to encourage businesses to adapt in order to compete as climate policy becomes stricter.[1253] The government also appointed an expert committee to prepare a proposal for green competitiveness and businesses in different sectors cooperated to review what a transition to a low-emission society would look like.[1254] Like Sweden, Norwegian businesses have a mix of both IER and domestic influence driving their emissions reduction action.

Like Sweden, the Moroccan government has involved the private sector in its low-carbon strategy. Shortly after the Paris Agreement, Morocco included the private sector as a key player in implementing its energy transition and emissions reduction goal.[1255] 9 Moroccan companies

[1248] Indra Guha "Business Action in the Wake of COP26" (Outlook India, April 4, 2022) .
[1249] Science Based Targets "Who We Are" https://sciencebasedtargets.org/about-us#who-we-are
[1250] Indra Guha above n1242.
[1251] Global Climate Action "India: 551 Actors Engaging in Climate Actions" https://climateaction.unfccc.int/
[1252] Norwegian.com "Norwegian commits to reduce CO2 emissions by 45 percent by 2030" September 17, 2020 https://media.uk.norwegian.com/pressreleases/norwegian-commits-to-reduce-co2-emissions-by-45-percent-by-2030-3035500 .
[1253] Norwegian Government "Better Growth, Lower Emission: The Norwegian Government's Strategy for Green Competitiveness" https://www.regjeringen.no/contentassets/4a98ed15ec264d0e938863448ebf7ba8/t-1562e.pdf at 5.
[1254] Ibid at 7.
[1255] NDC Partnership "Engaging the Private Sector in a Low Carbon Transition: Lessons From Morocco" https://ndcpartnership.org/news/engaging-private-sector-low-carbon-transition-lessons-morocco .

have also registered with UNGCAP, some companies such as Douar Tech have pledged to halve emissions by 2030.[1256] While there is a strain of IER influence, the Moroccan government's influence in partnering with the private sector to reduce emissions is more significant. Thus, it would appear that the emissions reduction efforts of the private sector in Morocco are driven by the Moroccan government rather than the other way around.

Nigeria and China have 22 and 549 companies registered under UNGCAP respectively. In China, guidelines for emissions reduction actions will be filtered from the government. As sector-specific and regional FYPs start to take form, these policy changes will gradually be delegated down to businesses and society across sectors and regions.[1257] The Chinese government has not at this time, set up an initiative where businesses can review the path to a low emissions society. It is possible that such initiatives may be included in the regional and sector specific FYP. Additionally, China has an emerging emissions trading scheme that potentially opens opportunities for business actors to reduce emissions in line with the Paris Agreement objectives. The Energy Commission of Nigeria (ECN), the Federal Ministry of Environment and the British High Commission in Abuja have jointly launched the an energy and emissions model - Nigeria Energy Calculator 2050 (NECAL 2050) to help industries and the energy sector to set their GHG emission reduction targets and identify realistic solutions which support the implementation of Nigeria's climate commitments. In Nigeria and China, both IER and domestic influence on emissions reductions is minimal at this time. This is because very few companies relative to the population of both countries have signed on to UNGCAP or publicly declared emissions reductions in line with the Paris Agreement. On the domestic front the initiatives or plans for the business sector from the government have not been operationalised.

The IER has influenced climate change protests around the world through the release of the IPCC annual reports which contain the latest scientific findings on climate change impacts. The dire findings in these reports have caused concern amongst activists and environmental groups across the globe. These concerns have galvanised environmental groups and NGOs globally to stage protests calling their respective governments to act. The scientific findings and the clear objectives of the Paris Agreement on keeping temperatures below 2^{o}C fuel these

[1256] Global Climate Action "51 Actors Engaging in Climate Change" https://climateaction.unfccc.int/
[1257] Lin Wang and Olivia Li "China's Climate Goals, The 14th Five-Year Plan, and the Impact on Sustainable Business" (BSR, April 28, 2021) https://www.bsr.org/en/our-insights/blog-view/china-climate-goals-the-14th-five-year-plan-sustainable-business-impact

climate protests and can often be seen on their protest banners. Much recently, over 1,000 scientists from over 25 countries staged protests following the release of the IPCC's 6th Assessment Report on climate change mitigation that warned of the necessity for rapid and deep cuts to GHGs by 2025 to avoid catastrophic climate effects. These scientists are now demanding action from their governments based on the findings in these reports.[1258]

One of the most recognised global protests is Fridays for Future, which is a youth-led organised global climate strike movement that started in August 2018. This movement started because of Greta Thunberg, a 15 year old student who was concerned about the low level of action to reduce carbon emissions and demanded that the Swedish government take steps in accordance with the Paris Agreement.[1259] By March 2019, that movement comprised over 1.4 million students in more than 300 cities worldwide.[1260] These protests have gained momentum from the IPCC reports and the Paris Agreement's goal to rapidly reduce emissions, which climate activists want their respective governments to comply with.

Several NGOs have also challenged governments based on the Paris Agreement requirements. In Norway, Greenpeace Norway Arctic campaigner, Erlend Tellnes, from on board the Arctic Sunrise, made a bold statement, saying:

"Norway is not as green as their image. With one hand, the government have signed the Paris Agreement and profiled themselves as an environmental champion, whilst handing out hundreds of new oil blocks in the Arctic with the other. They ignore and disrespect environmental, scientific recommendations and have offered the oil industry licenses in some of the most pristine areas of the Arctic. Now they have to answer for their actions in court."[1261]

In Morocco, an active community of environmental NGOs are demanding more ambitious climate action. School students have also taken to the streets to demand that the government consider the future generation in their decisions.[1262] In 2019, a call for protests in five major

[1258] Margaret Osborne "Scientists Stage Worldwide Climate Change Protests After IPCC Report" (Smithsonian, April 13, 2022)
[1259] Pernille Almlund "Greta Thunberg- A Climate Activist" 22 June 2020 https://nordics.info/show/artikel/greta-thunberg
[1260] Neil Gunningham "Averting Climate Catastrophe: Environmental Activism, Extinction Rebellion and coalitions of Influence" (2019) 30 Kings Journal 2 at 201.
[1261] Greenpeace International "Greenpeace Activists Confront Norwegian Government's Arctic oil Drilling Site" August 17, 2017 https://www.greenpeace.org/international/press-release/7132/greenpeace-activists-confront-norwegian-governments-arctic-oil-drilling-site/
[1262] Sebastian Bouknight "Young Moroccan Activists Rally for Climate Action" (Al-Monitor, October 1, 2019) https://www.al-monitor.com/originals/2019/10/morocco-rally-climate-change.html .

cities in Morocco: Marrakech, Casablanca, Rabat, Fez and Demnate was responded to by thousands of participants who marched the streets of these cities calling for action on climate.[1263] NGOs, volunteers, social clubs, teachers and scouts joined in those marches calling for climate actions from the government.[1264]

In Sweden, Swedish environmental activist Greta Thunberg started with a lone protest to pressure the government to meet its emissions targets and reduce their carbon emissions in line with the Paris Agreement.[1265] Her small campaign had a global effect inspiring young people globally to organise their own school strikes to demand for climate action from their respective governments. In the Friday for Future strikes in Sweden, Thunberg said, "Every Friday we will sit outside the Swedish parliament until Sweden is in line with the Paris Agreement."[1266] Taking the protest to the World Economic Forum, Thunberg challenged world leaders, "We want you to follow the Paris Agreement and the IPCC reports. We don't have any other manifests or demands. Unite behind the science, that is our demand."[1267]

Like protests in Sweden, Danish students took part in a protest against climate change in front of the parliament building Christiansborg Castle in Copenhagen, as part of youth demonstrations across the world to try to spark world leaders into action on climate change.[1268] The Danish chapter of Greenpeace have been involved in several climate protests against big oil operators such as Shell, piggeries and feed factories to reduce their emissions.[1269] Four Danish activists with Greenpeace went as far as swimming to the Dan oil field in the Danish North Sea demanding an immediate ban on all further oil and gas exploration in Denmark, followed by a complete phase out of domestic fossil fuel production and a massive expansion

[1263] Dania Cherry "For the First Time in History, Youth from Morocco, Lebanon, Tunisia, Iraq and other Countries in the MENA Region Marched the Streets and Demanded Climate Action" (Greenpeace Morocco Press Release, September 27, 2019)
[1264] Ibid
[1265] Jonathan Watts "Greta Thunberg, Schoolgirl Climate Change Warrior" 'Some People Can Let Things Go. I Can't" (The Guardian, March 11, 2019) https://www.theguardian.com/world/2019/mar/11/greta-thunberg-schoolgirl-climate-change-warrior-some-people-can-let-things-go-i-cant
[1266] NPR "Greta Thunberg: Are We Running out of Time to Save the Planet" June 7, 2019 https://www.npr.org/transcripts/730383662
[1267] NPR "Transcript: Greta Thunberg's Speech at the U.N. Climate Action Summit" September 23, 2019 https://www.npr.org/2019/09/23/763452863/transcript-greta-thunbergs-speech-at-the-u-n-climate-action-summit
[1268] Alistair Walker "Denmark Climate Youth Protest" March 15, 2019 https://www.politico.eu/interactive/in-pictures-global-climate-strike-fridays-for-future/denmark-climate-youth-protest/
[1269] Greenpeace International https://www.greenpeace.org/international/press-release/49658/activists-block-feed-factory-in-denmark-to-protest-danish-crowns-greenwashing-of-meat/ ; https://www.greenpeace.org/usa/8-million-strong-save-arctic-just-beginning/protest-against-shell-at-fredericia-in-denmark/ .

of clean offshore wind power. These demands echo the Paris Agreement's central aim of keeping the global temperature rise to below 2 degrees Celsius and even further to 1.5 degrees Celsius.

In Finland, members of the Extinction Rebellion, a global environmental movement have protested in front of the Finnish Parliament House, demanding for a declaration of a climate emergency. One of the protesters Hanni Häkkinen remarked "At this moment, Finland is not following the Paris Agreement, as long as this is the situation, I'm coming back here every day, until the government declares a climate emergency."[1270]

There has been only one report of climate change protests staged by a lone individual in China, which was not tolerated by authorities.[1271] Climate activism in China does not follow the same format as western democratic environmentalism, it is uniquely environmentalism with Chinese characteristics.[1272] A former environmental journalist remarked that climate activists and NGOs have to "show you're willing to cooperate, and that you come with constructive criticisms, and you follow the government agenda – say the 2030/2060 carbon goals. You don't say 'it's too late', you say 'here is our proposal". NGOs have to work on the side lines as most environmental movements are driven by the government or elites.[1273]

In the past few years, climate activists, mainly comprising students, environmentalists and farmers, have renewed climate protests in India.[1274] In some cases, the government has not responded favourably by arresting activists, but this has not diminished India's fledgeling climate change movement.[1275]

In summary, the IER has influenced non-state actors, climate activists, environmental NGOs and businesses. In the case of businesses, some businesses without state intervention signalled

[1270] Sanna Voltti "Climate Protests Outside Helsinki Parliament Continue" (The Click News, October 7, 2021) https://theclick.news/extinction-rebellion-protest-finland-climate/
[1271] Stephen Lee Myers "Ignored and Ridiculed, She Wages a Lonesome Climate Crusade" (New York Times, December 4, 2020) https://www.nytimes.com/2020/12/04/world/asia/ou-hongyi-china-climate.html
[1272] Environmental Activist Ou Hongyi's comments to The Guardian. Helen Davidson "'You Follow the Government's Agenda': China's Climate Activists Walk a Tightrope" August 16, 2021 https://www.theguardian.com/world/2021/aug/16/you-follow-the-governments-agenda-chinas-climate-activists-walk-a-tightrope
[1273] Ibid.
[1274] Manavi Kapur "India Joins the Global Climate Change Strike" (Quartz India, September 21, 2019) https://qz.com/india/1712995/the-global-climate-strike-inspires-protests-in-indias-cities/ .
[1275] Rhea Mogul "Disha Ravi: Indian Climate Activist Becomes Symbol of Crackdown on Dissent" (NBC News, February 20, 2021) https://www.nbcnews.com/news/world/disha-ravi-indian-climate-activist-becomes-symbol-crackdown-dissent-n1258337 .

commitments to and in some cases undertook emissions reduction targets in line with the Paris Agreement goal. These commitments were visible in Denmark, Finland and India. In Sweden, there was IER and domestic influence on businesses as the state had organised initiatives and collaborated with businesses to reduce emissions and Swedish businesses had independently joined the UNGCAP. All the selected countries had businesses registered with UNGCAP although in Nigeria, China and Morocco, there were fewer companies registered relative to the country's population.

The IER also influenced protests in several of the selected countries although direct references to the Paris Agreement and IPCC reports were evident in Sweden, Norway and Finland. It is important to highlight that many of the school strikes for climate action that have occurred across some of the selected countries such as Nigeria, Sweden, Finland and Denmark was as a result of Greta Thunberg's initial school strike demanding for the government to reduce its emissions in line with the Paris Agreement. The available press releases on these school strikes for climate action do not contain direct quotes referencing the Paris Agreement of the IPCC.

VIII. Conclusion

In conclusion, the IER's hybrid architecture that prescribes bottom-up and top-down approaches to tackling climate change has stimulated climate action in both state and non-state actors. The inclusion of non-state actors in global climate negotiations has encouraged bottom-up actions to complement the top-down nature of the IER. Going back to Young's expanded regime theory, the UNFCCC, as an enhancer of cooperation, has used its framework to enable cross-sectoral, cross-regional and international relationships to enable parties to share challenges and successes implementing NDCs toward emissions reductions. In countries where the government has cooperated with non-state actors, for example, the business sector, to reduce emissions, the IER objectives still formed the basis for such coalitions, and in this sense, the IER indirectly influenced the political will and behaviour of both parties. In other cases where the non-state actors voluntarily opted to set targets to reduce their emissions, these actions were causatively linked to the Paris Agreement, especially where the governments had not mandated them to reduce emissions.

The Paris Agreement has influenced the increase in climate change litigation. By providing for non-state actors engagement in policymaking and public participation in climate change solutions, the Agreement has impacted rising climate change litigation cases globally. The Grantham Research report confirmed this stating that, these "new cases have started forcing

courts to rule on the consistency of countries' actions with the Paris Agreement."[1276] Presently, it is unclear whether the rise in climate litigation will translate to a significant momentum in emissions reduction efforts. However, landmark cases such as the *Urgenda, Greenpeace* and *Aroksar* provide hope that governments will be held accountable to fulfil their commitment to emissions reductions. Further the examination of the cases in the selected countries revealed that litigants relied on provisions of the Paris Agreement and the IPCC reports as the basis for their claims. The Courts in turn duly considered the Paris Agreement, IPCC reports and international environmental principles before making its ruling. This is indicative of the normative influence of the Paris Agreement on the litigants and the courts, using the parameter of climate litigation.

The IER influenced environmental NGOs through its IPCC reports that have formed the foundation of their demands for climate action. Further, IPCC scientists involved with the compilation of the Assessment Reports as non-state actors have gradually influenced the governments of their countries, as indicated in the example of China, discussed above.[1277] The IER also influenced businesses through their registration with UNGCAP. By registering with UNGCAP businesses are committing to facilitate the achievement of the Paris Agreement by facilitating climate action.

The IER also actively influenced states political will, where it provided incentives for states to commit to implementing the Paris Agreement goals. These incentives included financial and technical assistance. As a result, countries such as Morocco have gone against the grain to develop their renewable energy sector, even though it is still a developing country with little natural resources. In addition, causative linkages between IER climate change assistance and Morocco's climate efforts point to IER influence.

Finally, the climate protests in the selected countries gained momentum based on the solid scientific evidence that the IPCC provided and the global objective that the Paris Agreement provided. However, it is not known that the protests since 2015 have led to emissions reductions in the selected countries, as this section does not engage with that.

[1276] Michal Nachmany and Joana Setzer "Global Trends in Climate Change Legislation and Litigation: 2018 Snapshot" April 30, 2018 <https://www.lse.ac.uk/granthaminstitute/publication/global-trends-in-climate-change-legislation-and-litigation-2018-snapshot/ >.
[1277] Gao Yun above n929 at 236.

CHAPTER SEVEN

LOOKING AHEAD: HOW CAN THE IER BETTER INFLUENCE FAVOURABLE EMISSIONS REDUCTIONS OUTCOMES?

I. Introduction

This thesis set out to examine the influence of IERs on members, particularly in terms of GHG emissions reductions. The thesis investigated the influence of the UNFCCC and the Paris Agreement on the environmental behaviour of eight countries, namely: Norway, Denmark, Sweden, Finland, China, India, Morocco and Nigeria. The thesis also examined other interactions between the IER and REOs, interactions among the REOs, interactions between the REOs and their members, and interactions between REOs and third countries. The thesis set out to answer whether the Paris Agreement has influenced emissions reductions and climate action in the selected countries. The research was motivated by contestations concerning the powers and relevance of the UNFCCC and the Paris Agreement in getting countries to take urgent climate action. The thesis utilises established parameters proffered by some environmental scholars to measure the effectiveness of earlier international agreements such as the Montreal and Kyoto Protocol. This thesis builds on these previous attempts and applies the parameters to the Paris Agreement to determine whether the Paris Agreement has influenced emissions reductions in the selected countries.

The thesis also introduces new parameters that have not been used in the existing literature to analyse international environmental regime influence, such as political will subsumed under behavioural changes, the equipping of environmental courts, climate litigation under the enforcement parameter and NDC target review subsumed under the implementation parameter. It is significant to note that the thesis also investigates the climate change efforts of non-state actors comprised of businesses and environmental NGOs in the selected countries. The factors considered for the investigation were: climate activism through protests, climate litigation and non- state actor efforts at reducing emissions, particularly businesses that have either reduced their emissions or pledged to reduce emissions. The thesis offers a fresh insight into the current climate actions of the selected countries and establishes linkages to the influence of the UNFCCC and the Paris Agreement.

This chapter summarises the findings of the previous chapters depicting the various interactions of the UNFCCC and the Paris Agreement with REOs and the case studies highlighted above pointing to IER influence. It also draws summations from the analysis of the emissions reduction efforts of the selected case studies and concludes that the IER has directly and indirectly influenced climate actions in the various countries and regions examined. Although many countries have committed to cease fossil fuel exploitation and become carbon zero between 2030 and 2045, there have been solid efforts to achieve this goal. For example, countries have designed climate change policies and legislation, businesses and states have formed coalitions to reduce emissions, and courts have issued judgments, taking into account the Paris Agreement objectives and the IPCC scientific reports. These efforts are taken into account to measure influence rather than the degree to which GHG emissions have reduced, as the latter speaks more to effectiveness derived from long term monitoring rather than influence. Also, scientists warn that it would take decades to observe actual results, particularly in keeping global temperature rise below 2^{o}C above pre-industrial levels.

The thesis laid the foundation for IER and IEA influence by first emphasising collective responsibility for emissions reduction. Set out in chapter one, the thesis resonated with the UNFCCC hybrid approach captured in its preamble that acknowledges

"that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with **their common but differentiated responsibilities and respective capabilities** and their social and economic conditions…."[1278] (emphasis added)

This hybrid approach encourages states to take responsibility by not dictating to them or imposing express targets but allows them to set their own pace through their targets. Similarly, the Paris Agreement adopts the same approach that follows a bottom-up combination of equity allocations in consonance with the top-down element of a global warming threshold prescribed by the Agreement.[1279]

[1278] Preamble to the UNFCCC.

[1279] Yann Robiou du Pont and Malte Meinshausen "Warming Assessment of the Bottom-Up Paris Agreement Emissions Pledges" (2018) Nature Communications at 2.

In chapter two, the thesis set out the green political theory and the regime theory as its theoretical framework. The framework also examined concepts of climate justice and environmental sustainability. The regime theory helped contextualise the UNFCCC and the Paris Agreement as an IER. It also highlighted the perceptions of an IER from the realist, neoliberal and cognitivist interpretation. The thesis resonates most with Young's expanded regime theory approach that the level of a regime's effectiveness incorporates the willingness or desire of a majority of its members to pursue a desired environmental outcome and their ability to put pressure on dissenting members within a corporate setting.[1280] This approach supports the thesis investigation of climate efforts captured in the behavioural process towards achieving the desired outcome. Chapters five and six captured the behavioural changes of the different actors within the selected countries after the signing of the Paris Agreement. These behaviours included ratification of the Paris Agreement, designing and submitting NDCs, agreeing to quantified emissions reductions and willingness to incorporate alternative clean energy to replace emissions-generating fuels.

The green political theory also emphasised the collective responsibility of both states and individuals to care for the environment. The theory also supports the hybrid approach adopted by the IER. The thesis findings revealed collaborative actions between governments and non-state actors in climate change efforts in all the selected countries but more actively in Morocco, Sweden and Denmark. In these countries, the government had established a coalition with business enterprises, industries and other relevant stakeholders to map out ways of reducing emissions.

The theory supported restraint from burdening the IER and its institutions with the sole responsibility of ensuring environmental compliance, re-echoing Bosselman's proposition that governments ought to assume a trusteeship role over the environment.[1281] However, this proposition does not mean that the IER or its institutions do not have any role to play in emissions reductions. On the contrary, Bosselman's suggestion that states can jointly act as trustees at the international level over the global commons creates the need for an overarching trusteeship framework that the UNFCCC should fulfil.

[1280] Oran Young above n77.
[1281] Klaus Bosselmann above n46 at 272.

Chapter three broadly examined the nature, structure and functions of the IER and the IEA. From the examination, several reoccurring parameters used to assess the effectiveness of previous environmental regimes were extracted to measure the influence of the Paris Agreement. The parameters extracted that could impact the IER influence are problem structure and institutional design, legal bindingness of an IEA, implementation, compliance, monitoring, enforcement, economic and time regulatory structures, environmental sustainability and climate justice, availability of environmental programmes and behavioural effects.

The chapter also examined the monist and dualist theories to assess climate behaviour in general in terms of receptivity to international environment treaties or agreements. One significant finding was that interactions within a regime could pressure countries to adopt a treaty irrespective of whether it was dualist or monist. Thus, while monist countries may find it easier to accept IEAs as they crystallise domestic and international laws as belonging to one legal order, dualists may not, but the thesis found that this does not deter IEA influence. This is because regime interactions involving powerful states can persuade dissenting countries to adopt an IEA, while non-state actors can pressurise their home governments to ratify it. Further, where a government decides not to ratify an IEA, sub-nationals can still incorporate the provisions of that IEA in their local environmental laws. This was the case of the US, where a coalition of governors decided to adopt the provisions of the Paris Agreement and set targets to reduce emissions.

Chapter four applied the parameters to the climate change regime: the Kyoto Protocol, the Montreal Protocol, and the Paris Agreement. First, the Kyoto Protocol and the Montreal Protocol were contrasted to identify the strengths and weaknesses and determine what made either more effective than the other. As these two regimes have had several commitment periods implemented by countries, the test for effectiveness was appropriate. Second, the same parameters were applied to the Paris Agreement to investigate whether the Agreement's provisions and mechanisms were fortified against the challenges of the two protocols. To do this a detailed examination of the Paris Agreement's objectives, obligations for Parties and compliance and implementation mechanisms was conducted. One of the findings was that the Paris Agreement departed from the Kyoto Protocol's compliance mechanism structure to include a facilitative approach through its enhanced transparency framework in Article 13 of the Agreement. The Paris Agreement also retained the economic mechanisms found in both the Montreal and Kyoto Protocol. Interesting developments included the long awaited MPGs

on Article 6 voluntary cooperation mechanism that includes market and non-market approaches, making it potentially easier for countries who did not want market based approaches to participate. The implementation and compliance mechanisms of the Paris Agreement provided for in Article 13, 14, 15 are yet to be operationalised. It is expected that the PAICC will complete the remaining rules of procedure on its substantive functions of facilitating compliance with and implementation of party obligations of conduct covered in the various articles of the Paris Agreement. One significant observation is the intricate linkages of the Paris Agreement compliance and implementation mechanisms such as the PAICC, with the reporting and review mechanisms under the ETF and the global stocktake commencing in 2023. When fully operational, these mechanisms can comprehensively and robustly engage with Parties to enable the implementation of the Parties' obligations under the Paris Agreement. Future research can benefit from an analysis of these mechanisms when they become fully operational.

Chapters five and six examined the interactions of the IER actors at the regional and national levels to determine IER influence. In the fifth chapter, the findings revealed that the IER influence on the EU's ambitious climate action was primarily passive. The EU formulated its environmental regulation in line with the Paris Agreement provisions and mandated its members to fulfil their commitments. The EU has also relied on the IPCC's scientific reports to formulate its environmental policies, but that was arguably the extent of the IERs influence on the EU.

The IER was very influential in ECOWAS and MENA. The influence was demonstrated by providing financial assistance, technical assistance and capacity building to the region. Conversely, as the EU consists of developed countries, there is no requirement for financial assistance and so IER influence in terms of funding was absent. A significant finding was that the various REOs also influenced each other. More dominant was the EU influencing ECOWAS and ASEAN through partnerships for renewable energy projects, technical and financial assistance. Another significant finding was that a region's cultural peculiarities could impact the degree of IER influence in that region. For example, ASEAN's mode of cooperation differed from the EU regarding transposing the Paris Agreement's objectives to members.

The chapter also revealed that the lack of an organised REO in the MENA region did not deter IER influence as the IER supported the implementation of its objectives in countries within the region. However, it was found that it was preferable to have an organised REO to enable the

IER's climate funding mechanism to function optimally. In establishing whether the IER was more influential than the REO's on their members, it was found that the EU influenced its members more than the IER. The EU's robust framework provided for implementation, enforcement and compliance measures that helped several countries comply with the EU environmental targets. In the ASEAN region, neither the IER nor ASEAN exercised more influence over the countries. Finally, in ECOWAS and MENA, the IER had more influence than the regional organisations, mainly due to the developing REO framework in both regions.

Chapter six analysed climate action in the selected countries to determine whether the IER was influential. In terms of implementation, causative linkages were drawn between the signing of the Paris Agreement and the enactment of climate change legislation in the countries selected. The chapter found that the governments of the selected countries have either enacted a climate change law or designed regulations to reduce emissions since 2015.

The preamble of the Paris Agreement encouraged the recognition "of the importance of the engagements of all levels of government and various actors, in accordance with respective national legislations of Parties, in addressing climate change..."[1282] This provision suggests an importation of climate change issues into national legislation with the full engagement of all actors. A relatively new study confirmed that all the countries that signed or ratified the Paris Agreement have at least enacted or designed at least one national law or policy on climate change, establishing causative links.[1283] Furthermore, it was found that the Nordic countries mainly complied with the Paris Agreement's provision to provide funding and technical assistance to developing countries.[1284] The UNFCCC, through its funding mechanisms, provided financial assistance for countries to design their NDCs and develop renewable energy technologies.

Passively, the IER influenced the positive emissions reduction efforts in Sweden and Denmark. This influence is inferred from the emphatic wording of the climate legislation that expressly refers to the Paris Agreement as the basis for their climate policy and actions. In Morocco and

[1282] The Paris Agreement above n35, Preamble.
[1283] LSE UK "New study reveals all countries that have signed or ratified the Paris Agreement have at least one national law or policy on climate change" April 30, 2018 <https://www.lse.ac.uk/granthaminstitute/news/new-study-reveals-all-countries-that-have-signed-or-ratified-the-paris-agreement-have-at-least-one-national-law-or-policy-on-climate-change/ >.
[1284] The Paris Agreement above n35, art 9.

India, the IER has played a more significant role in emissions reduction efforts through funding renewable energy projects in these countries, and this was reflected in the environmental performance results. Again the IER's implementation mechanism that could have been useful to help countries fulfil their NDCs is not operational presently, diminishing its influence on developed countries.

Regarding the enforcement parameter, factors such as enforcement through the courts, climate litigation and regulatory enforcement were examined. The thesis acknowledged the influence of the IER in equipping judges with tools to adjudicate better on climate change and sustainability issues, pre and post-2015, however, the thesis noted that although two of the selected countries were part of the GJIE which UNEP supports, there were no strong linkages of UNEP's programs, colloquiums and training equipping activities to the judges in the selected countries. This undermined its influence in the selected countries, however, the proposed judicial portal that enables judges to access environmental information can be useful in providing specific data on the courts and judges that have accessed and utilised such information and what countries they are from. There was also a rise in climate change litigation in five of the selected countries since 2015. The thesis showed that the Paris Agreement had influenced the increase in domestic climate change litigation. The thesis established that before the Paris Agreement, there was no scientific basis for litigants to bring an action against governments on failure to reduce emissions, but the Paris Agreement and the IPCC reports equipped litigants with a scientific basis to file climate change lawsuits and demand climate action from government.

The cases examined within the selected countries revealed that the courts duly considered the provisions of the Paris Agreement and the scientific reports of the IPCC including the carbon budget in determining whether the government had contravened its international obligations where lawsuits challenged governments climate ambition through NDCs or where governments approved of projects that would cause emissions and contravene the Paris Agreement. As the Paris Agreement has been ratified in all the selected countries, the court also examined its NDCs and domestic legislation. The examination of NDCs, IPCC scientific reports and the Paris Agreement provisions speaks to the direct influence of the IER on climate litigation.

The thesis also found that the IER influenced non-state actors, for example businesses who pledged to reduce emissions. In the selected countries, companies joined the SBTi and UNGCAP platforms that help them measure their targets and give advice based on the science to enable them reduce emissions in line with the Paris Agreement goal of keeping temperatures below 2 degrees Celsius and further reductions to 1.5 degree Celsius. Climate activists were also influenced by the IPCC reports and the Paris Agreement but this was more prevalent in Denmark, Sweden and Finland where protesters directly referenced either the Paris Agreement or IPCC reports.

In terms of regulatory enforcement, the IERs influence was minimal. Although the IER thrived in providing financial mechanisms for some developing countries to submit their National Communications on emissions reductions efforts, it did not independently monitor such efforts. The UNFCCC slightly influenced the Nordic countries as it provided technical assistance for developing their National Communications. The EU, however, wielded more significant influence through its robust regulatory enforcement mechanisms. Finally, the enforcement and compliance mechanisms of the Paris Agreement are still in progress.

In terms of its behavioural effect on regime members, the UNFCCC has been influential in addressing the time and problem structure of climate change. For example, the Paris Agreement set out the problem-specific task of stabilizing atmospheric GHG concentrations, which countries can focus on, similar to the Montreal Protocol. The UNFCCC has addressed this specific problem by setting five-year targets for countries to submit their emissions reduction reports. However, the time structure could benefit from being shorter, perhaps two-year targets.

The UNFCCC has also been influential as a utility modifier and an enhancer of cooperation during the five years by maintaining a global platform for continued negotiations, particularly during the annual COP meetings. The COPs have enabled cross-pollination of ideas, strategies and plans from private individuals, corporations and government toward emissions reductions. Although the COP process has been criticised, it has spurred businesses toward emissions accountability. For example, Finnish industries have done an about-face in Finland and are now 'begging' politicians to go green.[1285] Also, Swedish and Indian businesses voluntarily set up

[1285] Politico above n884.

emissions reductions targets in collaboration with either the government or independent outfits that help businesses set independent science-based targets.

The UNFCCC has influenced participation and cooperation toward emissions reductions by distributing responsibilities equitably through the CBDR-RC, and countries that were hitherto opposed to committing to emissions reductions have now set domestic targets to reduce emissions. The UNFCCC as a utility modifier also influenced countries' motivation to reduce emissions by adjusting the cost-benefit ratio to benefit countries. This adjustment allowed countries such as India to benefit from the CDM, and any additional effort to shift from fossil fuels was met by financial incentives toward clean energy technologies. In addition, the Paris Agreement encourages the transfer of technologies and institutional support between countries, further influencing emissions reductions commitments. Under the UNFCCC overarching framework, countries are currently engaging in technology transfer, funding, and capacity building.

As an agent of internal realignments, the UNFCCC has influenced behavioural cooperation by fostering its relationship with REOs such as the EU, ECOWAS, ASEAN and SAARC. For example, where a particular country did not have an overarching regional forum for addressing climate change issues, the UNFCCC engaged in direct interactions through financial agencies and mechanisms such as the World Bank and the GEF. Also, regions that have established partnerships on environmental projects could do so through the enabling platform that the UNFCCC provides.

The findings throughout the thesis indicate that the IER has been influential in emissions reductions efforts. The IER's influence was more tangible in developing countries than the developed countries indicated in the IERs support for RE uptake. The Nordic countries had a robust overarching REO that enabled compliance, although countries such as Sweden and Denmark undertook more ambitious targets according to the Paris Agreement's objectives. In India, Morocco and Nigeria, the IER was more influential, evidenced through its financial and technical assistance for renewable energy projects. Again, there was an increase in climate change regulations, policies, and laws emerging within these countries since 2015.

In addition, the 2^{o}C global temperature target outlined in the Paris Agreement steers present and future actions on mitigation and adaptation, technological development, capacity building

and low-carbon investment that are fundamental for addressing climate change and sustainable development issues. Overall, this thesis has demonstrated that the IER vis-à-vis the Paris Agreement and the UNFCCC are relevant today as an overarching global framework to steer climate ambition and emission reduction efforts. The examination of the selected countries and regions have also offered more profound insights into the internal workings of the IER toward motivating countries to reduce emissions. Although this research is novel in how it presents new parameters and engages with established parameters in evaluating IER influence, further research on the implementation of the Paris Agreement would be beneficial. The implementation mechanisms contained in Article 13, 14, 15 have either just become operational or are developing procedural rules for its core functions as with the PAICC and the ETF for instance. Further research can better indicate whether these implementation processes have influenced sufficient or more ambition from Parties in implementing their Article 4 obligations and more importantly achieving the objective of the Paris Agreement expressed in Article 2.

The scope of the thesis did not engage with IER influence in Oceania and the Americas, particularly with the higher GHG emitting countries such as the United States, Canada and Australia, and future research will benefit from exploring these continents. The following section will offer recommendations that could aid the influence of the IER for the next decade.[1286]

II. Recommendations

The next decade will be crucial for implementing the Paris Agreement objectives and the fulfilment and upscaling of country NDCs. As many countries have set ambitious emissions reductions targets to be realised in 2030, the UNFCCC will need to strengthen its role as an enhancer of cooperation through subsequent COPs. The Paris Agreement through the ETF, the TER committee and the PAICC will need to be strategically positioned to monitor, report and review countries' progress and facilitate compliance and implementation. Six broad recommendations can be drawn from the thesis:

[1286] Yun Gao, Xiang Gao, and Xiaohua Zhang "The 2°C Global Temperature Target and the Evolution of the Long-Term Goal of Addressing Climate Change—From the United Nations Framework Convention on Climate Change to the Paris Agreement" (2017) 3 Engineering 2 at 278.

1. The Paris Agreement compliance and implementation mechanism will need to be strengthened to contain clear trigger functions signalling non-compliance by individual countries. The PAICC's rules of procedure will need to include the right types and scope of triggers as the Agreement's influence will partly be hinged on this. The Committee will need to be fully equipped with the tools and resources for the functioning of its facilitative forum. As both the UNFCCC and the Paris Agreement call for collaborative processes, the PAICC will need to reflect that in its meetings and processes.

2. In discharging its functions, the PAICC's rules of procedure needs to delineate which actions require party consent to consider issues and which can be done by the party in its capacity. Also the rules of procedure will need to define or describe what amounts to significant or persistent inconsistencies of party- submitted information per Article 13(7)(9) of the Paris Agreement.

3. The fourth chapter outlined the potential of the combination of the stocktake and the ETF mechanism to provide markets with confidence that low-carbon opportunities are attracting investments and to potentially invest. Similarly, other investment avenues outside the UNFCCC that are not climate-specific can be leveraged on to encourage the alignment of financial flows with the Paris objectives.[1287]

4. While Parties have agreed to common reporting tables for national GHG inventories, CTF for tracking progress towards NDCs and climate finance, technology transfer and capacity building; outlines of the biennial transparency report (BTR), the review of the technical expert teams functioning under the ETF can benefit from climate change information provided by independent climate reporting agencies such as the CCPI, CAT, and EPI. These independent reporting tools have similar objectives to the Paris Agreement ETF to ramp up climate ambition. For the ETF it is through building trust and confidence that countries are contributing their share to the global effort by meeting their actions defined in their NDCs and for the independent climate reporting agencies through comparing the climate protection efforts and progress made by individual countries. Having a more comprehensive overview of the information from both parties and independent reporting tools can be beneficial to Parties during the facilitative processes of the TER and the PAICC.

[1287] Some examples of these channels are international financial institutions and international economic cooperation institutions such as the Organisation for Economic Co-operation and Development (OECD).

5. There is an urgent need for REOs, particularly in the ASEAN and MENA regions. The thesis revealed that the IER through its agencies such as UNEP and UNDP facilitated climate action through financial and technical assistance to ECOWAS. Although the IER has been able to directly influence climate action through technical and financial assistance to countries, its influence can be magnified through potential collaborations with established REOs in the MENA and ASEAN regions similar to that of ECOWAS, cutting off the bureaucratic hurdles associated with assisting individual countries. REOs can strengthen the regional capacity to assess and communicate climate risks and opportunities collaboratively and drive climate action momentum; a case in point is the EU that continues to increase its ambitions and set well-defined targets. Greater institutionalised coordination among the UNFCCC, REOs and national stakeholders can enable better harnessing of institutional resources, technical expertise, and sectoral participation across different treaty regimes and international organizations. This coordination will be beneficial for achieving various climate goals, such as securing financing, providing support to domestic industries, satisfying environmental interests, and creating more efficient climate governance.

6. The IER through UNEP should continue to provide or collaborate with national and sub-national judicial institutes and administrative offices of the courts in countries to provide continuing judicial education and programmes to build judicial capacity. These programmes should cover topical issue areas such as the Court's interpretation or determination a country's or company's responsibility for scope 3 emissions, climate change, human rights and the responsibility of courts, etcetera. The trainings or program may inform a uniform sense of environmental protection amongst judges and potentially influence judgments, particularly those pertaining to the fulfilment of the Paris Agreement objectives. UNEP should also continue to collaborate with the GJIE to ensure that the Judicial Portal is developed to enable the IER keep track of judges that have accessed judicial information. The Portal should also allow for feedback on how the Portal can be improved to benefit the diversity of courts or judges accessing information.

The effects of the coronavirus pandemic have been far-reaching and are predicted to disrupt countries' GHG emissions reduction targets due to increased economic activity to accommodate lockdown restrictions on production. However, this should not deter countries from fulfilling their NDC targets. While the pandemic may push the achievement of GHG emissions reduction targets slightly behind schedule, the IER can support countries to achieve

their targets. The next few years will be crucial to drive implementation especially with the first global stocktake occurring in 2023. It is important to reiterate that the Paris Agreement's hybrid structure and the UNFCCC emphasises collective responsibility for climate action and that countries must honour their obligations. The UNFCCC through the COP should also improve its role as an enhancer of cooperation and utility modifier by improving its facilitative processes, particularly during the annual COP sessions. Where these recommendations are implemented, the IER will have a more substantial influence on favourable emissions reduction efforts of all actors: state and non-state, within the climate change regime. It is pertinent to note that the next decade is incredibly crucial to reverse the negative impacts of climate change, and all hands must be on deck. In the famous words of the president of the European Central Bank, Christine Lagarde,

"It is a collective endeavour, it is collective accountability, and it may not be too late."[1288]

[1288] Ian Sanders "24 Quotes on Climate Change from Davos 2015" (World Economic Forum, 23 January 2015) https://www.weforum.org/agenda/2015/01/24-quotes-on-climate-change-from-davos-2015/

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