

Addressing the Climate Crisis: An Action Plan for Psychologists (Summary)

Task Force on Climate Change

American Psychological Association

Author Note

This article is a summary of the report of the American Psychological Association's Task Force on Climate Change, which was formally received (approved) by the APA Council of Representatives at its February 2022 meeting. The full report is available online at <https://www.apa.org/science/about/publications/climate-crisis-action-plan.pdf>.

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APA reports synthesize current knowledge in a given area and may offer recommendations for future action. They neither constitute APA policy nor commit APA to the activities described therein. This report was requested by the APA Council of Representatives at its February 2020 meeting and was developed with financial support from APA.

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Abstract

Psychologists have conducted valuable work on the climate crisis and can make even greater contributions to understanding the crisis, mitigating and adapting to climate change, and achieving climate justice. This summary of the report from the American Psychological Association's (APA) Task Force on Climate Change examines the multiple roles psychologists play in research, practice, education, advocacy, and communications related to the climate crisis and how APA can facilitate expansion of psychologists' work in these domains. The task force recommends that APA pursue a set of activities that will both (a) strengthen the field by encouraging a larger number of psychologists, across all specializations, to work on climate change, and (b) broaden the impact of psychologists' work on climate change by supporting their engagement and collaborations with other fields and sectors. Further, the task force offers recommendations for how APA can help mitigate climate change by improving its own energy use and sustainability practices and encouraging improvements by other organizations and the public.

Keywords: climate change, climate justice, sustainability, mitigation, adaptation

Public Significance Statement

Although the severity and urgency of the climate crisis should not be understated, it remains within the capacity of society to reduce its most adverse effects and to promote health, well-being, and justice for all people. Psychologists have the knowledge and skills to design and implement strategies that will help realize these aims. As a leading scientific and professional association, APA can prepare, support, and organize psychologists to address the climate crisis and amplify their work for greatest impact and visibility.

Addressing the Climate Crisis: An Action Plan for Psychologists (Summary)

Successful responses to climate change require the participation of all fields and sectors of society. To enhance the contributions of the American Psychological Association (APA) in addressing the climate crisis, the APA Council of Representatives passed a resolution in 2020 that authorized the APA president to “appoint a task force, composed of leading international experts, to review APA's past and current activities related to global climate change and to recommend goals and strategies for future APA activities that will have a strong impact on the climate change crisis” (American Psychological Association, 2020). The resolution went on to request that the task force consider “issues surrounding migration, human rights, and systemic aspects (including political, economic, and corporate) of climate change, as well as address how APA can improve its own sustainability practices.”

Following a call for nominations, the APA president appointed a task force composed of twelve members, each of whom had significant expertise and experience in climate change and related topics. The members had backgrounds in psychology, medicine, epidemiology, nursing, environmental science, local government, law, social work, museums, and business. They were based in the United States, the United Kingdom, and New Zealand, and several had strong ties to other countries as well.

The task force conducted its work virtually between October 2020 and January 2022, with liaisons from the APA Board of Directors and other boards also participating. It examined such areas as APA's previous work on climate change (focusing on activities directly overseen by APA's central office), current directions in psychology and other fields related to climate change, and the social justice, political, and economic dimensions of climate change. The task force considered these areas in relation to APA's strategic plan (American Psychological Association, 2022c) and APA's policies on human rights, ethics, racism, multiculturalism, immigration, socioeconomic status, global perspectives, and scientific freedom (American Psychological Association, 2022b). Further, it reviewed the work of an earlier APA task force that met in 2008-

09 (American Psychological Association, 2011; Swim et al., 2011) and consulted with several members of that body.

The full report of the task force was formally accepted by the APA Council of Representatives at its February 2022 meeting (American Psychological Association, 2022a). It is posted online at <https://www.apa.org/science/about/publications/climate-crisis-action-plan.pdf>. This summary conveys major points of the report, and readers may consult the full version for further background and details.

The Climate Crisis

Climate Change and Its Impacts

Since the late nineteenth century, the average surface temperature of the earth has increased by about 1.1 degrees Celsius (2 degrees Fahrenheit), with most of the increase occurring since the mid-twentieth century (IPCC, 2021). Scientists have firmly established that this temperature change, referred to as *global warming*, is primarily due to increased amounts of carbon dioxide and other “greenhouse” gases (including methane, nitrous oxide, and fluorinated gases) being emitted into the atmosphere and that the increase in emissions is due to human activities, such as the burning of fossil fuels and the clearing of forests and grasslands (which capture and store carbon dioxide) (National Academy of Sciences, 2020; U.S. Environmental Protection Agency, 2021).

Higher surface temperatures have led to changes in the climate of every region of the planet, including altered precipitation patterns, rising sea levels, melting polar ice, and increases in severe storms, flooding, heatwaves, drought, and wildfires (IPCC, 2014a, 2018; U.S. Global Change Research Program, 2017). Such changes have begun to have profound impacts on people’s health and on the well-being of individuals and communities. While outcomes vary across populations and settings, climate change is contributing to greater prevalence and severity of extreme weather and climate events, leading to deaths, injuries, and damage to infrastructure, buildings, and property; mental health conditions, including post-traumatic stress,

anxiety, depression, and substance misuse; interpersonal aggression and violence; impaired cognitive and brain function; premature births and low birth weight; shortages of safe water and food; dehydration and heatstroke; infectious diseases; and cardiovascular, respiratory, kidney and allergic conditions (Al-Delaimy et al., 2020; Clayton et al., 2021; Ebi et al., 2018; National Intelligence Council, 2021; U.S. Global Change Research Program, 2018; Watts et al., 2021).

Climate change can also lead to job losses, economic disruptions, interruptions in education and social services, losses of culturally significant places and resources, intergroup and international conflict, and population displacements (including voluntary and forced migrations, refugee movements, and planned relocations, both within and across national boundaries) (White House, 2021; World Bank, 2018, 2021). Associated with these impacts, individuals may experience loss or alteration of identity, autonomy, or sense of control. Further, households, social networks, and communities may become less cohesive and effective, and communities that undergo major disasters or lose homelands may experience collective or historical trauma. As climate change continues, these impacts will become more severe in future years.

Many of these impacts are violations of human rights under the Universal Declaration of Human Rights and other international agreements, including rights concerning life, health, and culture (Feygina et al., 2020; Office of the High Commissioner for Human Rights, 2015; United Nations Environment Programme, 2015). Further, some groups disproportionately bear the negative impacts of climate change, including Indigenous peoples, communities of color, and communities that are economically disadvantaged (Clayton et al., 2021; Jafry, 2019; Méndez et al., 2020; UNESCO, 2020), as well as children, older adults, women, persons with disabilities, and outdoor workers. Growing recognition of these disparities has led to activism and policy efforts to achieve *climate justice*, part of the broader movement for *environmental justice* (Jafry, 2019; Méndez, 2020; NAACP, 2021; Robinson & Shine, 2018; Rouf & Wainwright, 2020).

Responding to Climate Change

Unless major reductions in greenhouse gas emissions are made quickly, by about 2030, the earth's average surface temperature will continue to rise and climate change will intensify, with catastrophic consequences for human health, well-being, and equity (IPCC, 2018, 2021). The Paris Agreement, an international treaty adopted in 2015, set a goal of limiting global warming to below 2 °C and preferably to 1.5 °C. Major shifts in policy, investments, technology, and behavior—especially in the more economically developed countries, which currently produce most emissions—are needed to achieve either of these targets (Pearce, 2021).

Responses to climate change are generally classified under the broad categories of *mitigation* or *adaptation* (IPCC, 2014b). Mitigation refers to efforts to limit, prevent, and counteract greenhouse gas emissions so that human-driven climate change can be slowed and eventually halted. Mitigation approaches can aim to reduce overall consumption of energy as well as alter how energy is produced and used. Critical to mitigation is adoption of new norms, practices, and technologies for transportation, indoor heating and cooling, diet, land management, agriculture, industry, and waste processing (Carmichael, 2019; Meyer & Lord, 2021; Milfont, Satherley, et al., 2021). Mitigation also involves the development and widespread implementation of technologies for producing energy from sources other than fossil fuels (e.g., solar, wind, hydropower, geothermal, nuclear).

Adaptation refers to efforts to reduce the current and future negative impacts of climate change and help people to adjust to the impacts. Examples include building seawalls, shifting to drought-resistant food crops, improving disaster preparation and response by households and communities, training healthcare workers, promoting psychological and social resilience within communities, incorporating climate risks into financial policy and planning, relocating populations from unsafe areas, and services for climate migrants and refugees, as well as regenerative approaches to agriculture and daily living (Clayton et al., 2021; Newton et al., 2020; Pelling & Garschagen, 2019; U.S. Environmental Protection Agency, 2022).

Although governments around the world have taken some steps to advance

mitigation and adaptation initiatives, their efforts to this point are widely viewed as insufficient (Plumer & Friedman, 2021). In the U.S., a majority of the population perceives climate change to be a significant issue and favors government action to address it (Ballew et al., 2019; Tyson & Kennedy, 2020). However, political polarization within the U.S. system has prevented adoption of policies and programs that have adequate impact and scope (Doell et al., 2021; Jenkins-Smith et al., 2020; Mildenerger, 2020).

Another noteworthy element of the political landscape in the U.S. is misinformation about climate change disseminated by individuals, think tanks, and corporations (Brulle, 2021; Brulle et al., 2020; Cook, 2020; Cook et al., 2019). Most prominent are sustained efforts by the fossil fuel industry since the 1960s to mislead the public and policymakers about global warming and to lobby against changes in laws (e.g., tax subsidies) that favor use of fossil fuels (Climate Social Science Network, 2022; Mann, 2021; Oreskes & Conway, 2010; Skovgaard, 2021; Supran & Oreskes, 2021).

To be successful, mitigation and adaptation initiatives must recognize differences among individuals, communities, and countries in the amounts of emissions they produce, the nature and degree of climate change impacts they experience, and their capacities for transitioning to new technologies and practices. Taking a climate justice and human rights perspective, all those affected by climate change and potential responses to it in a region or community should be represented in decision-making to ensure that their needs and interests are addressed.

How Psychologists Can Address the Climate Crisis

Psychologists have made significant contributions to responding to the climate crisis (Clayton & Manning, 2018; Ferguson & Schmitt, 2021; Swim et al., 2011) and are well positioned to contribute more. As researchers, practitioners, educators, consultants, communicators, leaders, and advocates, psychologists have multiple opportunities to advance individual and collective health, well-being, and justice. Nearly all subject areas and approaches

within psychology offer concepts, methods, and tools that can be applied or elaborated to address climate change.

Mitigation

Psychologists can contribute to the design and evaluation of new technologies for residences, transportation, industry, and other settings that will both result in reduced energy consumption or greenhouse gas emissions and be usable and accepted by people and organizations. Among these are new solar energy technologies, heating/cooling technologies, electric and self-driving vehicles, and devices regulated by artificial intelligence (Furszyfer Del Rio et al., 2021; Stein, 2020; Viola, 2021). For those technologies that are deemed appropriate for application, psychologists can develop and implement methods for motivating and guiding people and organizations to adopt them (Palomo-Vélez & van Vugt, 2021; Verplanken & Whitmarsh, 2021). Throughout such transformations, psychologists can help people to understand and engage in collective decision-making and evaluation regarding changes to their environments and ways of living (Árvai & Gregory, 2021; Orlove et al., 2020).

Further, psychologists' perspectives and methods can enhance efforts, now being pursued across multiple disciplines and professions, to rethink and transform the design of people's environments and lives so that energy use and emissions are reduced (Creutzig et al., 2018; Faure et al., 2022; Nielsen, Clayton, et al., 2021; Uzell, 2018; Wynes & Nicholas, 2017). Psychologists can help forge new approaches in such domains as residence size and design (e.g., encouraging smaller homes that use less energy); virtual and remote work (e.g., making such work productive and satisfying with less need for commuting); regional, urban, and neighborhood planning (e.g., meeting people's needs locally and reducing shipping and travel); transportation (e.g., public transit, walking, cycling); diet (e.g., reducing consumption of meats, the production of which involves substantial greenhouse gas emissions); and agricultural, land management, and manufacturing practices (Creutzig et al., 2020; Doidge et al., 2020; Fox-Penner et al., 2021; Mastrangelo et al., 2014; Newton et al., 2020; Nielsen, Clayton, et al.,

2021). Psychologists can ensure that new environments, policies, and behaviors are compatible with human cognitive, emotional, and social functioning and with the identities, cultures, goals, and practices of the people involved and affected by the changes, and thereby increase the likelihood that the changes will be adopted and maintained (Constantino et al., 2021).

Adaptation

Psychologists have critical roles to play in helping individuals, households, communities, organizations, and countries understand and adjust to the impacts of climate change. They can produce research and offer interventions and services in areas such as psychological responses, mental health conditions, health behaviors, and social problems associated with climate change; therapies specifically tied to climate and the environment (e.g., ecotherapy, outdoor therapies); and support and guidance for people and communities transitioning to new forms of living that are less energy intensive and more protective and respectful of the environment.

Further, psychologists can help individuals and communities prepare for climate change impacts and prevent or reduce distress by supporting them in building their psychological and social resilience (Clayton et al., 2021; Doppelt, 2016; Everett et al., 2020). Resilience encompasses elements such as positive attitudes, a sense of meaning or purpose, coping and self-regulation skills, self-efficacy, social connections, community cohesion, practical preparations for disasters and other climate impacts, and taking productive action on climate change.

As more people migrate (including those who are involuntarily displaced) due to climate change, it is likely that psychologists will be called upon to work with migrants, the communities to which they relocate, and government and social service agencies to ensure that migrants' social and health needs are met. Psychologists can also contribute to the design of policies and programs to ensure that they respect migrants' cultures, address the needs of specific groups

(e.g., children, women, LGBT groups), and prevent or counteract discrimination and injustice toward migrants.

Public Understanding and Attitudes

What people believe and think about climate change and how to respond to it is key to the success of mitigation and adaptation initiatives and to the adoption and implementation of effective climate policies. Psychologists are engaged in assessments of the public's understanding and attitudes regarding climate change, how people's views vary across demographic groups, what factors influence their views, and how their views are related to changes in behavior (Ballew et al., 2019; Doell et al., 2021; Milfont, Zubielevitch, et al., 2021; Priestley et al., 2021; Shi et al., 2016).

Psychologists can also help develop effective forms of education (in schools and other settings) and public communication about climate change and climate policies, tailored to specific audiences and purposes. Especially important is developing methods to help people identify and accept accurate information about climate change and avoid or reject misinformation, disinformation, and misleading arguments (Cislak et al., 2021; Compton et al., 2021; Ecker et al., 2022; Sinatra & Hofer, 2021).

More broadly, psychologists can contribute to the design of educational and communication initiatives to prepare people (especially young people) for a future life in a world in which climate change is a principal feature (Geiger et al., 2019; Guzmán et al., 2021; Markowitz & Guckian, 2018). Such initiatives would help individuals plan their own lives and be knowledgeable participants in public discussion and social action around the climate crisis, including policies for mitigation and adaptation.

Some issues related to climate change policies can be expected to become more widely discussed in coming years. These include assessments of the risks and benefits of controversial mitigation approaches such as those involving geo-engineering technologies and nuclear power (Pearce, 2019). Proposals for achieving climate justice may also be debated as those involve

not only directing efforts and resources to groups who historically have been disadvantaged and have less political power but also altering the behaviors, lifestyles, and energy use of affluent people and wealthier countries, which produce greater amounts of greenhouse gas emissions (Nielsen, Nicholas, et al., 2021; Wiedmann et al., 2020).

Social Action

Psychologists can take action to establish policies and programs for mitigating and adapting to climate change and advancing climate justice. They can work on the “inside” as staff members and advisors to government, business, and other entities, applying their expertise to the development and justification of new initiatives. On the “outside,” psychologists can serve as advocates and activists for policies and programs on their own, within their local or professional organizations (including APA), and as participants in climate advocacy groups. Further, psychologists can conduct research and offer guidance on mechanisms for successful climate advocacy. For example, drawing on social and organizational psychology, they might advise on advocacy groups’ organization, leadership, and processes.

In all these types of work, psychologists can apply their knowledge of public attitudes, persuasion, and communication; how to motivate people to participate in collective efforts; how to promote sound information gathering, analysis, and decision-making; and how to facilitate productive interactions among stakeholders with various perspectives (such as community members, scientists, and policymakers).

Some scholars and advocates argue that new policies and programs alone will be insufficient to address climate change over the long term and that fundamental changes in economic, social, and political systems are needed (Jackson, 2017; McPhearson et al., 2021; Paterson & P-Laberge, 2018). One way in which psychologists can contribute to the development of proposals for new systems is through research on people’s beliefs, attitudes, and behaviors related to prominent features of many contemporary societies—such as materialism, consumption, individualism, competition, hierarchy, and disconnection from

nature—and how these psychological and behavioral characteristics are associated with energy use as well as health, well-being, and equity (Kasser, 2016; Milfont et al., 2013; Weintrobe, 2021). Such research could shed light on what kinds of systemic changes are most feasible, how to achieve them, and what their outcomes are likely to be.

Building a Stronger Role for Psychologists

For significant progress in these areas to be made, there is a need for more psychologists across all areas of the field to devote at least some of their efforts to the climate crisis. As discussed in the report, only a small number of psychologists today address climate change as a part of their professional work. It would be valuable both for established psychologists to shift their attention to climate change (e.g., applying methods and theories they have used in work on other topics) and for graduate students and early career psychologists to adopt it as their focus (enabling progress to continue in future decades). The breadth and complexity of climate change topics, along with their significance for human health and well-being, give rise to many worthwhile career paths.

To enhance the soundness and impact of their work, psychologists must engage with other domains that address climate change—not just other disciplines and professions but policymaking and advocacy as well. Psychologists also need to collaborate with and learn from diverse populations, within countries and around the world, who are affected by climate change and by mitigation and adaptation initiatives (Nash et al., 2020; Tam & Milfont, 2020). This attention to diverse peoples and their varied experiences of climate change will keep human rights and climate justice concerns in the forefront of psychologists' work and offer psychologists new perspectives and insights.

APA's Role in Addressing the Climate Crisis

Given APA's leadership position in the field of psychology, the goals in its current strategic plan, and its history of work on climate change, APA can do much to strengthen the role of psychologists in addressing the climate crisis. The task force observed that APA has regularly

conducted and sponsored work of high quality on climate change since 2007. Of note are the 2008–09 task force report (Swim et al., 2011), which highlighted for a broad readership the progress and significance of psychological research on climate change, and APA's reports with ecoAmerica (Clayton et al., 2021), which brought the psychological and mental health dimensions of climate change to the awareness of environmental communities, policymakers, and the general public. Further, the regular coverage of climate change in the *Monitor on Psychology* has been a unique and valuable educational resource for psychologists and students.

However, the needs and opportunities for work by APA on climate change exceed what it has done to this point. The climate crisis is now widely recognized to be an immense and urgent threat to human health and well-being. Psychologists' expertise and experience are highly relevant to many aspects of mitigation, adaptation, public communication, and social action in response to the crisis. However, realizing that potential fully will require more psychologists, across the breadth of the field, to devote their efforts to climate change work and to engage more closely with other fields and sectors of society. As the largest and best resourced psychological organization in the U.S., and building on its previous work, APA can lead in developing the field's capacity and enhancing its impact. Taking on that responsibility will require a stronger and more strategic commitment to addressing the climate crisis than APA has made thus far.

Recommendations for APA

The task force developed recommendations to advance work on climate change within five primary domains of APA's central office programmatic activities: research, practice, education, advocacy, and communications. Following the Council of Representatives resolution, the task force also developed recommendations for APA's own energy use and sustainability practices.

For each domain, the task force formulated a pair of recommendations (see Table 1). One recommendation in each pair focuses on strengthening the work of psychologists and APA on climate change, especially through programs and resources that will enable a greater number and breadth of psychologists to gain knowledge, skills, and career opportunities in the area. The other recommendation in each pair focuses on broadening the impact of psychologists' work through engagement and collaboration with people and organizations in fields beyond psychology and APA. Each recommendation is accompanied by suggestions for implementation activities that APA can undertake over the next several years. (The full report also includes comments on how APA might prioritize and manage the suggested activities.)

Research

Psychological research has produced important findings on a variety of topics, including public understanding and attitudes about climate change (Hoggett, 2019; Hornsey et al., 2018; Milfont, Abrahamse, et al., 2021), motivations to engage in mitigation and adaptation efforts (Brick et al., 2021; Sparkman et al., 2021; Truelove et al., 2015), factors shaping behaviors related to climate change (Lacroix & Gifford, 2018; Milfont & Markowitz, 2016), the design of interventions to help people alter their behaviors (Capstick et al., 2014; Karlin et al., 2015; Marghetis et al., 2019), and the mental health impacts of climate change (Burke et al., 2018; Clayton et al., 2021; Vergunst & Berry, 2021). However, as noted earlier, the field's full potential to respond to the climate crisis will not be realized until a greater number and broader range of psychologists address it. Research questions bearing on climate change can be formulated and investigated in virtually every area of basic and applied psychological research. Many current lines of research could be extended to address climate change topics, including work in such areas as science education, decision-making, organizational behavior, and disaster response, to name a few.

For their work to have greatest impact, researchers are advised to formulate questions that address major practical issues related to climate change and consult with the communities

most involved with or affected by these issues as well as with practitioners and policymakers. Psychological research can also be strengthened through engagement with other scientific fields, Indigenous approaches (Kimmerer, 2013; Nakashima et al., 2018; Petzold et al., 2020), and the arts and humanities (Adamson & Davis, 2018). Cross-cultural research and international collaborations are valuable for much of this work.

The task force offers the following recommendations to guide APA's efforts to enhance psychological research on climate change:

Recommendation 1 (Strengthening the field):

Advance research on climate change across all areas of psychological science.

Recommendation 2 (Expanding impact):

Promote engagement of psychological scientists with policymakers, practitioners, and community members on climate change issues.

As detailed in the full report, APA can implement these recommendations through such activities as sponsoring workshops and collaborations in multiple areas of psychological and multidisciplinary research relevant to climate change; advocating for research funding; expanding publication and conference outlets; offering training to psychological scientists on policy issues, advocacy methods, and community-based research; and facilitating psychological scientists' involvement in policy, community, and international work. The overall aims of these activities are to identify research priorities and conduct research that will have significant impact on climate change and climate justice.

Practice

Psychological practice on climate change encompasses both mitigation and adaptation. For mitigation, psychologists' work includes helping individuals, households, organizations, and communities alter the types and amounts of energy they use; contributing to the development and implementation of new technologies that produce lower levels of greenhouse gas emissions; and working with governments, businesses, and other institutions to design policies,

environments, and processes that lead to lower emissions (Lutzke & Árvai, 2021; Sintov & Schultz, 2015; Whitmarsh et al., 2021; Wolske & Stern, 2018). Such efforts may involve, for example, working with communities to modify the opportunities and incentives in people's environments that influence their patterns of energy use, or helping to plan and manage organizational change to support new work or travel patterns or adoption of new technologies (Cambridge Sustainability Commission on Scaling Behaviour Change, 2021; Unsworth et al., 2021). Psychologists are increasingly interested in mitigation actions that result in rapid, large-scale decreases in emissions, which require consideration of a broad range of behaviors and of the social, cultural, and economic contexts of behavior (Nielsen, Clayton, et al., 2021).

Psychologists' work on adaptation includes immediate counseling and support for people who have experienced disasters, extreme heat, migration, and other consequences of climate change, as well as counseling for climate-related distress (eco-anxiety) and longer-term treatment of conditions—such as mental health symptoms, substance misuse, academic problems, interpersonal conflicts, and violence—that are more likely to occur or worsen because of climate change (Baudon & Jachens, 2021; Clayton et al., 2021; Coffey et al., 2021; Ingle & Mikulewicz, 2020; Monsell et al., 2021; Pihkala, 2020; Suh et al., 2021). Psychologists may also work to prevent such conditions by implementing school and community programs to build people's socioemotional skills, resilience, and empowerment (Doppelt, 2016; Everett et al., 2020; Ntontis et al., 2020). In addition, psychologists can help people manage the psychological and behavioral aspects of physical health conditions that can arise from climate (Santos et al., 2021).

Further, psychologists can help guide disaster preparation, response, and recovery by households, organizations, and communities as well as contribute to the development and implementation of public policies and programs for addressing long-term climate change impacts (van Valkengoed & Steg, 2019). Psychologists can also provide guidance and services in communities that receive climate migrants and refugees.

Practitioners' interventions are generally rooted in the best available research, but they may also be guided by current environmental and sociopolitical developments and people's experiences and preferences. Consulting stakeholders and co-designing interventions is vital in working in communities with a history of disadvantage or environmental burden, so that past injustices are not repeated or reinforced.

The task force offers the following recommendations to guide APA's efforts to enhance psychological practice on climate change:

Recommendation 3 (Strengthening the field):

Build psychologists' capacities to support people in mitigating and adapting to climate change.

Recommendation 4 (Expanding impact)

Enlarge the range of settings and partnerships in which psychology practitioners address climate change.

To implement these recommendations, the report suggests that APA undertake such activities as maintaining a repository of information on effective interventions and programs; offering guidance and training on practice topics; facilitating networks of psychologists with other professionals, leaders, and organizations; and developing a specialty in climate change-related practice. Such efforts can be pursued at community, national, and international levels.

Education

The report calls for coverage of climate change to be incorporated into the general training of psychologists so that they are prepared for research and practice in the area. It further notes that trainees and professionals in other fields can also benefit from education on the psychological dimensions of climate change. Gaining knowledge about psychological research and practice can broaden their perspectives and enhance the effectiveness of their work, as well as enable them to collaborate more successfully with psychologists and others who work on or are affected by climate change.

Educating the general public is necessary too, both in formal settings (e.g., classrooms, clinics) and informal settings (e.g., museums, internet). By gaining appreciation of the psychological, not just physical, dimensions of climate change, people will attain a more complete understanding of the climate crisis and be better equipped to contribute to discussions and decision-making about climate change policies and programs. In some communities, educators may need to address denial of the reality of climate change and its human causes (Sinatra & Hofer, 2021; Wong-Parodi & Feygina, 2020). More broadly, all participants would benefit from being taught how to identify, question, and inoculate themselves against misinformation (Compton et al., 2021). Programs can also show how climate change is linked to social, economic, and political conditions (including those leading to human rights violations and climate injustice) and inform participants about actions they can take to address climate change and its consequences (Jafry, 2019). Further, educational programs can help participants to identify, express, and act positively on their emotional responses to climate change.

The task force offers the following recommendations to guide APA's efforts to enhance education on climate change:

Recommendation 5 (Strengthening the field):

Incorporate coverage of climate change into all levels of psychology education.

Recommendation 6 (Expanding impact):

Promote coverage of the psychological dimensions of climate change in the education of other professionals and the public.

APA can implement these recommendations through such activities as developing curricula and teaching materials on climate change for high school, undergraduate, graduate, and continuing education courses in psychology; providing guidance on the design and implementation of multidisciplinary undergraduate and graduate programs on psychology and climate change; working with other groups to incorporate psychological perspectives into climate change training

of professionals in other fields; and developing informal educational materials and experiences for the public on climate change and psychology.

Advocacy

Psychological research and practice are relevant to many topics related to climate change and climate justice that government policies and programs are likely to address in coming years. These include disaster preparation and response; mental health; migration; transitions to new forms of energy, transportation, and agriculture; housing and community development; and psychological and behavioral aspects of economic and national security affairs. APA has pursued advocacy on such topics at the U.S. federal level and international level. Looking forward, those efforts can be enlarged and advocacy can also be directed to state, local, tribal, and territorial governments, which increasingly are developing and implementing their own climate change policies and programs (Farber, 2021; Jones, 2020).

Further, APA can expand on its advocacy collaborations with other scientific, health, and environmental organizations. Collaborations enable scientific and policy expertise to be shared, advocacy resources to be coordinated, and psychological perspectives to be incorporated into a number of advocacy efforts. APA can both teach and learn from other organizations, such as Indigenous and environmental justice organizations that represent communities with substantial knowledge and experience related to climate change and its effects.

In addition to government, APA can explore advocacy directed to businesses, trade associations, labor unions, and non-profit organizations. It could provide information and guidance about the psychological aspects of mitigating and adapting to climate change to entities operating in sectors such as energy, transportation, manufacturing, agriculture, waste management, finance, health, education, and social services.

To complement the advocacy work of its own professional staff, APA can encourage individual psychologists to engage in climate advocacy and activism. It can offer training to psychologists on climate policy and climate justice issues, methods for advocating effectively to

policymakers in government and the private sector, and methods for organizing other individuals in climate advocacy.

The task force offers the following recommendations to guide APA's efforts to enhance advocacy on climate change:

Recommendation 7 (Strengthening the field):

Engage in sustained advocacy on climate change to government at all levels and to business and non-profit organizations.

Recommendation 8 (Broadening impact):

Partner on climate advocacy with other scientific, professional, social justice, environmental, and health organizations.

APA can implement these recommendations through such activities as expanding current advocacy efforts at local, national, and international levels, with emphases on both science-based approaches and climate justice; providing psychologists and psychological organizations with training, resources, and opportunities for climate advocacy and activism; advocating through the justice system by means of amicus briefs and supporting psychologists involved in legal cases related to climate change (such as those concerning climate migrants); and expanding advocacy partnerships with other psychological and non-psychological organizations.

Communications

APA can serve as a comprehensive source of information about the psychological aspects of climate change and climate action for psychologists and other scientists and practitioners as well as for journalists, policymakers, community leaders, business owners, youth, and other elements of the public. In addition, APA can encourage and train psychologists and others to communicate on their own about climate change, using various formats and media and pitched to local, national, or international audiences. The report reviews elements of effective communication about climate change, drawing from recent research and other organizations' experiences (e.g., Holmes & Richardson, 2020; Markowitz & Guckian, 2018). These elements

include offering people constructive responses that they can adopt now, without blaming them for past behavior; addressing collective and not just individual actions; using terminology, analogies, and graphics appropriate for the audience; and teaching people to detect and challenge misinformation (as also addressed under Education).

The task force offers the following recommendations to guide APA's efforts to enhance communications about climate change:

Recommendation 9 (Strengthening the field):

Serve as an important channel of information to psychologists about climate change and how they can contribute to effective climate action.

Recommendation 10 (Broadening impact):

Educate the public about the psychological dimensions of climate change and effective climate action.

Implementing these recommendations can involve such activities as regularly covering climate change in APA's various news and social media outlets; maintaining a section of the APA website on climate change; developing informational materials for the public; working with news organizations and social media companies to promote dissemination of accurate information on climate change; co-sponsoring public forums with other organizations; and training psychologists to be effective communicators.

APA's Energy Use and Sustainability Practices

The report includes a discussion of APA's recent energy use, greenhouse gas emissions, and sustainability practices (such as recycling and water use), with a focus on the operations of office buildings owned by APA and travel by APA staff, APA members, and others involved in APA activities. It notes that changes in work and travel patterns arising from the COVID-19 pandemic have prompted APA's leadership to consider how the association will function in the future, which creates an opportunity for APA to take major steps to reduce its emissions,

improve its sustainability, and serve as a model of environmental responsibility for psychologists, other organizations, and the public.

The task force offers the following recommendations to guide APA's efforts to improve its energy use and sustainability practices:

Recommendation 11 (Strengthening the field):

Implement a strategic approach to reduce greenhouse gas emissions and improve sustainability across all of APA's operations and in the psychological community.

Recommendation 12 (Broadening impact):

Engage with other organizations and the public to reduce greenhouse gas emissions and improve sustainability practices.

APA can implement these recommendations through such activities as developing and implementing a comprehensive climate action plan (including specific targets and actions and regular assessments); making most APA events fully virtual; hiring a chief sustainability officer or sustainability consultants; adopting a socially and environmentally responsible investment strategy; producing guidance for psychologists, psychology units, and the public on reducing emissions and improving sustainability; and exchanging information and developing joint projects with other organizations.

Final Comment

The task force offers these recommendations and suggested activities as guidance for the next stage of APA's work on the climate crisis. It invites others to refine these ideas and to offer additional ideas for how psychologists and APA can effectively respond to the crisis. Most important, however, is that APA act. The task force urges APA to direct its attention and resources to mobilizing psychologists to address the fundamental threat of climate change to the health, well-being, and equity of people throughout the world.

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Table 1

Task force recommendations for APA’s work on climate change

	<i>Strengthening the field</i>	<i>Broadening impact</i>
Research	1) Advance research on climate change across all areas of psychological science.	2) Promote engagement of psychological scientists with policymakers, practitioners, and community members on climate change issues.
Practice	3) Build psychologists’ capacities to support people in mitigating and adapting to climate change.	4) Enlarge the range of settings and partnerships in which psychology practitioners address climate change.
Education	5) Incorporate coverage of climate change into all levels of psychology education.	6) Promote coverage of the psychological dimensions of climate change in the education of other professionals and the public.
Advocacy	7) Engage in sustained advocacy on climate change to government at all levels and to business and non-profit organizations.	8) Partner on climate advocacy with other scientific, professional, social justice, environmental, and health organizations.
Communications	9) Serve as an important channel of information to psychologists about climate change and how they can contribute to effective climate action.	10) Educate the public about the psychological dimensions of climate change and effective climate action.
APA’s Energy Use/Sustainability	11) Implement a strategic approach to reduce greenhouse gas emissions and improve sustainability across all of APA’s operations and in the psychological community.	12) Engage with other organizations and the public to reduce greenhouse gas emissions and improve sustainability practices.