The socio-cultural impacts of community based *tabu* sites on men and women:
A case study of Cuvu district, Nadroga, Fiji

By

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Abstract

This research analyses the impacts of community based Marine Protected Areas (MPAs) or *tabu* on men and women of Cuvu district in the province of Nadroga, Fiji. The practice of *tabu* is not an uncommon phenomenon in the South Pacific. Many evaluations have been conducted of such initiatives. However, there appears to be a lack of comparative analysis detailing how gender specific impacts are caused by these resource management regimes.

Central to the methodology of this research was the interview of 17 villagers. They were three fishermen, five fisherwomen and nine traditional leaders. By fisher roles, respondents were either classified as artisanal or subsistence fishers. The reactions and responses by respondents and other villagers revealed realities and perceptions that were as diverse as the socially stratified marine resource using communities of Cuvu district.

Gender specific impacts were affirmed. Women fished in inshore areas using simple methods and were disadvantaged unlike men who dived and therefore fished along the outer edges of the reef. Geo–spatial impacts were also identified. Artisinal fishers who had wider personalised fishing zones were more receptive to the existing *tabu*. Different ranks of leadership, furthermore, determined the support, or the lack of it, that chiefs placed on the existing *tabu*. On the one hand, traditional leaders upheld the high chief's decision and spoke of the benefits for them and their future generations. On the other, few of these leaders offered diplomacy when explaining the challenges faced by their people.

Commonalities were not entirely absent. All respondents and villagers in general, regardless of gender and social standing, felt that the involvement of the *Turaga Na Kalevu* (high chief) brought sanctity and spiritual blessings upon the *tabu*.

The findings of this research reflect the need to better understand and appreciate the heterogeneous make up of communities when introducing resource management regimes such as *tabu*. To be effective, they must be inclusive of villagers'diversity and their dependence on the marine environment. A TOP model *tabu* is proposed as it is accommodative of the diverse interests and values

that men and women have on the marine environment. It will ensure conservation and simultaneously enable the coastal communities of Cuvu district to meet their daily protein needs as well as preserve their heterogeneity.

Acknowledgement

Glossary

Adi	chiefly title reserved for female chiefs
Bati	traditional warriors who not only protected their chief but fought to defend their people and defeat their enemies
Bete	traditional priests for ancestral worship
Buli	a chiefly title
Dreu	jovial relationship enjoyed between people of Vanua Levu and Nadroga
Gase Ni Vanua	literally means the elders of the *vanua* but these are men whom the *Turaga Na ka Levu* closely consult with (advisers) regarding issues concerning the district. Often the first persons to traditionally relay decisions of the *Turaga Na ka Levu* to other villagers
Gonedau	master fishermen of the chief, they are skilled in fishing
Haravi	traditional markers used to mark *tabu* boundaries
I sevusevu	customary protocol of offering *Yaqona* and used on most occasions; to welcome, farewell, request permission for an activity
*I tauke*i	indigenous Fijian
I tokatoka	sub clan level below the m*ataqali* and often refereed to as households
I qoliqoli	customary fishing grounds

Kalou vu	ancestral god. The spirit of *vu* which is respected and feared even to this day.
Kakana dina	literally meaning true food but refers to root crops which is a staple diet for indigenous Fijians
Kana veicurumaki	a practice whereby all villagers and their families have the rights to fish within the *i qoliqoli* of the district with out restrictions
Kava	traditional Fijian drink, made from a solution of powdered *yaqona*
Kere kere	tradition of begging or borrowing things from others, a trade mark of Fijian life styles i.e. communal spirit
Lolo	a Fijian dish prepared by boiling food in coconut milk
Mana	spiritual powers associated with chief
mataisau	traditional carpenters of the chief, skilled in building houses and canoes
Matanitu	means government but originally referred to confederacies in Fiji
mata ni vanua:	traditional spokes person of the chief
Mataqali	a sub clan below the *yavusa* in the Fijian social structure
Na Marama Na Ka Levu	honorific title for a female paramount chief of the Nadroga Navosa province
Ro	a chiefly title
Ratu	a chiefly title
Sau tu	blessed, usually as a result of respecting the decisions of leaders

Sau turaga	traditional ambassadors of the chief
Tabu	forbidden, an activity not permitted by traditional authorities or due to local customs
Talanoa:	informal story telling which usually codncuted while consuming kava
Tamata Ni Turaga	people belonging to the chief
Tui Cakau	honorific title of the paramount chief of the Cakaudrove province
Turaga	could mean king or a head of a social unit
Turaga Na Ka Levu	honorific title for a male paramount chief of the Nadroga and Navosa province
Turaga mataqali	chiefly clan from which chiefs are chosen
Turaga Ni Koro	village headmen appointed under the Fijain Provincial Aminstration
Turaga Ni Tamata	chief of the people
Turaga ni mataqali	head or leader of a *mataqali*
Turaga ni yavusa	head or leader of a *yavusa*
Vanua	highest level of Fijian social structure which is paramount to the identity of an indigenous Fijian. Translated in English as land but has deep physical and spiritual connection with the land, natural resources, customs, social obligations, relationship with relatives and the supernatural world
Vola Ni Kawa Bula	the Fijian registrar of native land owners. It confirms legal recognition of an individual as a *i taukei* and ones origin (*mataqali, i tokatoka, vanua and yavusa*)
Vu	original ancestor of whom villagers are direct agnate descendants
Yaqona	a plant whose scientific name is *piper methysticum*.Cleaned and dried roots are presented

in the *i sevu sevu* and solution made from pounded roots is the traditional drink of Fiji

yavusa   clan, a level below the *vanua* in the Fijian social structure

Acronyms

FAB   Fijian Affairs Board

FLMMA   Fiji Locally Managed Marine Area

FSP Fiji   Foundation for the Peoples of the South Pacific Fiji

FSPI   The Foundation for the Peoples of the South Pacific

IAS   Institute of Applied Sciences

ICRAN   International Coral Reef Action Network

NLC   Native Lands Commission

NGO   Non Governmental Organization

OISCA Advancement   Organization for Industrial, Spiritual and Cultural Advancement

PCD Fiji   Partners in Community Development Fiji

WWF   World Wide Fund for Nature

WSSD   World Summit on Sustainable Development

Orthography

The spelling and pronunciation guide presented below is that of the standarised Bauan dialect of the Fijian language.

Pronunciation

b is pronounced as mb as in *timber*

c is pronounced as th as in *the*

d is pronounced as nd, as in *end*

g is pronounced as ng, as in *singer*

q is pronounced as ngg, as in *finger*

cuvu is pronounced as *thuvu*

tabu is pronounced as *tambu*

daveta is pronounced as *ndaveta*

gonedau is pronounced as *ngonedau*

yaqona is pronounced as *yanggona*

The expression of plurality of common nouns in standardized Bauan bears no similarity to the English language. For the sake of simplicity, the plural of '*tabu*' will be '*tabu sites*' rather than '*tabus*'

Foreign Exchange Rates

The table below represents the currency exchange rate for the Fiji dollar. To convert Fiji dollar into a foreign currency, one must multiply the Fiji currency by the buy rate. To convert foreign currency into Fiji dollars, one must divide the value of the foreign currency by the sell rate.

Table 1: Foreign exchange rates

Currency	Buy rate	Sell Rate
GBP	0.3151	0.3071
NZD	0.8689	0.8359
AUD	0.7282	0.7032
CAD	0.6227	0.6037
EUR	0.4479	0.4359
JPY	72.9808	69.9808
USD	0.6577	0.6407

Source: Foreign Exchange rates *The Fiji Times* www. Fijitimes.com.fj. (accessed 12th November, 2007).

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Chapter 1:   Introduction

Understanding a conservation systems means understanding not only the nature of what is being conserved, but also the view point of the conserver (Johannes 1978)

My thesis is specifically concerned with the socio - cultural impacts of Marine Protected Areas (MPAs) on men and women of resource owning communities in Cuvu district, Fiji. Community based MPA or *tabu* sites are increasingly being applied across the South Pacific and hold much hope for sustaining inshore coastal fisheries.   The wellbeing and prosperity of coastal communities are dependent upon the health of coral reef ecosystems. For decades, these systems have provided coastal communities with much needed protein supplies and stable food bases but unfortunately, have been under increasing pressure from multiple threats including land based sources of pollution, natural disasters, and destructive and unsustainable fishing practices. In the South Pacific natural resources are often communally owned. Therefore, to ensure that conservation efforts are effective and sustained, practices must be appropriate to local circumstances. In other words, to better achieve sustained efforts, the social and cultural aspects of communities must be further understood.

This thesis attempts to show that communities are more than just groups of people. The heterogeneous make up of communities appears to be acknowledged in resource management focussed literature but there are few studies that explore this in relation to marine resource management. In particular, the views of men and women are at the centre of this research. Women and men both participate in the management of natural resource management but women are often disadvantaged. They usually have limited rights and access to natural resources (Vunisea 1996, Lambeth et al. 2005). With this in mind, there is sufficient reason to conduct assessments that compare the impacts of *tabu* sites on men and women. Existing literature highlights this but mainly through research on impacts of other forms of natural resource based development projects such as forestry and mining (Overton, Scheyvens and Puride 1999, Lagasia and Scheyvens 1999).

Tabu sites as a form of resource management are increasingly being replicated by indigenous communities across the South Pacific and South Asia (Hviding and Baines 1994, Bank 1998). As traditional communities often have customary rights over inshore fisheries resources and are experiencing declining seafood stocks, this form of resource management is being hailed as an effective tool for conservation and restoration of marine resources. However, this is not without controversy and debate (Smith and Homer 1994, Crawford et al. 2005). Ironically, the debates mostly focus on the biological indicators or spill over effects such as the migration of species from restricted to unrestricted sites (Gell and Roberts 2003). Social factors are equally important as conservation requires modification of people's behaviour (e.g. fishing practices). The success of *tabu* sites or MPAs to a large extent depends on the cooperation of local communities and understanding their views is vital (Christie 2004).

Through this research, I intend to explore the sustainability of *tabu* sites by focusing on their social and cultural impacts on men and women. The reasons for conducting this research are manyfold. Firstly, as stated earlier, communities are not homogenous but heterogeneous (Aswani and Weiant 2004, Holden 2004) and therefore, it is likely that impacts of *tabu* are perceived and experienced differently by men and women (Nielsen and Lackey 1980).Women and men have specifically different roles. It is therefore possible that they have different values in terms of the marine environment and management regimes such as *tabu*. Not only do men and women have different rights and access to resources, they also have different knowledge, use different fishing methods and target different species as is the case of men and women in the South Pacific (Roepstorff 2000, Secretariat for the Pacific Community 2000).

In Pacific societies like Fiji, women traditionally are less likely to voice their opinions in village meetings due to cultural prohibitions. They are often behind the scenes working hard to ensure family and community needs are met. Women are sometimes referred to as the silent ones or silent voices but this is not to mean that their views in terms of the impacts of *tabu* are any less important. Understanding any differences in perceptions about the impacts of *tabu* is essential because it can provide insights into how best negative impacts can be reduced and positive impacts be enhanced and sustained.

Personal interest

My interest in *tabu* sites is directly related to previous work experience and passion for conservation. While employed by a non - governmental organisation (NGO) in Fiji, I worked on community based projects which aimed to empower resource owning communities better manage their marine resources. I often noted that there was emphasis on compiling reports on the sustainability of these projects but was of the view that such reports, as requested by donor agencies, were focused primarily on biological impacts without being equally considerate of social factors and the dynamics of resource owning communities involved in *tabu* projects. Unfortunately, this position is pervasive in many other conservation agencies in Fiji.

Christie (2004) stressed the importance of better understanding the communities involved but in particular the perspectives of males and females. The essence of *tabu* projects is sustainability. Researchers, practitioners and local communities are at the forefront of trying to determine how best coastal communities can meet their needs while at the same time trying to conserve environmental resources. I am supportive of sustainability which often focuses on balancing the social, economical and environmental aspects of development but also believe the definition can be extended a little further by being inclusive of cultural components (Overton et al. 1999). Understanding cultural impacts can provide much needed progress in the quest to achieve long lasting and effective *tabu* sites.

Aims and Objectives

The aim of this research is to determine the social and cultural impacts of community based marine *tabu* sites on men and women in indigenous Fijian communities within the Cuvu district, which have customary rights to traditional fishing grounds.

Research Question

The principal question posed in this research is "do *tabu* sites have a social and cultural impact on Fijian coastal villages?" To answer this, the research seeks to determine the:

- social and cultural impact of *tabu* sites on men and women
- impacts of *tabu* on the fishing practices of men and women

- most preferred marine resource management system preferred by men and women

Scope of research

While this research attempts to provide an in depth and accurate account of the impacts of *tabu* sites in Fiji, there are short comings which deserve acknowledgement. Firstly, any mistakes or inaccuracies are the sole responsibility of the author. Respondents' views about impacts of the *tabu* are temporal. It is possible that perceptions may have changed since the actual period of data collection. While there are many similarities among villages in Fiji, the local context varies from village to village. Therefore, the findings of this research may be either fully or partially applicable to other communities engaged in *tabu* projects.

Thesis outline

This first chapter provides the background, aims and objectives of this research. Chapter two is a literature review which both summarises and critiques major schools of thought about MPAs and *tabu* sites. Chapter three outlines the methods used in obtaining and analyzing the data collected. Chapter four provides a brief outline of coastal fisheries in Fiji. It also examines conservation initiatives in Cuvu district and social structures in a traditional Fijian setting. The results of the data, including primary and secondary data is presented in Chapter five. Chapter six then analyses and discusses this data and compares the findings with those schools of thought as outlined in Chapter 2. The conclusion of this research and a summary of recommendations are presented in Chapter seven.

Chapter 2:   Management of Marine Resources

Introduction

This chapter explores schools of thought relevant to Marine Protected Areas (MPAs) or *tabu* sites as they are commonly known in the South Pacific. Firstly, it discusses the need for sustainability and its linkages to the management of fisheries. This is followed by an evaluation of debates concerning the effectiveness of *tabu* sites and an emphasis of the social impacts of MPAs within the South East Asian region. In addition, the impacts of other forms of natural resource management such as forestry and agriculture are examined through a consideration of examples from India and Africa. Finally, the relations between men and women with regards to the marine environment are discussed for the South Pacific region and Fiji.

Sustainability

International forums such as the United Nations Conference on Environment and Development (UNCED) 1992 and the World Summit on Sustainable Development (WSSDS) in 2002, have brought to the global community vigorous discussions concerning the need for sustainable management of natural resources (Barret and Caniggia 2001). As a result, there is growing awareness and renewed international commitment towards implementing development which meets the "needs of present generations without compromising the ability of future generations to meet their needs" (World Commission On Environment and Development 1987,8).

The reasons for such efforts are simple but striking and noteworthy. Global development rates are alarming: demand for natural resources like crops, water, fisheries and land is increasing rapidly. In addition, population growth rates are rapidly rising as exemplified by the twentieth century in which the global population rose from 1.65 billion to 6 billion (The World Bank 2007). Development in the twentieth century has been labeled as a phenomenon having serious implications. The huge imbalance between development and demand for

natural resources seriously threatens the well being and survival of the human race. It has been noted that nations are experiencing greater difficulty in raising standards of living given the current decline of natural resource supplies and degradation of natural resources (The World Bank 2007, Kurien 2005) .

There is a real and urgent need to address and counteract this decline (Kelleher and Kenchington 1992). Trends in global fisheries reflect the seriousness of achieving sustainability. The world ocean resources are facing unprecedented pressure as a result of increasing population and the introduction of advanced fishing technologies. Global marine fish captures increased from 19 million tonnes in 1950 to about 81.3 million in 2003 (Fisheries and Oceans Canada 2006). This has resulted in fish harvests reaching exploitative levels.

The problem is aggravated by the fact that the use of scientific knowledge in the development of fisheries management regimes for well over 10 years has not been able to reduce exploitative levels of marine capture (The Independent World Commission on the Oceans 1998, Food and Agriculture Organisation 1998). There is widespread consensus that despite various state interventions and models of sustainable fisheries, deep sea commercial fish stocks are in a state of crisis with over 70 percent fished beyond sustainable limits. Even inshore coastal fish stocks are over exploited (Kelleher and Kenchington 1992, King 1995). Similarly, the collapse of global fisheries is attributed to increased numbers of fishers using advanced technology and poor management (Kooiman and Bavinck 2005). Previously, fisheries resources were abundant with little need for management. This trend has reversed. Local and international authorities are having to painfully accept that fish stocks are in limited supply, making therefore, the search for new management regimes obligatory.(National Research Council Committee to Review Individual Fishing Quotas 1999).

Community based conservation

The failure of scientific models has led to greater consideration of other forms of marine management. Community based conservation has become a popular tool for managing common property resources (Ostrom 1990, Pomeroy and Carlos 1997). The limited success and failure of top down approaches to the management of coastal fisheries has resulted in the increasing use of bottom up approaches

where local resource owning communities are at the fore front of development (Quinn et al. 2007). Often these projects are driven by the same motives but have different names such as participatory development and empowerment of local communities (Carr and Halvorsen 2001, Burkey 1993).

Discussions about sustaining oceanic resources is incomplete without the consideration of Hardin's (1968) *Tragedy of Commons*. Oceanic resources are considered common property from two perspectives. Firstly, resources in international waters are free and can be openly accessed. Secondly, certain species such as fish are not sedentary but mobile and move to different locations. Furthermore, individuals do not own the resources personally so there is little reason to reduce catches to ensure constant supplies in future (Norse 1993).

Hardin's (1968) fundamental argument is that common property resources like the oceans are destined to experience exploitation because of a lack of regulation amongst resource users who enjoy equal access(Hardin 1968). In addition to the lack of incentives to conserve a given resource, individuals act according to their own interests and have different levels of exploitation thereby leading to a collapse of resource bases (Schans 2001).

There are many literary contributions that support the above tenets of Hardin's (1968) framework by emphasizing the need for involvement of external institutions, quite often the state, to regulate the use of common property resources in order to avoid their degradation or depletion (Metha, Leach and Scoones 2001, Quinn et al. 2007). However, this premise is not faultless. When further scrutinized, the very definition of common property resources by Hardin has critical short comings and is a subject of debate. It is often argued that Hardins' perception of common property may in fact refer to resources which are characterized by open access without any forms of control on exploitation (Acheson 1988, Feeney et al. 1990). There are several critics of the tragedy of commons but Schans (2001:69) offers a thought provoking analysis:

> Hardin is too optimistic about the ability of the state to prevent over exploitation either by regulating the use of the resource or by instituting private property. Hardin, it is argued, is also too pessimistic

> about the possibility that resource users act together and institute rules amongst themselves to prevent over exploitation without relying on any great extent on state intervention or private property

It must also be noted that the relationship between state intervention and preservation of common property resources is not simple and direct as portrayed by Hardin because there many other factors and issues (e.g. pollution, impacts of natural disasters) which affect the sustainability of any given natural resource. There is sufficient literature which illustrates that the management of common property resources has experienced both success as well as failures even with the inclusion of state regulation (Fernandez 2002, Ostrom 1990).

Classification of common property resources

When discussing the tragedy of commons, it is imperative to focus on the classification of common property. For the purposes of greater classification, common property resources have been categorized into a further four groups namely:

1. *open access*: unregulated access to resource and open to everyone
2. *private property*: where an individual and /or a group has the right to right to regulate a resource including the right to exclude others. Note that property rights are not transferable
3. *communal property*: whereby local communities hold access rights but also have internal control mechanism over resource usage. Note that communal rights are not transferable. In some countries communal rights are legally recognized whereas in other countries communities hold *de facto* ownership rights
4. *state property*: the state having sole rights to mange and control access to resources (Feeney et al. 1990, Berkes et al. 1989, Bromerly and Crenea 1989).

Customary management practices

As previously noted, some have argued that without the direct involvement of the state, successful management of marine resources is unlikely. However, prior to the publication of the *Tragedy of Commons*, indigenous communities in the South Pacific were known to have practiced traditional marine customary tenure which

was based on unwritten and culturally accepted rules (Hviding and Baines 1996, Cinner, Marnane and McClanahan 2005). These practices sustained coastal inshore fisheries for decades but have only gained recognition since the mid 1970s.

Furthermore, because such practices have evolved and adapted over time in response to changing circumstances, they are important tools for conservation and management of coastal fisheries (Johannes 1982, Ruddle, Hviding and Johannes 1992). These tenure systems have been advocated largely because they have "survived the test of time" (Adams 1998:128). Apart from traditional rules, which have governed access and control over fishing grounds, other common methods of managing marine resources have included " periodic reef closures, gear restrictions, entry limitations, and the protection of spawning aggregations" (Cinner 2005:1). One of the most common forms of customary management practices is the declaration of traditional MPAs or *tabu*. These are usually complete spatial restrictions over particular periods which communities respect and avoid violating in fear of retribution from ancestral gods.

Community Based Marine Protected Areas (MPAs)

This chapter will now closely examine the practice of MPAs, debate its success and explore the merits of conducting socio – cultural impacts assessments of MPAs. Community based MPAs or *tabu* sites are increasingly being used as a management tool aimed at restoring and/or conserving fish stocks (Alder, Sloan and Uktolseya 1994, Bakus 1982, Ballantine 1989). In the1970s, the number of community based *tabu* was declining but since the 1990s, there has been a resurgence of this practice in the South Pacific (Adams 1998). Despite this resurgence, there still some skepticism surrounding there validity and viability as a resource management practice.

An explanation for the conflicting ideas of the success of *tabu* sites is that different researchers and writers have varying interpretations of its success. This highlights a key point about sustainability; its concept and related practices are potentially contentious (Ehrenfeld 2005, Newton and Freyfogle 2005). Numerous studies and reports have substantiated the success of *tabu* sites for they are known to increase fish and invertebrate stocks both inside and outside *tabu* sites over

time (Alcala 1988, Bailing 1995, White 1988, White and Savina 1987). Studies from the Philippines have demonstrated how fish catches in open areas increased (from 9.7 to 14.4 tons per square kilometer) when an MPA was put in place over an eight year period but then decreased when the MPA was abolished and then increased again once it was reestablished (Alcala 1998).

Similarly, research in the Sumilon islands showed increased fish stocks both inside and outside MPAs. The percentage of live coral cover rose to more than 50 percent over a 10 year period (White 1987). A reason for its success can be attributed to the increased participation of local people. This approach enables greater chances of achieving objectives and an increased sense of ownership among project recipients (Nepal and Weber 1995, Heinen 1996). They are also likely to support management options such as MPAs when they are aware of the benefits and the participatory nature of community based projects ensures that this is likely to occur. More importantly, community based projects, such as that of MPAs often lead to the empowerment of local communities.

While *tabu* sites may be considered to provide direct benefits for community members, a point of discontent is that decision making processes are often executed or controlled by an elite group (Waste 1986). Studies have shown that community based conservation may lead to increasing reinforcement of the voice of elite members in communities and there are consequent suggestions that most benefits do not reach specific target groups (Cooke and Kothari 2001, Hildyards et al. 2002).

In addition, there is growing criticism that *tabu* sites as a form of community based coastal conservation are failing because they are not producing expected results since only a few have demonstrated success. Based on experiences from the South Pacific and South East Asia, some authors and researchers claim that there is a lack of conclusive evidence on larvae recruitment and fish production which does not guarantee the success of *tabu* (Christie et al. 2003, Foale and Manele 2004) Moreover, failure of MPAs is attributed to a lack of enforcement of rules (Christie et al. 2003, Foale and Manele 2004). Often this is attributed to the lack of human and other resources needed to effectively enforce MPAs (Roberts and Polunin 1993). Furthermore, Deguit et al. (2002) argue that they are not

simple solutions. To ensure efficiency MPAs must be jointly implemented with other management options like reduced fishing in open areas.

These negative criticisms of MPAs are indicative of Western ideologies which are centrally based on empirical science. Such contentions inadequately accommodate the views of communities involved. Social science research, which is designed to better understand the life styles and cultures of communities, is of equal importance. The two forms of science are complementary and should be integrated as such. Unfortunately, there is an abundance of literature highlighting the biological benefits of *tabu* but a lack of detailed studies on socio - cultural implications (West, Igoe and Brockington 2006, Pomeroy et al. 2006b).

Importance of including social impacts

Despite the apparent emphasis on biological research on *tabu* sites, it will be argued strongly that the success of *tabu* sites is primarily dependent upon social factors. Firstly, fishing restrictions require changes in human behavior and interaction of people in a given area (McClanahan 1999, Fiske 1992). Secondly, the creation of an MPA leads to consequences; some of which are intended (recovery of fish stocks) but others which are unintended (e.g. conflicts, economic hardship).

If social issues and challenges are not adequately addressed, then the biological successes of *tabu* projects will be over shadowed by social failures (Pomeroy and Carlos 1997, Pomeroy, Katon and Harkes 2001). In a review of MPAs in South East Asia, it was noted that the neglect of social aspects resulted in a lack of understanding of how best to implement MPAs and an under representation of conflicts that they often contributed to (Christie 2004, Christie et al. 2003).

Based upon a comparative analysis of four MPAs in Philippines and Indonesia, it was found that social factors cannot be ignored if MPAs are to achieve long term success (Christie 2004). Groups which had been disadvantaged are known to have had minimum interest in or resisted MPAs (Oracion 2003, Trist 1999). MPA sites have been likened to politics whereby they "create winners and losers" (Oracion, Miller and Christie 2005:396).

They are known to affect people within given communities differently as Pomeroy *et al*. (2006a) wrote:

> for those gaining preferential resource accesses, MPA establishment has often resulted in increases in income, food security, and material assets, while those losing access may suffer corresponding losses or adopt mitigation strategies by shifting resource use patterns or livelihood strategies

Equally important to the social impacts of MPAs is a discussion of accessibility, economic implications, displacement and alternative livelihoods. These issues will be presented here.

The implications of access as a result of *tabu* can have serious social consequences such as conflicts among user groups of the marine environment. For example, there may be restricted to local populations but open access to other users, such as tourists, often resulting in strong resentment from local populations which have not only been displaced but deprived of fishing rights (Christie 2004). This can result in hardship as members of communities which are most economically and socially affected face greater challenges in attempting to meet their daily needs. The lack of compensation or alternatives perhaps , results in even stronger resentment from local populations (Cho 2005).

From an economic perspective, the creation of no fishing zones can reduce income opportunities for commercial fishermen (Frontani 2006). The potential for conflict is further heightened when protected areas are established without the consultation with local resource owning communities or when communities feel that consultation is not genuine but conducted merely as a sake of formality (Hamilton 2003) . The establishment of an MPA leads to restrictions in the area that local communities can use to harvest edible species. Reviews of forty- five community based MPAs and six integrated coastal management projects in the Philippines emphasized the need to provide local communities with alternative resources or income generation opportunities as crucial (Pollnac, Crawford and Gorospe 2001, Johannes 1978, Pomeroy et al. 2005). Similarly, in a review of the Sumilon reserve project (Philippines) it was found that once external assistance from the Silliman University had stopped, local communities successfully managed the MPA project on their own as fish sales and income

from tourism activities had not only increased, but more importantly proved a viable option (strong incentives) with regards to reduced fishing due to restrictions of the MPA (Alcala 1998). Spillover effects from the MPA led to greater fish supplies in open areas.

More importantly, equity issues may arise as local communities experience displacement and increasing hardship while resorts increase economic returns through attractions such as protected areas (Zinn and Buck 2001). It is argued that protected areas are tools which require changes in social behavior and to expect this to occur without tangible incentives is unreasonable and can be counter productive to the success of *tabu* sites (Kelleher and Recchia.C. 1988, Christie 2004).

Marine protected areas are known to not only reduce available fishing areas but displace fishers and force them to travel longer distances to new fishing grounds and incur increased expenses (Knudsen 1999, Council 2001, Mascia 2004). In addition, concentrated fishing in new areas can potentially lead to congestion and fishing of fewer species (Sanchirico, Cochran and Emerson 2002).

To reiterate this point, studies of the impacts of protected areas on commercial fishing communities in Australia have found serious social impacts such as loss of income. This affected both fishermen and their dependents. Some fishermen suffered from depression and a loss of identity (Allen and Gough 2006). Increasing friction between the fishing communities and authorities responsible for enforcing the no fishing bans are known to increase as a result of MPAs. Similarly, Faasen and Watts (2007) note that local communities at the Tsitsikamm National Park (Botswana) resented an MPA and began to fish in restricted areas. Even though MPAs are known to have positive implications like economic returns, the unequal distribution of economic benefits is a highly contentious issue which if not contained or effectively addressed, can undermine the long term success of conservation efforts (Pollnac et al. 2001, Pomeroy et al. 2003).

A further socio economic issue is that of alternative livelihoods. Studies from the Philippines and Vietnam indicate a strong need to establish alternative livelihoods to ensure long term success of *tabu* sites (Pollnac et al. 2001, Gonslaves 2006).

This is understandable given these communities are dependent upon the marine environment for their survival, either for subsistence or semi subsistence purposes (Gonslaves 2006, Pollnac et al. 2001).

Even though *tabu* often result in increased fish stocks in one site, they can also shift increased competition amongst fishers from one area to another. In addition to increased fishing pressure amongst fishers, the likelihood of conflict also increases as pre - existing fishers challenge the equity benefits of *tabu* sites (Maisca 2003, Mascia 2004). This highlights the crucial importance of having alternative forms of livelihoods because even though a *tabu* may lead to increased fish stocks in the future it does restrict fishers' abilities to fish and meet their immediate daily and short term needs. The failure of many integrated coastal management schemes in the Philippines has been largely blamed on the inability of project implementers to include alternative forms of livelihoods (Pomeroy et al. 2006b). The vast literature available on description and assessments of MPAs or *tabu* appears to present long term benefits but fails to adequately discuss alternative options which when presented to local communities can enable them to meet their daily needs. If alterative options for livelihoods are not planned for, then MPAs can become counter - productive by increasing hardship and further marginalizing some members of communities (Waste 1986).

At this point it is possible to make an apparent summation. As well as their positive impacts, MPAs do have negative impacts which should also be considered in the planning and management of MPAs. If planners of MPAs do not take into consideration socio economic factors such as displacement, economic impacts, accessibility and the need for alternative livelihoods, it is highly possible then, that the success of MPAs will be limited. Another condition for the success of MPAs or *tabu* sites is the need to carry out impact studies of recipient communities, specifically with a focus on men and women involved in traditional resource management. Such impact studies have the potential to demonstrate the importance of socio economic factors as mentioned above, in the planning and management of MPAs.

Heterogeneous or homogenous communities

Prior to conducting impact studies of MPAs, an understanding of the makeup of recipient communities is essential (Ward and Evans 2001, Sanchirico et al. 2002). For some time, fisheries management has been dominated by the interests of economists and biologists (King 1995, Hamilton 2003) but marine management is also fundamentally about managing people (Hviding and Baines 1996). It is often argued that communities are more likely to support conservation initiatives or take responsibility for management practices when they not only participate but also take control and benefit directly from it (MPA News 2002). The questions that need to be raised are what is a community? Are there any assumptions in this definition and if so, how realistic are they?

Unfortunately and too often though, literature treats communities as homogenous groups based on the assumption that all members have similar interests whereas they can consist of sub groups with different social, economic and cultural priorities (Barr 1998, Ribot 2004, Dalzell, Adams and Polunin 1996). For example, the livelihood dependence of individuals and their families on the marine environment is not the same but varies among individuals in a community. An outsider may view a community as one united group assuming predominantly similar views when in fact, individuals can have different values and interests (Leach 1994, Moore 1993). This has a direct bearing on the social cohesion which affects support and respect for *tabu* or MPAs (Jentoff 2000, Holm 1999). This assumption is often over looked by outside development agencies and " hides a great deal of complexity'' (Berkes 2004:23). It is these differences which influence community members to place different levels of value on MPAs which in turn may cause internal community conflicts (Aswani 2000, Cooke et al. 2000).

The internal differences within groups or communities can provide vital information relevant to decision making and assist in the successful implementation of *tabu* sites (Nazarea et al. 1998). It has been noted that culture, in particular the relations local communities have with their marine environments, is an important factor which deserves more recognition in the implementation of protected areas (Crosby et al. 2000, Ward and Evans 2001).The costs borne or

sacrifices made, by different members of communities allow for interesting and valid research.

Similarly, Christie *et al.* (2003) stress the need to identify the impacts of coastal management projects by also taking into account the dynamic nature of communities, in particular, the heterogeneous history of communities. Likewise Jentoff (2004) noted the need to realize that specifically defined groups such as geographical communities can actually consist of different sociological communities.

A community may appear as a unified group but careful analysis many times, if not all, reveal differential levels of power, influence and access to resources (Jentoff and McCay 1995). Connell (1999) provides a much clearer understanding the realities of why and how communities participate in resource management. Some of these factors include:

- differences in values individuals place on the marine environment
- ability to influence decision making processes
- livelihood dependence on natural resources
- availability of alternative options

These socio-cultural differences are important as they provide in depth understanding of the gendered impacts of resource management and could be used to improve policies at national level and support effective community based resource management. However, it appears that while literature acknowledges the heterogeneous make up of communities, there is a lack of research about the gender specific impacts of *tabu* sites. In conducting impact studies of MPAs, it should be noted that women and men are not homogenous but heterogeneous groups. For instance, they have different needs which are influenced by factors such as social status, age and access to resources (Munro 1991).This has the likelihood of impacting men and women differently on the way they view, respond and participate and contribute to MPAs. Such studies with specific focus on gender have the potential to assist planners and leaders to make community friendly decisions in the implementation of MPAs and *tabu* sites.

Women's participation in natural resource management

To begin the fundamental discussion of the relationship between men and women's participation, it is important to briefly consider the historical background of the global response to women's participation in natural resource management. The mid 1970's – 1990's witnessed an increasing number of movements calling for the improved participation in natural resource management (Rathgeber 1995). This was based on previous experience of poor women in developing nations. The United Nations declared 1975 – 1985 the United Nations Decade for Women but this did not result in improving women's economic position. The impacts of decisions in development and assistance programs by international bodies ironically further marginalized women (Karim 1995). External agencies need to be aware of and appreciate local cultures when introducing interventions aimed at empowering women. The number of women's movements fighting for greater recognition and rights was strong in developed nations like the United States and Europe (Seager 1997, Momsen 2004). Shiva (1994) argues that development initiatives have frequently pushed women towards informal production which is often associated with family sustenance whereas men are privileged, receiving more opportunities associated with income generation. She notes that female interaction with the natural environment is productive, consisting of wide range of roles such as collecting food items, fire wood and assisting men with farming. One of her main arguments is the need to include females as equal stakeholders in environmental management. Furthermore, Merchant (1989) argues that women in rural communities experience greater exploitation. She illustrated this with examples of some Indian communities where upon marriage, women basically loose their land and property rights to their husbands.

The above historical perspective points to the fact that the relationship between men and women in terms of access and participation in the management of natural resource has predominantly been a relationship best characterized as contrastive. Men and women both interact directly with the natural environment but it appears that women have more roles related to harvesting and fetching of natural resources. (Moser 1991). While there are similar roles carried out by male and women there is also a marked difference guided by a gendered division of labour.

The roles of men are generally defined by a link with status or identity. Murphy and Murphy (1985) illustrate how men's roles are associated with prestige and power amongst indigenous communities in the Amazon. Men hunt and their catch is often associated with honor but the contributions of women are deemed as acts contributing only to the sustenance of families. The species caught by men are often bigger than those caught by women but involve greater effort, risk and higher uncertainty. However women's contributions are more consistent in terms of contribution to family nutrition (Murphy and Murphy 1985).

Furthermore, many of women's roles in relation to providing meals, require them to collect food items from forests and they therefore gain good environmental knowledge. In India and African countries, women interact regularly with the forest since they collect fruits, nuts, medicine, and material for repairing houses and are also engaged in small income activities. Their roles also include catching fish and small insects found in the forests (Janin 1984). The ability to provide for their families depends heavily upon the health of forests. Consequently, they are more negatively affected by deforestation than men (Sigot, Thrupp and Green 1995, Cernea 1989, Johda 1986). In addition to these roles, women in developing countries play many other roles.

For example, in Somalian societies they are responsible for weaving, managing livestock and preparing land for farming (Ibrahim 1991). In African communities, women are not only responsible for the majority of agricultural work but are known to provide two thirds of the family diet through gathering (Lee 1968). It is therefore logical to assume that women also have a broader knowledge about the local environment and are a more reliable source for the provision of family meals.

Unfortunately, the many diverse interactions women have with the environment an dthe challenges of such diversity, are often concealed by the impacts of any given resource management system (Williams 1993). For instance, the impact of degradation of resources has not only subtle but negative and profound impacts on women because of the direct interaction women have with the natural environment (Mathur 1990). Statistics of natural resource depletion such as

deforestation and forest degradation often highlight how quickly resources are depleting through statistics but often do not reveal the pressures experienced by women (Dankleman and Davidson 1988). Given their knowledge and interaction with the forests, they have been described as " the main collectors and users of forest products"(Odebode 2005:308). In some Indian communities, apart from assisting men in the field and attending to cattle, women have to walk longer distances into degraded forests and exert greater effort in collecting fire wood, fodder and fruits. This in turn affects the cooking and dietary habits of families, the quality of nutritious meals but, most of all, impacts on women's health given that they have domestic as well as physical roles outside the homes (Agarwal 1986, Agarwal 1992).

It is clear that given the multiple roles women play and gendered division of labor, any changing patterns of resource use are more likely to take a heavier toll on women. Dankelman and Davidson (1991:1) note how women are often displaced and have to travel longer distances to collect resources need for their family welfare. Synder (1990:4) further elaborates on why women are likened to the backbone of rural food systems: "women produce 80 percent of the food in Africa, 60 percent of the food in Asia and the Pacific; and 40 percent of the food in Latin America (1990:iv).

The rather precarious relationship women have with their environment and the tendency for resource management systems to conceal the challenges faced by women are aggravated by further disadvantages women face in resource development. Their work is not often acknowledged in official reports and under - valued because domestic roles are not paid and they are simply ignored (Wallace 1991).

Challenges of gender impact assessments

This provides a solid rationale to support the need to conduct gender focused impact assessments globally as well as regionally. Unfortunately, there seems to be little focus on the analytical and comparative assessments of the impacts of existing conservation on women and men. What, if any, are the costs and benefits of such efforts? How can an understanding of such impacts be used to improve

local, regional and international efforts in conservation and sustainable development? First, it is important to consider the cost and benefits of such efforts in carrying out gender impact studies of natural resource management.

Such studies specifically contextualize community based projects such as MPAs or *tabu* sites. They provide valuable and timely information. Furthermore they could provide insights into improved resource management practices. Lessons learnt from such studies will ensure that short comings of previous projects are avoided. This will strengthen the implementation of community based projects and ensure impacts are effective. Therefore, such studies will serve to empower communities to adopt practices which are appropriate to local circumstances.

Having discussed an advantage, attention should be shifted to the challenges of gender impact assessments. Despite its importance in sustainable resource management, gender impact assessments are challenging and require careful analysis of impacts. They are subject to individual values and perceptions. Values are defined as "what people consider to be important" and value orientations "reflect the attitude that an actor shows with regard to a specific value" (Becker 2003:132) Secondly, based on their experiences over time individuals are known to change views of their interpretations of negative and positive impacts (Burdge and Vanclay 1995) . Thirdly, most evaluations have failed to include this vital point (Berkes 2004, Mather and Chapman 1995). More importantly, perceptions of males and females both before and after the establishment of such resource management practiceswould provide useful insights and lessons for communities, governments and non governmental organization as they try to improve the implementation of such initiatives.

A further challenge of impact assessments is identifying and capturing tangible as well as intangible impacts of projects. Often assessments are usually based on tangible outcomes which are measurable but intangible impacts are also very important. Common intangible impacts include identities, attachment to places, spirituality and value of life (Altman 1983, Freundenburg 1984, Burdge and Vanclay 1995, Grieder and Garkovich). Interpretations of change are context dependent. Depending on the relationships between community actors and the

social, cultural, and economic history of an area, members have differential capacities in adapting to and bearing the negative consequences of change (Redclift 1995, Thompson, Warburton and Hatley 1986).

The previous discussions have focused on the relationship between men and women in relation to MPAs or *tabu* sites and the relevance of impact studies to resource management. These issues are relevant to the South Pacific region. These connections and relevance will now be examined. Even though there are many differences between Pacific island nations and other nations such as India and Africa, there are several issues in common. Firstly, in the Pacific there is high dependence on the natural environment, especially marine resource, for survival. Due to increasing degradation and/ or depletion of resources there is equally a quest amongst Pacific island nations to achieve sustainable management of marine resources.

Pacific Themes

Gendered division of labour

In traditional Pacific communities, social role are characterized by a gendered division of labor (Vunisea 1995, King and Lambeth 2000). This is obvious in traditional resource management practices such as fishing (Asian Development Bank 1990, South Pacific Commission 1995). Traditionally, women's fishing activities are restricted to inshore areas and harvesting invertebrates while men fish beyond the reefs. Women and men posses different knowledge, utilise different fishing methods, target different species and have different chores (Tuqiri and South 1997, Rawlinson et al. 1995, Vunisea 1997b). Women are believed to have tremendous fishing knowledge of seasons, weather patterns, tides and several other factors such as the best types of baits to use for fishing (Lambeth 2000, Veitayaki 2002, Mackay Year unknown). In Western Samoa , the establishment of *tabu* was found to have displaced women and the elderly from fishing in shallow inshore waters (King and Faasili 1998).

Gendered division of labor often isolates women from fisheries development programs. Men are usually involved in commercial fisheries using technology and equipment. The Fisheries Department has more training and development activities for men. Matthews (1995) emphasizes that women's fishing, restricted

to shallow and inshore waters, is often not considered important as the most common commercial species are deep sea fish and highly mobile species. Johannes (Johannes 2002b) cautions that *tabu* sites could work against women by displacing them from fishing in shallow water while men may continue to dive and fish outside the reefs.

Exclusion

If Pacific women are continually excluded from or under acknowledged in fisheries management and development projects, the issues of depleting fisheries resources and degraded reefs are likely to worsen because it will leave a large area of "resource use with no data, unmanaged and, no alternatives for those dependent on its use " (Lambeth 2000:27). Ironically, it appears that regional organizations highlight this concern but fail to actually implement projects dealing with this vital but often ignored issue. Traditional Pacific communities are often headed by males and therefore are more privileged in decision making compared to women.

Fiji

The importance of coral reefs as food bases and regular sources of protein cannot be over emphasized. Like most other Pacific nations, indigenous communities in Fiji have customary rights over inshore coastal resources usually under the leadership of chiefs. However, governments have legal status in terms of ownership. For instance, resource owning communities have the right to exploit or control resources within their traditional fishing grounds, commonly known as the *i qoliqoli* (Siwatibau 1984a, Veitayaki 1990). In the past, Fijian communities established *tabu* sites to preserve marine resources for special events such funerals of chiefs, weddings and also to recover over fished reefs (Ravuvu 1983, Waqairatu 1994, Kunatuba 1983). Traditional priests, *bete*, are also known to have been responsible for the declaration and lifting of *tabu* in pre historic times. Villagers feared disrespecting these *tabu* in case of retribution by spirit gods (Veitayaki et al. 1996, Veitayaki 1990).

Community based *tabu* sites

The success of community based MPAs or *tabu* projects in the mid 1990's have witnessed the rapid growth of this form of management. A number of NGOs were influential in raising awareness amongst traditional communities which have since

formed their own management plans of which a key focus has been MPAs. Natural resource government ministries and NGO's are taking advantage of joint partnerships aimed at enhancing community based empowerment. More communities are declaring *tabu* sites either with the assistance of joint Department of Fisheries and non governmental organizations or have taken such initiatives without external support. The cooperation of government and civil society groups in community development is an advantage that Fiji enjoys. In contrast , there are many countries in which governments are reluctant to share responsibilities with charitable organizations (Barret and Caniggia 2001).

The success of these efforts led to the formation of a Fiji Locally Managed Marine Area (FLMMA), a network which has the purpose of promoting successful community based MPA projects through the sharing of information and collective capacity building (Tawake et al. 2001, Veitayaki et al. 2003). It is made up of government departments, NGOs, recipient communities, the University of the South Pacific and other important stakeholders.

Coastal and marine resources are not only over harvested but are under increasing pressure from destructive fishing methods, inappropriate developments, land based pollution and natural disasters (Watling and Chape 1992, Institutue of Marine Resources 2003).With the failure of conventional methods of fisheries management programs, many resource owing communities in Fiji have engaged on communaty based *tabu* sites (Mattew, Veitayaki and Bidesi 1998). While there are many community efforts being supported by non- government organizations and natural resource departments, they are often advocated under the banner of communities. However, it appears that although women participate in participatory workshops, there are few efforts aimed directly at specifically enhancing the capacity of women (Vina 1998). There appears to be an almost complete absence of conservation initiatives in Fiji implementing activities to specifically empower women.

Also lacking are comparative studies of the impacts on men and women from *tabu* initiatives. However, there have been comparative studies carried on the social attitudes towards marine resource management in two Fijian villages. It was found that the villagers in Verata (Tailevu Province) were more interested and involved

in the establishment of *tabu* as their main source of income was from the sale of Kaikoso (*Anadara antiquate*) whereas those from Namatakula (Nadroga Province) were less interested in the projects as their main source of income was from employment in the tourism industry (Middlebrook and Williamson 2006). Other studies such as the research conducted on subsistence fishing patterns in Lau between 1982 – 2002 have shown that as a result of the introduction of fishing technology men have increased their catch but in doing so have rendered the important inshore subsistence fishing role of women less important (Kuster, Vuki and Zann 2005).

Women's roles

The roles of women in Fiji show similarities to women from other Pacific and international regions. In a study of women's fishing practices in Fiji, it was found that women dominate inshore fishing and are largely responsible for providing subsistence diets (Rawlinson et al. 1995). In addition to this, given the fact that they play multiple roles which are vital for family well being, Vunisea (1995) highlights women as *agents of change*. She has noted that women in Fiji have greater knowledge about seasons of different species and types of fishing methods best suited for catching particular species. In Driti village (the province of Bua) , women have demonstrated great potential in successfully managing an aquaculture project that is actively functioning and financially sustainable (Department of Environment 2003).

Given the knowledge they have acquired about the environment Ram (1995) stresses the need for changing the perception of women, in particular, to view them as having important roles to play in sustaining coastal fisheries. She also calls for the implementation of international agreements that promote the involvement of women. This certainly calls for impact assessments that address the heterogeneous nature of communities in Fiji.

Conclusion

In all, this chapter presents a number of conclusions. Firstly, there is a lack of research on the impacts of *tabu* on men and women and communities at large. The use of the term community, which contains assumptions of homogeneity, is questionable due to varying forms of life styles amongst community members.

Ironically, this is despite literature emphasizing the heterogeneous make up of communities. Secondly, this literature review has identified the need for (a) greater consideration of the socio- cultural impacts of *tabu* sites and (b) impact assessments of MPAs or *tabu* sites not just on communities as a whole but specifically on men and women. The implication is clear. An assessment of the impact of *tabu* sites is incomplete if it fails to adapt a gender component. Finally, most studies on the impacts of MPAs on communities were based on South East Asian nations or developed countries. There appears to be a lack of such studies in the South Pacific. Such a short coming needs to be addressed considering that the issues of gender focused impact studies of MPAs and the need to achieve sustainable levels of marine resources managemen has direct relevance to Pacific islands and their dynamic communities.

Chapter 3:   Methodology

Introduction

This chapter describes the methodology used in this research. Five research methods were applied:

   (a) semi structured interviews with community participants

   (b) participant observation

   (c) *talanoa* sessions

   (d) semi structured interviews with external stakeholders

   (e) literature review

 These methods will be explained after a discussion of research objectives and research issues such as reflexitivity and triangulation.

Field Research objectives:

The overall objectives of this study are:

(1) to understand the impacts of community based marine protected areas on the fishing practices of men and women

(2) to determine respondents perceptions' of the best forms of marine resources management

 (3) to investigate underlying reasons for responses of participants

This research is based on a case study of six coastal Fijian villages in the Cuvu district (see Figure 4, Chapter 4). The case study approach was chosen for two reasons. Firstly, it allowed for a full and in depth understanding of the gender impacts of *tabu* sites. Secondly, the case study allowed the researcher to gain insight into the social and cultural context of the project area which proved crucial in trying to understand the underlying reasons for participant responses. Five villages were chosen to improve representation of findings and avoid

generalisations based on a single site. This is often a common criticism of the case study approach (Bryman 2001).

Reflexivity

The positionality and reflexivity of one's research are increasingly being recognised as important components of social science research. Valentine (2005:113) states that "when you are thinking about whom you want to interview, it is important to reflect on who you are and how your own identity will shape the interactions with others." Research participants saw me playing dual roles. Firstly, I was a former employee of an NGO that played a crucial role in community conservation initiatives in Cuvu district. Secondly, I was their *dreu*, a traditional and jovial relationship between the people of my province (Macuata) and their province (Nadroga/Navosa). I had already established relations with people from all case study villages. Having previously worked in the district may have been advantageous in enabling me to better understand their opinions, although the possibility that I may have not fully grasped their reasoning and circumstances remains (Valentine 2005).

Apart from working with an NGO that was directly involved in the *tabu* projects, I also worked for a period of nine months at the Shangri La Fijian resort which is situated on Yanuca Island. Many villagers from the district are employed at the resort and I also had the opportunity to further interact with villagers. I both understand and speak Bauan, the commonly spoken Fijian dialect. Even though I cannot functionally converse the Nadroga dialect I can understand it when listening to others who communicate in the dialect. My previous personal experience may have influenced the way in which I interpreted the data collected.

It is possible that my position as a university student may have either worked for and/or against me during the interviews. My position as a researcher may have also affected the ways in which I interacted with participants, the way I perceived them and the way they perceived me (Rose 1997). Just as much as many researchers deny the fact that their previous experiences or social status may have influenced their perceptions, it is equally important that they "not do away with these things, but to know them and learn from them" (Schoenberger 1992:218).

Triangulation

In order to increase their understanding of a topic, researchers use "multiple methods or different sources to try and maximise their understanding of a research question" (Valentine 2005). For this research the views of fishermen, fisher-women and traditional leaders were compared. Data collected from *talanoa* sessions was included in the comparison and the views of community participants were also compared against those of external stakeholders. While making comparisons, the socio economic status of each community participant was also given due consideration.

Methods of data collection

Initially I had planned to use a combination of qualitative and quantitative methodologies. This included conducting surveys and focus group discussions in addition to semi structured interviews. However, it became obvious that participants were having difficulty in completing the survey forms. If respondents returned them, they were either late or incompletely filled. Some felt nervous at the thought of having to complete a form for a university student. As I was making little progress during the second week, I abandoned the surveys and focussed on interviews only. Focus group discussions were also not possible so I adjusted the interviews by providing participants with a sketch map of their customary fishing grounds, *i qoliqoli*, and asked them to mark areas where they commonly fished both previously and after the *tabu* sites were put in place.

Primary data was collected using:

- semi structured interviews that focussed on eight questions about respondent perceptions of the positive and negative impacts of *tabu*, respondents' views on the best form of marine management and their understanding of *tabu* sites
- informal *talanoa* discussions: group interviews conducted which were less formal and conducted over a bowl of *kava*. In some ways, these could be likened to focus groups but differed in the sense that while they were group discussions, they were not necessarily focussed on the research topic.

- participant observation: through directly interacting with villagers and joining them in some of their daily activities and discussions I not only able observed them but also gained in depth understanding of some of reasons for their behaviour and opinions.

Secondary data was collected through a literature review. Relevant readings from journals, reports, books, the internet and articles were reviewed to develop an understanding of community based *tabu* or MPAs and gender relations in natural resource management. I also read previous reports on the Cuvu *tabu* projects. Furthermore, this review identified gaps in the topic of my interests and shaped the focus of my research. I visited libraries at the University of The South Pacific (USP) in Suva, Fiji, and the University of Waikato. Participants from a government department and an NGO, which participated in the t*abu* initiatives, were also interviewed separately.

Sample

While my approach was not to seek a representative sample, I aimed though, to have as widespread as possible, a range of perspectives. In order to avoid an insufficient number of interviewees, I took any chance that I had to collect data and before long realised that I had more than enough. However, I viewed this as favourable in comparison to collecting less than enough data. A total of twevele semi - structured interviews and five *talanoa* sessions were conducted in Fiji. A greater proportion of my time was spent in Nadroga province. Five female and 12 male participants were interviewed in the field. All females were regular fishers of which two were semi- subsistence fishers. Of the 12 male participants, nine were traditional leaders who did not fish but were involved in decision making at village and district levels (refer to Table 2). Three men fished regularly but only one was a semi subsistence fisher. I also managed to interview three external stakeholders, two employees of a non governmental organisation and one representative from a government department.

Table 2: A summary of respondents

Respondent Type	Number	Village
Fishermen	2	Yadua
	1	Tore
Fisher women	1	Cuvu
	1	Tore
	2	Yadua
	1	Rukurukulevu
Men with leadership roles	2	Yadua
	2	Navuevu
	2	Tore
	2	Cuvu
	1	Rukurukulevu
External stakeholders	1	Government department
	2	Non - governmental organisation

There were specifications in the selection of participants of Cuvu district. I took this approach in order to obtain an understanding of impacts and participants' perceptions at the intra- village and inter - village level.

This approach assisted me in identifying any variations in views among participants from different villages and asking the necessary probing questions to enable me to successfully achieve the objectives of this research. The decision to select participants from different villages was to also increase the range of data collection and reduce researcher bias (Beeton 2004). Furthermore, participants were selected from different villages as I intended to identify both similarities and differences among male and female participants. Men with traditional roles were interviewed as they were either advisers to the *Turaga Na Kalevu* and had a direct influence in decisions about natural resource management at the district level.

Secondly, fishermen and fisherwomen were also chosen because as regular fishers, they not only had in-depth knowledge of fishing in their fishing grounds but were probably first to feel the impacts of changing marine resource management practices.

Selection of site

All five villages are located in the district of Cuvu where community based marine *tabu* sites have been established since 1999. Cuvu was chosen as a case study site because it has experienced three types of marine resource management initiatives which are explained in Chapter five.

Previously, between 1999 and 2004, I was employed by Partners In Community Development Fiji (PCD Fiji) which was an important stakeholder in the project. Most of the awareness raising activities focussed on participatory methods. It was assumed that through such an approach, all community members were equally benefiting from the *tabu* sites. However, as time proceeded, I began to question this assumption. I also began to ponder the nature of how men and women were impacted by a *tabu*. While conducting awareness raising programs in the Cuvu district, it appeared that women were passive participants in village meetings. What also struck me was that despite an immense amount of literature highlighting the need for gender impact studies of coastal resource management, there appeared to be few researchers initiatives in this direction (Gurung 2006, Secretariat of the South Pacific Community 2003). Having worked in Cuvu and other community based initiatives, it became my firm conviction that when given the opportunity, I would initiate an impact assessment study of MPAs with a gender focus. I firmly believe that such a study would offer important lessons and thought provoking insights into improving coastal fisheries in coastal districts and provinces across Fiji and other island nations of the South Pacific.

Qualitative and Quantitative Research

Qualitative research is concerned with individual experiences and/or social structures. It attempts to give more meaning to people's views and opinions (Winchester 2000). Quantitative research focuses on facts and information that can be quantified. It often consists of closed questions which are specific. Qualitative research is more informal. The researcher has more control over the

questions. In quantitative research, it is the results of the survey that matter most whereas in qualitative research the interviewee and his/her opinions are important (Kitchen and Tate 2000). This research does not seek to discredit quantitative research. Rather both are important as they have their own strengths but given the circumstances experienced during data collection and my desire to collect in-depth data, qualitative methods were chosen over quantitative methods.

Semi structured interviews played a key role in this project and involved a number research participants. There were several reasons for using semi structured interviews including an exploration of interviewees' responses by obtaining a deeper understanding of their circumstances and underlying reasons for their views (Harvey 1990, Sarantakos 1998). Recording discussions was important for it allowed me to listen intently and repeatedly to their views.

Through face to face interviews with the research participants, it was possible to get information a respondent may not have divulged in the presence of other community members. Adults (including women and youth) cannot freely express their opinions in the presence of their traditional leaders. One respondent commented that women are very quiet in village meetings but talkative outside these meetings. The interviews enhanced an understanding of cultural and social contexts applicable to respondents. These factors are important given that the case study site compromised of traditional Fijian villages.

Furthermore, the qualitative method allowed for greater flexibility as there were opportunities to adjust interviews accordingly when necessary. Each semi structured interview was tape-recorded with permission from research participants.

Semi structured Interviews

The duration of these interviews was approximately forty minutes. The semi structured interviews were conducted at places and times convenient to participants.

The majority of the interviews of community members were carried out in the local dialect unless the interviewee spoke in the commonly used *Baun* dialect. At times, English was the language of communication. This was dependent on interviewees' level of confidence and proficiency in the English language.

The interviews were conducted over a period of two months between the 20th of May and 20th of July, 2007. Initially I planned to conduct field work over one month but experienced delays due to the change in data collection methods during my third week of field work. Secondly, traditional social functions in the district cut into valuable research time. Finally I was at the mercy of participants and could only interview them at times when they were available. Unexpected situations, like funerals, resulted in further delays as respondents had to suddenly postpone our appointments.

Talanoa discussions

At the end of the day it is common for villagers to sit around a bowl of *yaqona* (also known as kava) and engage in story telling. This is known as *talanoa* but it encompasses more than just story telling as villagers often share information, problems, experiences, and/or interesting issues such as the latest news. Through *talanoa*, villagers often catch up with the latest news. It is also a means of sharing and caring for each other. The atmosphere is often relaxed or informal. I found this method of data collection very useful and appropriate as traditionally Fijians are known to store or share knowledge and experiences orally.

Male participants who had traditional roles were interviewed in the respective community halls of their village during such *talanoa* sessions. At least two other males were present for the purposes of conducting local protocols. Because it was culturally inappropriate to seek separate interviews, I proceeded with discussions in the presence of others. Even though it was not representative of focus group discussions, this method of *talanoa* discussions proved useful as I was able to explore participants' opinions by asking probing questions and later comparing their views with participants from other villagers (Tonkiss 1998). While some spoke more during the *talanoa* sessions, others spoke less but still made valuable contributions to the discussions. Some *talanoa* sessions that I participated in, included either men or women. At times both men and women participated.

Informed Consent

Social science research often involves ethical issues. An ethics application was submitted to the Faculty of Arts and Social Sciences Human Research Ethics Committee (University of Waikato) for their consideration and approval before

permission to commence data collection was granted. A key feature of my ethical application was the confidentiality and anonymity of research participants.

A consent form was prepared to obtain informed consent from participants (refer to appendix 1 and 3). The consent forms outlined the purpose of the research projects, ethical issues involved and participants' rights. The consent forms were for the semi structured interviews with community participants and external stakeholders.

Data collection only commenced once participants had confirmed their consent. In the field, it became obvious that following the presentation of protocols (which also included an explanation of the objectives and guarantee of confidentiality of respondents) participants were happy to give their oral consent. To further request consent by signing or take recordings of verbal consent was inappropriate and could have been counter productive. Formal consent was obtained for external participants such as NGO and government employees.

Acceptance

Conducting traditional protocols was an important component of field work. Prior to any data collection, I had to traditionally seek permission to conduct research in the four communities. The *i sevusevu* is an important ceremony in Fijian culture and it involves the presentation of a bundle of dried roots of *kava* (*Piper methysticum*) to the village leaders and *Turaga Ni Koro*. This was accompanied with a short speech acknowledging the traditional leaders of the district and the high chief followed by an explanation of the purpose of our visit. The *i sevusevu* was received by the local chief's leader who then reciprocated with verbal acknowledgement.

A description of the *i sevusevu* ceremony is presented. A bowl of *yaqona* (kava solution) was prepared and a *bilo* (cup) was served to my research assistant as he was the more senior of the two of us. The next cup was then served to the traditional spokesperson followed by the chief. During this ceremony, there was complete silence except for the clapping of hands three times after each individual drank his *bilo* of kava. The ceremony was over once all in attendance had been served a *bilo*. It then became informal and we began to discuss the details of my research and organise interviews (refer to Figure 1). Arrangements for the

interviews were then organised through the *Turaga Ni Koro.* The *i sevusevu* is not a standard academic methodology but was crucial in not only seeking permission but also the blessings of the *vanua*. It is believed that those who do not follow traditional protocols like the *i sevusevu* are disrespectful to local people, their chiefs and ancestral gods and are likely to experience some form of misfortune. Respondents were more than willing to participate in interviews when made aware that my research assistant and I had presented our *i sevusevu* to their leaders. Without the approval of the traditional leaders this research would not have been possible.

Figure 1: Men preparing kava after the *i sevusevu*

Some interviews were conducted on an ad hoc basis as participants were happy to participate in the discussions without any prior notice. It appeared that these participants were more relaxed and less nervous than those who had made prior arrangements for interviews. The most productive interviews and discussions were conducted over a bowl of *kava.*

Research assistant

A research assistant was chosen to assist with the data collection. He was selected for his experience in conducting community work and fluency in English and local dialects. I also worked with him previously on community development projects and found him to be not only a reliable field worker but also very knowledgeable with local protocol.

In preparation for field work, I briefed my research assistant of the objectives of the project. This included discussions about the purpose of the research, the types

of research methods and ethical issues involved. The importance of research participants' anonymity and confidentiality was stressed. I also briefly explained to him how the data was to be analysed. I was able to pay the assistant through financial assistance provided by the New Zealand Overseas Development Agency (NZODA).

Data analysis

Data from the interviews was firstly translated into English before being transcribed. Separate transcripts were prepared for separate interviews or discussions. They were then repeatedly read and common themes were marked with highlighters of the same colour. Secondly, all transcripts were combined as one document with all answers to corresponding questions placed together using the cut and paste functions of a word processor. This method also helped identify common themes. Upon grouping common themes, underlying reasons were determined through repeated reading and personal reflection on the transcripts. These themes were then classified and/or broken down into sub themes. The final component of this analysis involved trying to determine linkages, connections or patterns among the themes (Kitchen and Tate 2000). Finally, evidence for major themes and their linkages were determined.

Chapter 4:   Background of Cuvu

Origin of the district

According to Fijian mythology, the ancestors of Cuvu district originated from the highlands of Fiji, most probably the mountainous Nakauvadra range in the province of Rakiraki. It is believed that prior to the coming of Christianity, original settlers in Cuvu district resided at Yadua while others gradually moved to Navuevu and Rukurukulevu. Two respondents claim this is reflected in the fact that the resource owning communities from Yadua own the largest proportion of land across the district.

Cuvu District is a coastal community situated approximately three kilometers from the town of Sigatoka (refer to Figure 2), located on the south western coast of Viti Levu, the largest island in Fiji.
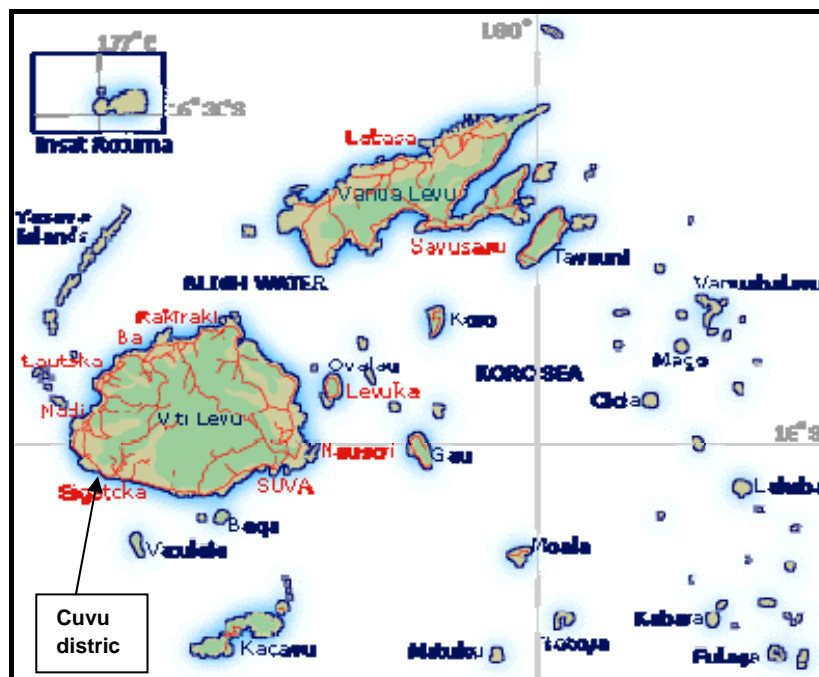
Figure 2: Map of Fiji

Source:(InfoHub Speciality Travel Guide 2007)

Six villages including Cuvu, Rukurukulevu, Tore, Sila, Navuevu and Yadua make up the district. Cuvu district is traditionally an important community because it is the residence of the Paramount chief of the Nadroga - Navosa province, the *Turaga Na Kalevu*, Ratu Sakuisa Makutu. Cuvu village is traditionally the political centre for the province.

Apart from its chiefly connections, Cuvu is famous for other reasons. The Shangri La's Fijian Resort is the biggest resort in the South Pacific and is located on Yanuca, an island of 44 hectares which is situated within the traditional fishing grounds of Cuvu district. At full capacity, the resort caters for a thousand guests and boasts over five hundred rooms. Cuvu is also known throughout Fiji for its abundance of *octopus* (*Octopus. spp*) and visitors are often fed with this delicacy.

Sigatoka is a tourism center and often called the Coral Coast. It consists of a of 30 kilometer strip of coastline. The Coral Coast is bounded by barrier reefs and mountains in the background. It is also famous for sandy beaches and good picnic spots. The Coral Coast is well known internationally for it hosts some of the best and largest resorts and hotels in Fiji.

A large proportion of villagers from Cuvu district are employed in the tourism industry, either permanently or on a casual basis. Other forms of employment include shops, private companies and government departments. There are others who farm sugarcane commercially. At the other extreme, some villagers are unemployed and regularly engage in small scale farming and fishing for subsistence needs.

Fisheries
Pacific islanders have a higher reliance on seafood as the source of animal protein diet than anywhere else in the world (World Bank 1999). Fijians are no exception. Fishing is an important activity in Fijian village life. Fishing is neither completely social nor economic (Veitayaki 1995b). Fijians are traditionally good fishers and are known to fish regularly, especially coastal villagers. Fishing is an important cultural practice and many livelihoods are directly dependent upon the state of their marine environment (Tawake 2004). Seafood, such as fish and invertebrates, form a crucial component of their diet and is also a source of income. Inland communities usually get their meat protein supplies from fish, eels, prawns and

other forms of invertebrates obtained from fishing in creeks and rivers. Veitayaki (1995b:15) summaries the five main fishing categories in Fiji as:

1) the industrial fishery sector which is capital intensive, largely export oriented and involves the canneries, distant water fish nations (DWFNs), industrial fishing boats and the recently developed snapper and chilled/frozen fresh (sashimi) tuna fisheries

2) aquaculture, presently in its early experimental stages and requiring large investments of time, effort and money

3) the artisanal fishery sector, which is small scale commercial production for domestic sale

4) the subsistence fishery sector for self consumption with the occasional sale of surplus catch.

5) A fifth category, recreational game fishing, is a recent development but one that has attracted increasing interest in recent times. Recreational fishing is rapidly becoming a popular sport amongst the elite. It is closely associated with development in tourism

Despite the importance of coastal fisheries, they are ironically, often ignored. Fisheries development plans have often reflected an eagerness to expand deep sea commercial fisheries. The key reason for this is the greater national economic returns for government and lack of statistics on the economic value of artisanal fisheries. However, there have been numerous calls for greater recognition of the importance and value of artisanal fisheries to coastal communities and national fisheries (Ram 1981, Rawlinson et al. 1995).

Under the Ministry of Agriculture, Fisheries and Forestry, the Fisheries Division is responsible for the "regulation and control of Fijis' aquatic resources" (Swamy 1990:1). It carries out these functions through its administration of the Fisheries Act. Under this Act, the use of chemicals, fish poisons or stupefacients, such as the commonly used plant *duva* (*Barringtonia derris*), for fishing purposes is strictly not permitted. Although the practice is strictly forbidden under the Fisheries Act it is widely practiced amongst rural communities (Adams 1990, Gawler 2001). There are also minimum size limits for the commercial sale of several fish and invertebrate species. However, the policing of these regulations is

often difficult due to the lack of resources and the isolation of communities in rural areas and outer islands.

The importance of fishing to Fiji's economy is reflected in an Asian Development Bank report which estimated the economic value of fishing (Food and Agriculture Organisation 2002):

- subsistence fishing worth – US$24, 675,061
- commercial fishing – US$15,231,519
- locally based offshore fishing – US$25,639,724

The report further added that 280,505 people are employed through fishing and total exports for tuna to the Japan and the United States of America between 1999 and 2000 amounted to US$15 million (Food and Agriculture Organisation 2002).

Conservation initiatives in Cuvu

The late 1990s was a defining moment for community development in Fiji because conservation projects began to focus primarily on local resource owning communities. By putting people first, and working with existing traditional governance structures, environmental NGOs in Fiji were about to develop a new model of community based conservation that was not only appropriate but timely and enhanced the quest to ensure sustainability and empowerment of resource owning communities (Tawake et al. 2001).

Cuvu District in Sigatoka happened to be one of the pioneer communities in this new but promising form of environmental conservation. The Partners in Community Development Fiji (PCD Fiji), a local non-governmental organisation in Fiji, was approached by traditional leaders of Cuvu district to assist them restore their inshore coastal fisheries which they claimed had been decreasing significantly since the 1980s (refer to Figure 3). In 1999, PCD Fiji commenced working with the district on an environmental restoration project. A participatory approach was adopted and aimed to empower resource owning communities of Cuvu district as better managers of their customary fishing grounds. A number of stakeholders including natural resource based government ministries, the Shangri La's Fijian resort and other stakeholders participated in the initiative.

Collaboration with other government departments, the private sector and research institutions such as the Institute of Applied sciences (IAS) later led to the mutual formation of the Fiji Locally Managed Marine Area (FLMMA). The FLMMA is a now a recognised charitable trust and has received international recognition for its efforts in supporting community based conservation. At the 2002 World Summit on Sustainable Development (WSSD), held in Johannesburg, the FLMMA received the United Nations Equator Initiative Award. At present the FLMMA provides support for 71 community based marine protected areas in Fiji and the number is increasing (Techara 2007).

Figure 3: A sign board about the *tabu* initiative

Marine Tenure: the *i qoliqoli*

In traditional Fijian societies, it is not uncommon to find the heads of the *vanua,* chiefs, considering themselves the sole owners of the *i qoliqli* and therefore reserving the rights to make decisions about its management (Veitayaki 1995a). The *Turaga Na Kalevu* culturally received ownership rights over the *i qoliqoli* which extends from Naidiri bay in the west to Naqarai.
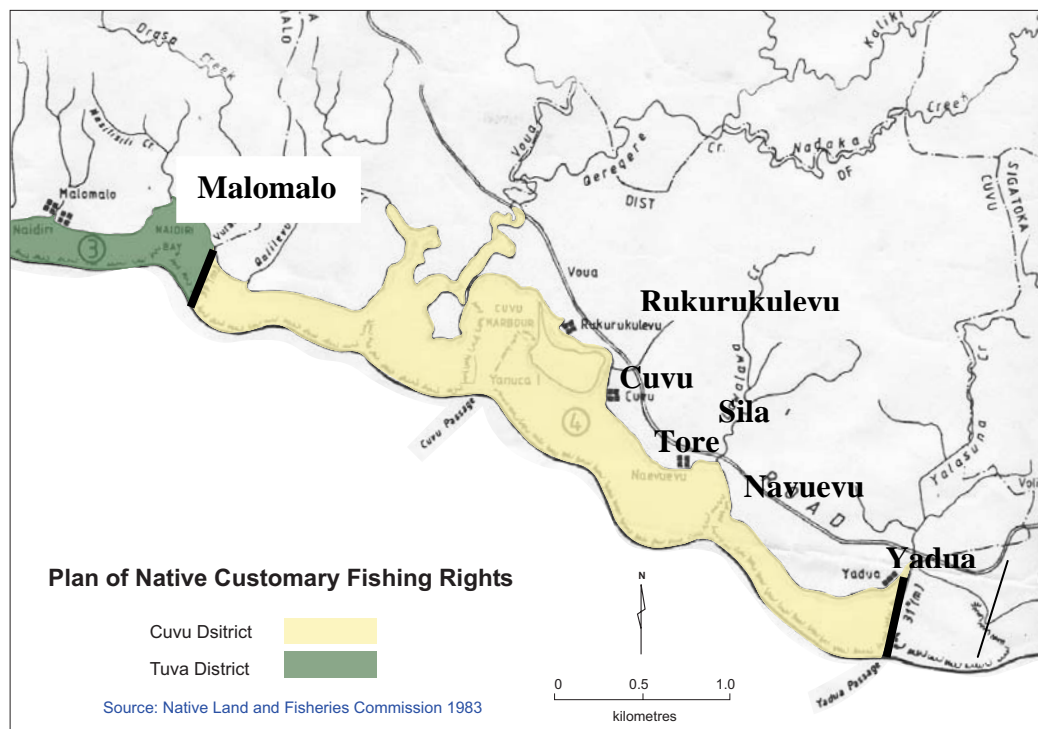
Figure 4:Customary fishing grounds of Cuvu

Figure 4 illustrates the *i qoliqoli* of Cuvu and Tuva districts. The boundaries of the *i qoliqoli* are illustrated by thick black lines. Naqarai bay marks the eastern end while to the western end is Naidiri bay, which also adjacent to the Tuva district.

However, the concept of *kana veicurumaki*, whereby all villagers and their families have the rights to fish within the *i qoliqoli* of the district, quite interestingly, co exists with this cultural perception. Ravuvu (1996:4) argues that this concept is crucial for "the sake of maintaining the *vanua* and its customary obligations". The *vanua* is at the heart of Fijian identity. It represents not only the spiritual relationship between the land, sea and people but also people's social obligations to each other. Indigenous Fijians have a special relation with the *i qoliqoli* as reflected by Techera (2007:2):

> the connection is both physical and cultural extending from reliance on marine resources for food and livelihoods to deeply rooted traditional practices surrounding the use of marine resources for ceremonies and practices

The traditional management of the *i qoliqoli* includes beliefs and rituals which are highly regarded and respected by communities of Cuvu district. It is seldom challenged as villagers often fear retribution from the supernatural. Questioning

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the management of the *i qoliqoli* can be likened to an act against the *vanua*. For an indigenous Fijian, this is forbidden as it represents an act against chiefs, their ancestors and the *kaluo vu,* ancestral god (Siwatibau 1984b, Vunisea 1994).

Social structure

Having briefly considered the conservation initiatives in Cuvu this section will now attempt to describe the social structure of indigenous Fijian societies. It considers the different levels of the social structure and the influence it has in people's lives. This discussion is necessary because the factor of social structure plays a crucial role in the implementation and management of MPAs within a traditional setting in Fiji. The intricacies of this crucial role, however, will be presented in Chapters 5 (results) and Chapters 6 (discussion).

Fijians have a highly structured governance system with specific designated roles assigned to various social groups. To grasp an understanding of the socio - political structure of Fijian societies, one has to firstly understand the term indigenous in the Fijian context. Eligibility for official recognition as indigenous, *i taukei*, is dependent upon patrilineal heritage. If this can be determined, than registration under the Fijian registrar of native land owners, the *Vola Ni Kawa Bula* is possible. These records are administered by the Fijian Affairs Board (FAB) through the Native Lands Commission (NLC).

The social structure of Fijians is stratified. In the order of descending prominence, they consist of the *vanua* (tribe), *yavusa* (clan), *mataqali* (sub clan) and *i tokatoka* (sub clan at household level). The basic unit of identity for Fijians is the *vanua* which literally means land but also has deeper cultural nuances. It represents a close affinity, not only with land but ones obligations to social groups that one is a member of. It encompasses many facets of life, both the living and the past, and has been described as the following:

> the word *vanua* has physical, social, cultural connotations. It refers to the land area a person or a group is identified with together with its flora and other objects. It also means a social group, the members of which relate to one another socially and politically. They may be staying together in a particular locality or scattered in various size groups and living in different areas, but each recognising its social and political relationships with others (Ravuvu 1986:1).

Apart from its social and cultural dimensions, the *vanua*, also includes animal life and vegetation, extends from the land to sea (Thaman 1993). The *vanua* is the largest social unit and its members are direct agnate descendants of an original ancestor, *vu*. The *vanua* always has a name and an honorific title. Following the death of the *vu*, its descendants worshipped the spirit, the *kalou vu* (Roth 1970). Even though some may not directly worship their *kalou vu* as a result of Christianity, it is still respected. For example, there are certain places where the *kalou vu* is believed to rest temporarily and villagers often fear making loud noises or shouting in the area. It is believed that the *kalou vu* is likely to punish or even curse them. Vunisea (1997a) notes that "there was a high respect for the gods of nature and the wrath they could instigate (termed *sau*) on people who went against communal directive".

The *mataqali* is the principal land owning unit in Fijian societies but there are some exceptions. In some parts of Fiji, it is the *i tokatoka* that has ownership of land. Every *mataqali* is entitled to ownership of a certain proportion of land that is communally owned by all its members who all have the same privileges and rights (Ravuvu 1990). Many daily affairs of indigenous Fijian communities are controlled through the *mataqali*. The *i tokatoka* is at the lowest level of the Fijian social structure (refer to Figure 5). The *i tokatoka* represents families, the basic unit of society. It is a socio economic unit whereby parents and adults work to provide for their family needs and welfare.

Traditional responsibilities

Each Fijian is born into a particular *mataqali*. Every *mataqali* and/or *yavusa* has a particular identity with designated traditional roles. It is considered an honour to fulfill these responsibilities (Derrick 1950). Those who are unaware of their traditional roles are likened to people without an identity and are often mocked among their peers.
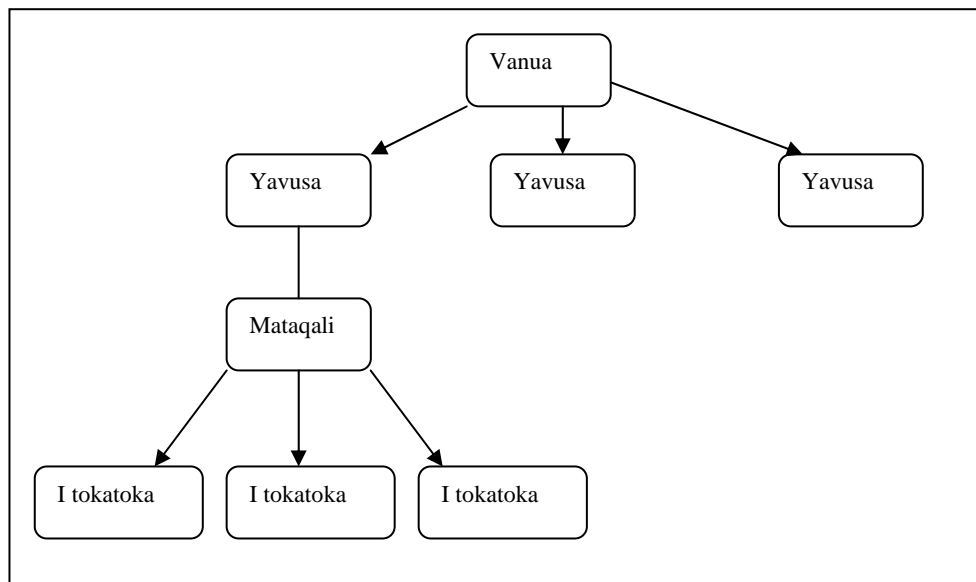
Figure 5: Fijian social structure

The seven most common traditional roles in Fijian society include (Qereqeretabua 2007, Roth 1970):

- *turaga mataqali*: the chiefly clan from which chiefs are chosen and they have important leadership roles.

- *sau turaga*: likened to ambassadors of the chiefs. They ensure that decisions of the chiefly family are carried out accordingly amongst other clans in a village. Members of this clan have the responsibility of traditionally installing new chiefs. They often communicate directly with, and are close to, *turaga mataqali*.

- *mata ni vanua*: traditional spokesperson for the chiefs, often acting as go-between mediators between chiefs and their people. At traditional functions, they are spokespersons for chiefs and the *vanua.* They have the task of relaying messages from their chiefs to fellow villagers or other *vanua*.

- *bete*: traditional priests that facilitated ancestral worship. They are known for the important role of providing spiritual direction and advice. They are still respected but in the pre - colonial times were feared by villagers as they had the ability to communicate directly with the *kalou vu*. Their advice was crucial for people relied on it, in preparation for war, journeys and identifying and healing sicknesses. Even though ancestral worship is

not widely practiced as in pre-Christian times the *bete* is still highly respected.

- *bati*: the warrior clan whose members are fierce, aggressive and expected to protect both their chiefs and their people from enemies. The warriors were skilful in the art of art and defence.

- *gonedau*: traditional fishermen of the chief who were responsible for supplying him with sea food. They are skilled in fishing methods and have superior knowledge about currents, tides and weather patterns.

- *mataisau:* skilled craftsman who are renowned for constructing canoes, houses, weapons and other wooden articles

Status of women

Traditional Fijian culture is patriarchal in nature. Women generally have a lower status than men (1990:2). Wives are expected to serve their husbands and families and carry out tasks designated by their chiefs. Men are the providers and protectors of their families. Bolabola clearly explains this (1986:2) :

> as seen by their secondary roles; marginal participation, or exclusion, from ceremonies, rituals, decision making and wars. Women's low status was reflected in their sitting position at ceremonies and meals, and their allotted bathing spots in village rivers, usually at the lower end

However, local custom varies within Fijian societies. In some villages, women are not permitted to carry out tasks involving strenuous physical work. In other communities, this is acceptable. In some communities, women fish more often than men whereas in other communities they do not fish at all. Males often have the freedom to fish wherever they want to but in some parts of Lomaiviti, there are certain areas where only women are permitted to fish.

Chiefly System

The Fijian chiefly system is "the basis on which the whole Fiji culture is based" (Qereqeretabua 2007:1). As leaders of the *vanua,* chiefs, are responsible for the functioning of traditional governance systems. They are expected to ensure the well being of their people. The prosperity of their people is a reflection of their leadership. The appointment of a chief is spiritual as he or she is blessed with the divine guidance of ancestral gods, including the *kalou vu*, and therefore has

special spiritual powers known as *mana*. It is a common belief amongst Fijians that a chief is the chosen representative of a deity (Rakoto 1986). Chiefly status is inherited in Fijian communities usually through the male line but there are exceptions. For example, traditional leaders in Cuvu bestowed the chiefly title to a female because she happened to be the eldest in the chiefly family and because, the legitimate chief (a male) was considered by the traditional leaders to be too young to become a chief. The significance of chiefs is stressed by Nayacakalou (1978:15) who argues that chiefs are symbols of unity amongst their people and are treated with utmost respect. A fundamental aspect of the chiefly system is the direct relationship between chiefs and their people. Lasaqa (1984:23) explains that:

> Fijians regard their society in terms of a fundamental unity between people and the chiefs. They often refer to this unity as *turaga ni tamata* and *tamata ni turaga* that is to say, the chief belongs to and is of the people, and the people belong to and are of the chief. This unity is cemented be a common bond of allegiance, loyalty and reverence binding together the people and their chief, and is demonstrated by the reciprocal duties each side has for the other. The Fijians realise that they must serve their chiefs and at the same time the chiefs are obliged to look after their people

The names of chiefs are significant and they are usually given titles. Often these titles have historical and cultural meanings which the elderly are familiar with. These titles vary in different parts of Fiji but some of the most common titles are: *Ro*, *Ratu*, *Adi*, *Buli*, *Tui* and *Na Kalevu*.

Communal identity

The grouping of indigenous Fijians under social units makes them quite distinct from the other communities in Fiji. Lasaqa (1984:20) explains "the members of the social group are bound together by their common name, common ownership of land and common or close residence". For indigenous Fijians land, is sacred and paramount to their identity. In this regard, the land does not belong to them. The belief is that they belong to the land and are stewards who must ensure wise usage of natural resources as this is what will be passed onto their children. Secondly, indigenous Fijians (*i taukei*) have close relationships with the land and are part of a system whereby lifestyles are conducted through communal efforts

and each individual has a role to play within ones society. Personal sacrifices are made for the sake of family, community well being or security.

Conclusion

A communal life style is typical of indigenous Fijians. Their social structure determines ones place and roles in society. It is like a kingdom with several sub kingdoms. For example, the *vanua* is at the highest level and *i tokatoka* at the lowest. The *vanua* and chiefly system are pivotal in the identity of Fijians. Having said this, the way individuals access environmental resources within such a rigid social structure will depend on an individual's place and role in society. This will be expanded further in the results and (Chapter five) and discussion (Chapter six).

Chapter 5   Results

 The findings of this research will be presented under five sub headings. Firstly, a chronology of *tabu* initiatives followed by a description of stakeholder characteristics will be made. Pre existing fishing methods will then be presented as well as an outline of the socio cultural impacts of *tabu.* Finally, a description of respondents' perceptions of the best form of marine management will be specified.

Scope

Prior to the presentation of results, an explanation of the conceptual limits of the term "impact" will be made. There are definitive semantic boundaries of the concepts *impact* and *impact assessment* that this research has embraced. Even though the *tabu* is an environmental conservation and restoration initiative it does have social and cultural implications for the functioning of Cuvu at individual, household, village and district levels. For the purposes of this research, an impact is considered to be the effect of the *tabu* upon the social and cultural environment of Cuvu district.

An impact assessment of the *tabu* initiative is in several ways likened to an Environmental Impact Assessment (EIA) but it is also different in certain aspects. EIA is believed to have originated in the United States in the early 1970's (Woods 2003). There is no universally accepted definition of EIA because different authors utilise various definitions and models which are applied in both developing as well as developed countries (Avis 1994, Smith and Wansem 1995).

The purpose of this research is not to forecast or evaluate any impacts but to determine the impacts which already exist as a result of the *tabu* initiative. However, there is similarity between EIA and this thesis. The findings of this research will be used to make recommendations for the enhancement of existing policies to improve the sustainability of community based *tabu* sites in the Cuvu district. For an evaluation of impacts, I have adopted an approach used by the European Commission (2005) and they are as follows :

- identify issue at stake

- determine whether an impact is positive or negative and the extent of the impact

- identify social actors or stakeholders and their interests

- establish the cause

Chronology of *tabu* in Cuvu district

The *tabu* initiative in Cuvu experienced 3 phases. The timeline below chronologically presents the implementation, dissolution and re – implementation of the tabu. The re-implementation phase was marked by 3 district council meetings. Generally, the re – implementation phase lacked thorough consultation creating dissent among sub chiefs of various villages in Cuvu.

Table 3: Chronology of tabu

Time	Event
Prior to 1999	*Kana veicurumaki* - no fishing restrictions and villagers of Cuvu district free to fish within *i qoliqoli*, customary fishing grounds.
1999 **IMPLEMENTATION**	- Community based marine resource management plan formed by villagers. - Three tabu sites established by village leaders in Cuvu district and open areas are available for villagers to fish. - Decision is also endorsed at district council meeting by the late *Na Mara Na Kalevu*.
2001 – 2006 **DISSOLUTION**	*Tabu* sites temporarily opened for a day and closed again but only on special occasions. - New high chief is installed, *Na Turaga Na Kalevu*, Ratu Sakuisa Makutu. - Some villagers break *tabu* and this eventually leads to a dissolution of *tabu* sites. Gradually the *kana veicurumaki* concept is reintroduced
2007 January **RE -IMPLEMENTATION** February	- <u>First district</u> council meeting: amongst other issues discussed, the *Turaga Na Kalevu*, makes known his intentions of re - introducing *tabu* sites known to all village leaders of Cuvu district - <u>Second meeting</u>.Sudden introduction of one large *tabu*. The *gonedau* erect *haravi*, traditional pegs to mark the *tabu* from the reef surrounding Yanuca island up to Navuevu. - High chief scolds villagers for removing markers and re

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May	- emphasizes his declaration of *tabu*. The *Turaga Ni Koro* of Yadua establishes a separate *tabu* for Yadua. The open area is situated between the Yadua tabu and the *tabu* established by the high chief. • <u>Third district council meeting</u>: Rukuruklevu villagers complain about Yadua having separate *tabu*. The *Turaga Na Kal evu* directs the *Turaga Ni Koro* of Yadua to modify it. The open area for Yadua is also declared a *tabu* and this ensures that *tabu* start from the reef surrounding Yanuca Island up to Yadua. The *Turaga Na Kalevu* declares the former *tabu* for Yadua an open area. His decision is respected and not challenged.

Role Characteristics of Stakeholders

There are numerous definitions of stakeholders but in principle the term is defined as "groups or individuals who can affect or are affected by" an activity or development (Friedman and Miles 2006, Freeman 1984). For the purpose of this research, the focus is on male and female adults. Some key stakeholder groups were identified and classified as listed in Table 4.This classification is necessary as it provides insights about their interests in relation to the *tabu* and is a starting point for trying to determine underlying reasons for the various stakeholders' perspectives and responses to *tabu* practices.

Table 4: Stakeholder classification

Stakeholder	Characteristics
subsistence fishermen	those men who fish regularly at least once a week fetching sea food for their family diets
artisinal fishermen	those men who fish regularly at least two times a week for both family needs and take orders for fish from fellow villagers. Fishing is a source of cash income for them.
subsistence fisherwomen	those women who fish at least once a week fetching sea food for both their family diets
artisinal fisherwomen	women who fish at least twice a week fetching sea food for their both family needs and take orders for fish from fellow villagers. Fishing is a source of income for them.
traditional leaders: heads of *yavusa* and *mataqali* and the *gase ni vanua*	traditional leaders of social units who are expected to lead their groups in supporting the *tabu* and/or offer suggestions when requested by the high chief
Turaga Na Kalevu	the paramount chief of Cuvu district and Nadroga Province. Traditionally he has ownership status of the Cuvu district *i*

Stakeholder	Characteristics
	qoliqoli
Gonedau	traditional fishermen of the high chief
Turaga Ni Koro	village head men who come sunder the Provincial Fijian Administration and oversee daily affairs and development activities of the village. Each one is appointed through the village council meeting and serves for usually a period of three years before another individual is given these responsibilities
Non fishermen	those men who do not fish at all
Non fisherwomen	those men who do not fish at all

A range of resource users with diverse interests in relation to the *tabu* is apparent. Firstly, there are ordinary male and female stakeholders who fish for subsistence and/or artisanal purposes. Secondly, there are traditional leaders who interact more closely with the *Turaga Na KaLevu*. Culturally, they are expected to uphold decisions of the chief (including management of the *i qoliqoli*) and lead by example. Finally, there exists a group of male and female users who do not fish and depend upon the fishers for sea food supplies.

Pre - existing fishing practices

To develop an in-depth understanding of the impacts of the *tabu*, it is worthwhile to examine the fishing practices of male and female respondents before the *tabu* was established.

Both men and women fished during the week from Monday to Saturday. The dominant religion practiced is Christianity and therefore no fishing is permitted on Sunday. Although both men and women fished at sea there were marked differences in their fishing zones. Interestingly neither men nor women fished in mangrove forests which are situated within the vicinity of Rukurukulevu, Navuevu and Yadua.There were distinct differences in fishing practices between males and females. The differences are tabulated and summarized in Table 5.

Table 5: Pre existing fishing practices of male and female fishers

Fishing practice	Female	Male
Methods	Gleaning for invertebrates Fish using hand lines -fishing equipment - hand lines - iron rods - fishing line - fish hooks	Predominantly catch fish species fishing equipment - flippers - googles *qilivati,* an iron rod with a sharpened edge - an elastic rubber used to propel the spear to catch fish.
Time	- Only during day - Spend less time fishing as they have other household chores (e.g. cooking cleaning)	Dive during day and night using water proof torches. Men spend more time out at sea.
Fishing zones	Inshore – from beach to reef edge	Inshore and along outer edge of reef
Cleaning of fish and shell fish	Done by women	Seldom done by men

Given the differences in fishing methods of male and females, logically there are differences as well in target species. Table 6 is a summary of the species caught by female respondents.

Table 6: List species caught by females

Name of marine species			Type of marine species	
Local name	Common name	Scientific name	Fish	Invertebrate
Kabatia	thumb print emperor	*Lethrinus harak*	√	
Kacika	slender emperor	*Lethrinus xanthochilus*	√	
Kake	blackspot seaperch	*Lutjanus fulviflamma*	√	
Kawakawa	honey combed rock	*Ephinephelus merra*	√	
Ose	Goatfish	*Upeneus vittatus*	√	
Sabutu	yellow tail emperor	*Lethrinus mahsena*	√	
cawaki	sea urchin	*Tripneustes gratilla*		√
Dri	bech de mer	*Holothuria .spp*		√

Name of marine species			Type of marine species	
Driloli	Blackfish	*Actinopyga echinites*		√
Ega	Spidershell	*Lambis lambis*		√
Loliloli	Lollyfish	*Halodeima arta*		√
Kuita	Octopus	*Octopus .spp*		√
Madrali	polished nerite	*Nerita polia*		√
Sici	Turbanshell	*Niloticus .spp*		√
Veata	green seahare	*Dolabella auricularia*		√
Vula	brown sandfish	*Bohadschia vitiensis*		√

From *talanoa* sessions with male and female groups, it became clear that males who collected invertebrates were often mocked amongst by peers as invertebrates were associated with females. However, when females caught big fish using simple technology such as hand lines , they were held in great esteem amongst men and women and their stories were often told in *talanoa* sessions.

The table below summarizes the target species of male participants.

Table 7: List of species caught by male participants

Name of marine species			Type of marine species	
Local name	Common name	Scientific name	Fish	Invertebrate
Balagi	Yellowfin surgeon fish	*Lethrinus harak*	√	
Damu	mangrove jack	*Lutjanus argentimacculatus*	√	
dokonivudi	long nosed emperor	*Lethrinus elonggatuis*	√	
kabatia	thumb print emperor	*Lethrinus harak*	√	
Kake	blackspot seaperch	*Lutjanus fulviflamma*	√	
kanace	mullet	*Valamugil seheli*	√	
Kawakawa	honey combed rock	*Ephinephelus merra*	√	
Sabutu	yellow tail emperor	*Lethrinus mahsena*	√	
Kawago	spangled emperor	*Lethrinus nebulosis*	√	

Name of marine species			Type of marine species	
Nuqa	rabbit fish	*Siganus spinus*	√	
Saqa	sanka	*Carnx ignobilis* *Carangoides hedlandensis*	√	
salala	chub mackerel	*Rastrelliger brachysoma*	√	
Sokisoki	porcupine fish	*Diodon hystrix*	√	
Ulavi	Five banded parrot fish	*Cetoscarus bicolor*	√	
Varivoce	hump headed Maori wrasse	*Cheilinus undulatus*	√	

Obviously male participants focused on catching fish where as females mainly gleaned for invertebrates but also used hand lines to catch smaller lagoon fish.

Social and cultural impacts of tabu

Frequency of fishing activity. The tabu had immediate and profound impacts on the fishing practices of both men and women. Among females, four previously fished solely for their family needs but have now completely stopped fishing. Interviewee 2 mentioned having fished once at Malomalo (in the neighboring district of Tuva) but seldom does now. This a huge change given that four out of the five female respondents fished daily for six days per week. Only three of the twelve male respondents fished and were directly affected by the tabu. Two out of three males including a youth and a man (with a family of five), stopped fishing as a result of the tabu. In totality, female fishers experienced greater decline in fishing activity than male fishers.

Fishing zones.Despite those who stopped fishing as a result of the *tabu*, two fishers including one male and one female, continued to fish as normal and claimed not to have been negatively affected by the *tabu*. A consideration of their fishing areas clearly explains the differences in the impacts experienced by them and other fishers. On one hand, it was noted that both these two fishers previously had wider personalised fishing zones. Their fishing range covered a wider area within the *i qoliqoli* prior to the implementation of the *tabu.* On the other hand,

the other fishers (two males and four females) had specific personalised fishing zones, with narrow fishing ranges. Therefore when the *tabu* was implemented in 2007 and included their fishing zones, those latter fishers experienced a greater sense of displacement and were most vulnerable. This is illustrated in Figure 6. The most recent *tabu* included their personalised fishing zones. They could not adjust to fishing at other sites as they were familiar with their personalised fishing zones and were not quite ready to make the change.
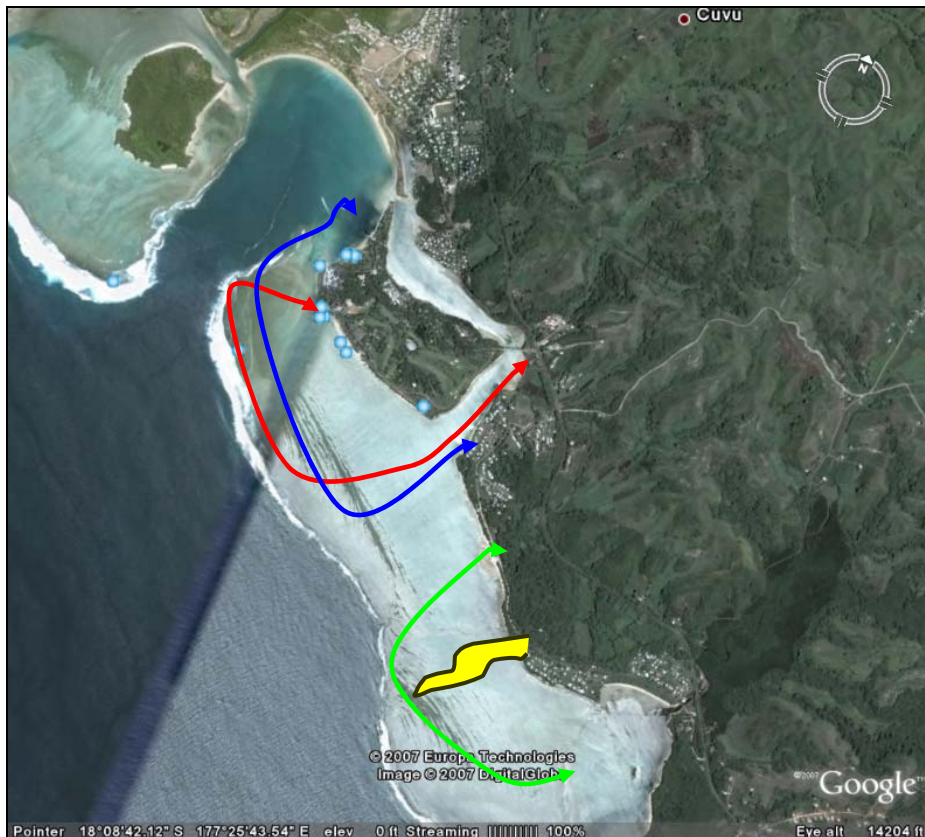
Source of map: Google Earth

Figure 6: Personalised fishing zones

Cuvu fisherwoman	←——→ (red)
Rukurukulevu fisherwoman	←→ (blue)
Tore fisherwoman	←——→ (green)
Tore fisherman	⬭ (yellow)
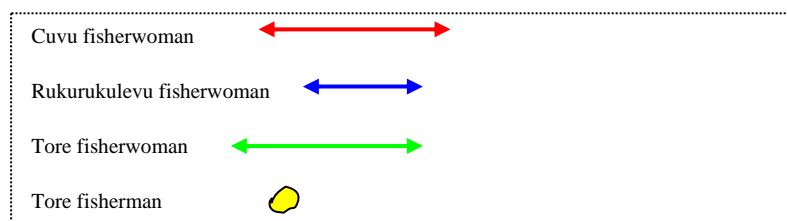
It is clear, then, that those with wider personalised fishing zones experienced lesser disruptions to their fishing practices (refer to Figure 6). Additionally, fisher

women more than fishermen experienced greater displacement considering their smaller fishing zones (see Table 5).

Dietary impacts. The staple diet of Fijians is known as the *kakana dina* literally meaning true food and refers to starchy foods like root crops. In Cuvu district, cassava (*Manihot esculenta*) is the most commonly consumed root crop and to a lesser extent, *dalo* (*Colocasia esculenta*). It is usually consumed with some fish, invertebrates and occasionally with meat with vegetables.

This pattern has now changed. All female participants, except for one, reported green vegetables becoming an increasing component of their daily meals. They are consumed more often and in greater quantity. In addition, the quantity and frequency of protein sources in their daily diet has decreased significantly. Now, all female respondents (except one) and their families have to prepare meals with less fish and more vegetables like *rourou* (dalo leaves cooked in coconut milk), *bele* (*Abelmoschus manihot*) and water cress (*Rorippa nasturtium –aquaticum*). If respondents could afford purchasing sea food, this was done specifically for Sundays whereas previously it was consumed daily. One respondent who fished almost daily for family needs complained that:

> if there are no green vegetables then we just have cassava and lemon (leaf) tea. If there is no *bele* then we just have to go to town to buy *bele*. It costs money. Not like before we just put the cassava on the stove and go fish by the beach. **What can I do now? The leaves of our *bele* plants have all been plucked**. I tell my family we just have tea. On Sunday if some have no money they just have to have *rourou* for lunch. Before Sunday was a day when we traditionally had fish for lunch

She further explained that even though they respected the views of the high chief and culturally could not challenge them, the daily struggle that they were experiencing was getting increasingly difficult because it is affecting them in many ways. Another female echoed similar remarks. Frustration was obvious. A summary of this dietary impact is diagrammatically represented in Firgure 7:

tabu → Displaceme → Reduced fishing consumption → Increased vegetable in diet and less sea food

purchase of sea food

Decrease in nutritional quality
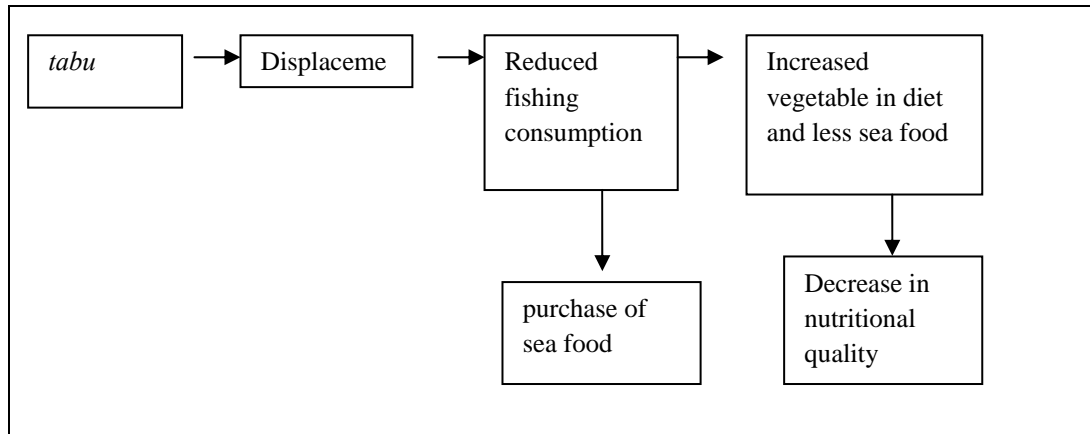
Figure 7: Dietary impacts of *tabu*

It appeared that male respondents were less forth coming about the impacts of *tabu* on their family diet. Only one of the three fishermen clearly discussed the difficulty in obtaining seafood to consume with root crops such as *cassava* and *dalo*. His emotional response showed diet was a major change and a challenge which he found difficult to overcome. However, he indicated that his family had at least one family member who was working and therefore they were able to purchase seafood from fish shops. The other fishermen acknowledged similar difficulties but were less descriptive.

Of interest was the diverse manner of articulation and underlying connotations in the views of traditional leaders concerning dietary change. A certain group of leaders were resolute in their support of the *tabu* and were adamant in their views that "we can still survive – eat more vegetable!" While they were diplomatic, they were also seen to express their views in aggressive undertones and strongly condemned those with opposing views. The second group of leaders admitted the challenge of changing diet but did not elaborate. Rather they focused on other topics which dominated the *talanoa* sessions. In addition, they laughed or joked when explaining the challenges their people faced but it was obvious that their jovial tone was not genuine. One can deduce that leaders with this style of response supported the decision of their high chief even though they may not have necessarily agreed with it either partially or fully.

A third group of leaders, however, were more critical of *tabu*. They (two respondents) not only acknowledged the struggle their people faced but also took the time to provide detailed explanations. A certain correspondent in this group made sarcastic reference to the profound change in diet of users. These differences suggest a degree of dissent among traditional leaders in response to the dietary impacts of the *tabu*. While traditional leaders are culturally expected to uphold the decision of the high chief, it was obvious that some disagreed but could not break the *tabu* as this would be traditionally unacceptable.

Nutritional costs. The consequence of spending more money on food was experienced after the introduction of the *tabu*. A more detailed presentation of results will be made here. One female participant mentioned purchasing fish for at least $4/kg and spending up to $50 a week to provide for the family's Sunday lunch and especially for her children's lunches during week days. Their family consisted of three adults and two children who attend primary school. Only one member of the family worked at a nearby resort and was the only source of family income. She was both humble and honest in acknowledging that other adults were experiencing greater struggles to provide for their familie if they had larger family sizes and more importantly if they had few, if not any, engaged in some form of wage employment. A second female respondent noted how her family now had to spend up to $25 dollars per week for traveling to the market to buy *bele*. Previously, they fished freely and obtained *bele* from their gardens. This may seem like a small amount of money but it is significant because her household consisted of three adults and a child. She provided seafood for the family. Her daughter in law was the sole income earner whom they had to depend on for their survival.

In contrast, one female respondent who stated that even though they were now spending $25 dollars every week on purchasing fish, she did not view it as a struggle. In particular, she stated that "There is no big change. If we want sea food we buy it. We are vegetarian in the week days and eat fish in the weekend". Her response was very quick and she raised the importance of abiding by the chief's decisions. There are two possible reasons for her comments. Firstly, her family

was of chiefly status and as such they were expected to honor the *tabu*.Secondly, they were economically better off than other families.

Interestingly, only one out of the three male fishermen discussed how his family was financially affected by the *tabu*. His family purchased $30 of fish per week whereas previously these funds were spent on purchasing other groceries like oil, sugar and flour. There was only one sole income earner in the family and the inability to catch sea food supplies would have likely taken its toll on their family budget. None of the traditional leaders spoke of nutritional costs which may have risen as a result of the *tabu*. Once again, it appeared that female respondents were more forthcoming about their struggles with coming nutritional costs than males. Transportation costs. The loss of fishing zones and the subsequent impacts of displacement meant that fishers had to travel to Malomalo (Tuva district) to fish. This travel included extra transportation expenses as fishermen and fisherwomen had to hire carriers from Cuvu district. Fares for carriers vary between $20 – 40 for a return trip. In addition, their yaqona (Piper methysticum) must be purchased at between $16 and $30 for the *i sevusevu*, which is presented to the traditional heads of Malomalo village (situated in Tuva district). The majority of villagers from Cuvu district work at the Shangri La Fijian resort and on an average earn $80 - $100 per week after deductions (e.g. taxes). However, given the decline in tourist arrivals since the 2006 military coup many staff have had reduced working hours and consequent pay cuts.Accordingly, $20 - $40 spent on yaqona is a very significant amount of money for villagers.

Apart from increasing transportation costs, fishing in Malomalo was time consuming. Previously, the fishing grounds were basically at the door step of villagers, only minutes away from their homes. Now they have had to travel to Malomalo, another *vanua*. Every time they go to Malomalo, they must traditionally request permission to fish, through the presentation of a *sevusevu* which does take time and is a slow process. I particularly noted how male respondents kept referring to mostly women going on fishing trips in Malomalo. I therefore infer that even though men go on these fishing trips, these journeys are dominated by women. Similarly, female respondents talked mainly of women going on these fishing trips and not so much men. However, women still relied on

at least one male accompanying them to perform their *i sevusevu to* villager leaders of Malomalo.

Income generation In addition to the economic impacts on family expenditure, the tabu also had implications in terms of income generation. Two female participants from Yadua fished for family needs and small scale commercial returns. Interviewee 3 continues to take orders for octopi from fellow villagers and earns up to $100 per week. She maintains that apart from a change in fishing location,her catch efforts remain the same "Whatever I used to catch before the [recent] tabu I also now catch. Still fish six days a week, able to catch the same species and amount that I used to catch. Only change is the place where I am now fishing".

In contrast, interviewee 2 was more severely affected. The *tabu* is situated in her personalised fishing zone and she could not earn income from fishing. She is a widow and the main income earner who supports herself, her grandchildren and daughter. Previously, she sold *loliloli* (*Halodeima arta*), *dri loli* (*Actinopyga echinites*), and *vula* (*Bohadschia marmorata*) to a middle man who came to buy from their door step on a fortnightly basis. She earned between $50 - $100 per sale. As a direct consequence, she was unable to pay her electricity bills for the last two months and therefore power supply to her home was disconnected. Even though she mentioned selling fish to other villagers, she declined to indicate how often or how much she sold fish. She was very vocal in her staunch opposition to the existing *tabu*. She complained that the present open area made it more difficult for her to navigate due to deep pools of water even at low tide. More live coral also made it harder to move around. Perhaps another factor influencing her perception is age. She is above 50 years. However, judging from her discussions, it was obvious that previously, she had a narrow personalised fishing zone and unfortunately for her, the new *tabu* covered areas where she had previously fished.

Of the three fishermen, only one fished for subsistence as well as selling fish to fellow villagers. He sold fish to other villagers mainly during the season of the *kawakawa* (*Ephinephelus merra*). His earnings varied from $20 to $60 per week.

This fisherman stopped fishing for small scale commercial purposes after the establishment of the *tabu*.

Conflict Natural resource management is not without conflict. In this regard Cuvu district was no exception.The sudden and abrupt erection of the *haravi* (traditional *tabu* boundary – see Figure 8) created tension. A fight almost erupted between the *gonedau*(traditional fishermen of the chief) and villagers of Rukurukulevu. Secondly, there was frustration over the lack of clarification about the duration of the tabu. The initial time frame of 1 month lapsed into 3. One respondent exclaimed

> after one month everybody looked forward to catching fish but the month passed and the *tabu* kept going but the … *tabu* did not open. Sometimes we just go to the sea wall and with a piece of *cassava* and just see the fish swimming freely in the channel. When a fish passes by we say now that's my fish and bite a piece of cassava

Thirdly, leaders from Rukurukulevu village were upset about being denied permission to temporarily open the *tabu,* at the second district council meeting. Respondents noted that the high chief was firm in his judgment. Their request was based on the fact the villagers found it increasingly difficult to fish and secondly a number of their people had complained of consuming all the leafy vegetables in their gardens. Their request was refused.

Figure 8: *Haravi*

Perceptions of best form of marine management

Having discussed the respondents' perceptions of the impacts of the tabu, their opinions about the most preferred type of marine resource management in Cuvu distric will be examined. As stated earlier two types of *tabu* were implemented in the Cuvu district:

(a) three *tabu* sites which had open and as well as closed areas in 1999

(b) one very large *tabu* with less open areas for fishing in 2007

During the interviewing process, it became apparent that all five female respondents strongly supported the concept of *tabu* sites as effective marine resource management systems. However, their views on how it should be implemented varied. None denied the fact that as a result of *tabu*, fish and shell fish populations observed in their *i qoliqoli* had increased significantly. This is interpreted as a positive impact of the *tabu*. A respondent commented that "we see more fish swimming closer to shore and in greater abundance".

Opinions with regard to preferred types of *tabu* varied and their consideration is important as it provides insight into the underlying values of respondents. All female participants indicated their respect for the decision of the *Turaga Na Kalevu* but because of the socio – cultural and economic impacts that they were experiencing, all except one believed there was a need for a change. They felt the present *tabu* should be modified, in particular the spatial size of the *tabu* having open areas located within reasonable distances from their villages. One mentioned that it would a be "huge relief" if the present *tabu* was opened at least for a period of time and/ or open areas were included as part of the *tabu.* During the interviews I could sense a level of frustration amongst respondents.They were without options. Complying with the *tabu* was manadatory.

There is pressure on such resource management practices to fulfill dual roles (a) as breeding grounds to increase marine life population and sustain sufficient stocks for future generations, and (b) to ensure families are currently able to meet their daily needs as they were also able to before the *tabu* was established. From discussions with all females, it can be inferred that both they and their families ate seafood almost daily and enjoyed the privilege of having accessible fishing

grounds. A distinctive feature of the previous *tabu* was adequate open areas for fishing despite the presence of restricted areas.

Having discussed the views of females I will now consider the views of the male respondents. A total of twelve male respondents were interviewed for the purposes of this research. Of these respondents, three were regular fishers and nine were traditional leaders of various types within their respective villages (the traditional title of these men is not indicated to ensure anonymity).

All but two of the nine traditional leaders, strongly supported the present *tabu* and believed that it was blessed *(sau tu)* as the *Turaga Na Kalevu* was directly involved. One of them commented "the *kanace* (*Valamugil seheli*) and *saqa* (*Carnx ignobilis*) that's normally observed in the passages (in reefs) is moving closer to shore and the crab population is increasing". Another commented that this was a blessing from their leader because they were honoring their king's decision. A common theme which emerged from discussions with these leaders was peoples respect for the *tabu* and fear of breaking it, as noted by a respondent "with this *tabu* by the *Turaga Kalevu*, people are afraid, afraid to fish in *tabu* areas. The previous *tabu* was not respected much. The sight of the *gonedau* putting the markers made an impact and certainly meant something serious. The traditional *tabu* is very different. When referring to the present *tabu* three males and three females used the term "*tamata sa rere*" (people are scared), indicating their fear of disobeying it.

Through discussions it was obvious that all male and female respondents quite often compared the recent *tabu* to the initial *tabu*. I note that all were happy with the *Turaga Na Kalevu* being directly involved in establishing the *tabu* sites. They believed populations of fish and shellfish were increasing and that they were being observed closer to shore. They believed that this improvement in stocks was a blessing for honoring the decision of their chief. Even though the *tabu* was only three months old at the time of the interview, all confirmed that compared to the previous *tabu,* there was a greater abundance of marine life within a shorter span of time. I then began to probe further seeking to determine their reasoning. It was found that the common perception was that this *tabu* was culturally and spiritually

significant as it was a direct decision from the Turaga *Na Kalevu.* They believe that by respecting the *Turaga Na Ka Levu's* decision, villagers were likely to experience his *mana.*Their interpretation was that this *tabu* was *sau tu* (blessed by the *vanua*) and that chief's *mana*[1] is alive. Secondly, the participation of the *gonedau* (traditional fishermen of the high chief) in establishing traditional markers, *haravi*, has increased cultural significance of the *tabu*.

It appeared that those leaders who staunchly supported the *tabu* were those who had close traditional responsibilities (e.g. his advisers) and had close relationships with the high chief. Firstly, the leaders from *Cuvu* village explained that they resided in the same village as the high chief and as such are expected to be exemplary in honouring the restrictions. Leaders from Tore are traditionally known as the *Gase Ni Vanua*, those whom the *Turaga Na Kalevu* consults closely on issues affecting developments in the district. Secondly, they are expected to relay any message from the *Turaga Na Kalevu* to other villagers in district. This is reflected in the comments from a leader from Tore:

> When the *Turaga Na Ka Levu* wants something done or new developments (like *tabu* sites) we are expected to sit by his side have the role of traditionally informing other villages and relaying the *Ka Levu's* message to the district

Two traditional leaders disagreed with the present *tabu* and were sympathetic towards the struggle experienced by their people. They indicated their respect for the *Turaga Na Kalevu* but firmly believed that the present *tabu* should be modified. One suggested that it be opened at least for a day but the best form of *tabu* was having restricted as well as unrestricted areas. The second respondent had a very interesting suggestion, having three sites under one *tabu,* consisting of a permanently closed site, a restricted area that is open on only certain special occasions and a third area where fishing is unrestricted. One of these respondents commented that there was a difference between those who fish and those who do not: "Decision makers sit and wait for fish but the grass root peoples are closest to the sea".

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[1] Mana refers to the spiritual powers associated with a chief

During the interviews I noticed a trend in choice of words which provides insights into the values of leaders. They commonly referred to the "villagers, the people and our future generations" which perhaps indicates that they were equally concerned about meeting the sea food needs of their families, the whole village and future generations. It must be noted that none of these leaders were actively involved in fishing. One respondent commented "If we don't respect the *tabu* what fish will there be for our children?" Interestingly, three leaders indicated that there were some people who may have not been totally satisfied with the restrictions but explained that they had no choice but to comply.

Having discussed the views of traditional leaders, it is important that the views of fishermen are considered. All three fishermen acknowledged their *i qoliqoli* represented a daily source of food and income. However there were others who relied upon it for both purposes. These individuals were struggling to meet their daily needs. Therefore all of them preferred having an open as well as a closed site.

Spatial impacts of the *tabu*

There were spatial implications of the *tabu* and this resulted in inequities across the district. When the *tabu* was established across the district all villagers except Yadua complied. Instead, the current traditional head of Yadua defied the directive from the *Turaga Na Kalevu*. He decided on a separate *tabu* and an open area for the village. He also happened to be a *bete* (traditional priest who communicated with ancestral gods) and who were not only respected but revered in the olden days. As illustrated in Figure 9, this resulted in a *tabu* as well as an open area within close proximity of Yadua village. Some found this unfair as the reef immediately surrounding Cuvu, Tore, Rukurukulevu, Sila and Navuevu was declared *tabu*. It was obvious that the sacrifice of having to travel further (i.e. to Malomalo district) was not borne by villagers from Yadua. A respondent commented "It's not fair that only Yadua has one side open ...all villagers should have the same areas *tabu* and all must respect the *Turaga Na Kalevu*". Therefore at the third district council meeting leaders from Rukurukulevu complained and questioned the appropriateness of Yadua having a separate *tabu*.
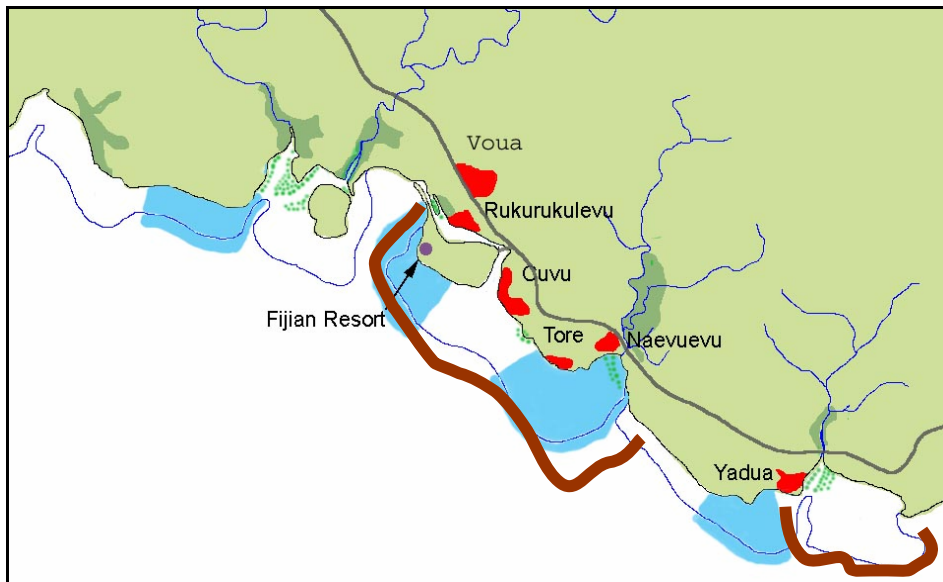
Figure 9: First set of *tabu* sites in 2007

(1999 tabu in blue, boundary of 2007 tabu in brown)

Figure 9 illustrates the *tabu* areas in Cuvu district which were established in 1999 and 2007. Note that there are four *tabu* sites (3 for Cuvu district) as the *tabu* to the far east was established by a neighboring district after hearing from the people of Cuvu about positive impacts such as increased fish stocks. The one to the left was the *tabu* established by the *Turaga Na Ka Levu* while the one to the right (brown boundary) was established by the *bete* in Yadua.

At this third district council meeting, a decision was immediately made by the high chief and he called upon the leaders of Yadua to change the boundaries accordingly. Under this new *tabu* an open area was established from the east of the channel at Yadua through to the eastern edge of the *i qoliqoli*.

Following concerns raised at the third district council meeting, the *Turaga Na Kalevu* declared the most recent *tabu* in Cuvu district as that marked by the brown borders (refer to Figure 10). Note, an open area to the West of Yadua. While the exact area of the existing tabu is not known it was commonly noted by male respondents that it covered greater than half of the total area of the *i qolqioqli*.

Figure 10: *Tabu* site (May 2007: brown line represents border for recent *tabu)*

Conclusion

The results of this chapter indicate a number of important socio–cultural, economic and spatial impacts of the *tabu* on men and women in Cuvu district. An understanding of these issues is important for they have direct management implications in terms of maximizing the benefits of the *tabu* while minimizing its challenges.

In terms of the impacts of the *tabu,* there were both similarities as well as differences between men and women. This was reflected in the heterogeneous make of the district, in particular, values relating to the *i qoliqoli* .Therefore, individuals perceived impacts of the *tabu* differently. Stakeholders included fishermen, fisherwomen, the high chief, traditional leaders and non fishers. Even among some of these leaders, such as traditional leaders, there were differences in views (e.g. leaders opinion on best form of *tabu*). Some impacts were gender specific while others showed variation amongst male and female participants.

Impacts commonly experienced by men and women were displacement and the complete cease of fishing activity .Consequently, this led to the decreasing quantity of sea food and increased vegetable in their diets. This also resulted in increasing expenses in having to purchase seafood and travelling to other fishing sites such as Malomalo. Male as well as female respondents acknowledged the difficulty with their inability to catch sufficient fish and shellfish supplies for their

families. This caused frustration. The uncertainity over the duration of the *tabu* aggravated matters futher.

The positive impacts included increased fish and invertebrate stocks, raised awareness amongst communities, direct involvement of *gonedau* and the renewed belief amongst participants that the involvement of the *Turaga Na Kalevu* would result in greater spiritual blessing of the *tabu*.

The *tabu* is not without conflict.This can be attributed to several factors such as the sudden imposition of the *tabu*, lack of consultation amongst community leaders of each village, struggle of respondents to obtain daily food sources and lastly, inequities arising as a result of Yadua initially establishing its own separate *tabu*. In the traditional Fijian context decisions about *tabu* are decided by me.Only a few including the chief and those of elite social status can have direct influence. Therefore, from one perspective, this decision making process is gender biased as women have no obligations in such matters.

Finally, it was found that the factors which were most influential in the perceptions of men and women of the impacts of the *tabu* were the level of dependence on the marine environment for their livelihoods (including respondents and their families), personalised fishing zones prior to the establishment of *tabu*, traditional status and/or responsibilities and socio - economic status of a family.

Chapter 6: Discussion

Integrating local people into the process of conservation is believed to increase the chances of objectives being reached (Nepal and Weber 1995, Heinen 1996). However, this claim tends to assume homogeneity and that all members of communities have equal levels of participation. The results of this research suggest otherwise and partly reflects calls by Howitt (2001) for new ways of thinking and doing resource management and, in particular, strongly supports existing literature which stresses the importance of understanding the fact that communities are not homogenous but heterogeneous (Leach 1994, Moore 1993, Barr 1998). Henceforth, there is a serious need to avoid such an assumption. Agrawal and Gibson (1999 – cited in King 2007) clearly argue that:

> The vision of small, integrated communities using locally evolved
> norms and rules to manage resources sustainability and equitably
> is powerful. But because it views community as a unified, organic
> whole, this vision fails to attend to differences within
> communities, and ignores how these differences within
> communities affect resource management outcomes

The findings of this research show that communities of Cuvu district are far from being a "unified, organic whole". That is to say, even though villagers in Cuvu district may belong to a single *vanua* and share the same *i qoliqoli*, they are heterogeneous and extremely diverse.

 This state of heterogeneity raises important concerns and sustainablility issues regarding the implementation of traditional MPAs. The following discussion will firstly demonstrate this existence of community diversity in Cuvu district by drawing extensively from the research findings. The chapter will then analyze the challenges and implications that arise for marine resource users in Cuvu district and civil society organisations.

Heterogenity Issues
Gender. This gender focussed study of marine resource users has unearthed many social complexities of communities in Cuvu district and the subsequent impacts

arising from such social intricacies. Firstly, the results of the gender oriented research supports the premise that because men and women of Cuvu district have different roles and expectations with regards to the access and control of marine resources, their response and access to marine resources within a *tabu* site varies greatly. It will be seen that on many occasions, these gender determined experiences are conflict ridden and seem to take a heavier toll on women. This point has been raised by Dankleman and Davidson (1991) in Chapter two.

Given the size of the *tabu* and the location of their personalised fishing zones (restricted to inshore areas) women in Cuvu appeared to have experienced a greater sense of displacement. Male fishers on the other hand had larger fishing zones extending outside the *tabu* site (i.e. outer edge of reefs) and the further advantage of more sophisticated technology and diving skills. This consequence of displacement was aggravated further by other factors. Firstly, women could only fish in Malomalo if there were sufficient funds to pay for transportation. Secondly in fishing in a new district, they were crossing over a traditional and culturally defined boundary requiring the purchase of *yaqona* to perform traditional protocols. In addition, women were unable to fish on their own in Malomalo but had to wait for a male chaperone to accompany them on their fishing trips so that he could perform traditional protocols. Furthermore, in unfamiliar waters, women fished in closed clusters. In fishing clusters, closely guarded fishing knowledge was acquired by inexperienced yet observant fishers causing animosity.

Interestingly, the *tabu* created unequal displacement among women. Women from villages other than Yadua faced greater displacement as they were further away from open zones. This meant that these women were required to travel furthest and incur greater transportation costs. This double burden is most likely the reason for complete abanomdment of fishing by some some female respondents.

Also, given the multiple roles women of Cuvu district have from preparing meals for their families, household cleaning, attending to children and preparing for village functions, the increased time and effort spent on travelling and fishing in new sites at Malolo, would certainly have reduced their ability to carry out other tasks. This draws similarity with exiting literature documenting the impacts of deforestation on women and men in India and Africa (Cernea 1989, Johda 1986).

While the struggle of women in Cuvu had similarities to that reported in the literature, women in Indian and African societies have the option of travelling further into forests but the women of Cuvu district had limited options.

Traditional Political leadership. Although this research focussed on gender, there were other important socio-cultural factors which influenced the perception of the impacts of the tabu. Traditional political leadership within the framework of the Fijian social structure was one such factor. It can be argued though that traditional Fijian political leadership cannot be totally detached from a gender analysis considering that the traditional social leadership structure in Cuvu is patrilinealy determined. This accepted, however, this research found that conflicts and impacts as a result of social-political structure evolved largely due to inequality of power ownership rather than gender differences.

Generally fishermen and fisherwomen felt that their fishing rights were impinged upon by the *tabu*. This represents a clash of rights on different hierarchical levels between those ordinary villagers and others of higher social status. Through the *tabu t*he *Turaga Na Kalevu* expressed his ownership rights over the whole *i qoliqoli* which is culturally appropriate given the Fijian context. Those with traditionally sanctioned power had greater control over the access of resources in the *i qoliqoli*. Sub chiefs of Cuvu and Tore for instance were traditionally not inclined to overturn the decision of the *Turaga Na Kalevu.* The reactions of some sub chiefs, however, against the *Turaga Na Kalevu's* decision to implement the *tabu* varied according to their proximity to *Turaga Na Kalevu's* power. Sub chiefs higher up the hierarchy were generally more supportive of the *tabu* and down played the negative impacts felt by their people, than those sub chief lower in the hierarchy.

A challenge then exists for communities in the Cuvu district to try and maintain a balance between the different values villagers place on the *i qoliqoli* and the different decision making powers certain individuals have given the hierarchical structure of Fijian societies. This was perhaps a factor which to some extent contributed to conflict because in terms of resource management, there are two groups with different levels of decision making powers and different levels of

interaction with the marine environment. However, given the context of traditional Fijian communities, the hierarchical structures are part of an existing and long established social structure. This is also an important cultural factor which appears not to be reported in existing literature.

While the *Turaga Na Kalevu* had the authority to instruct the *gonedau* to immediately erect *haravi* and bypass normal protocols, it could act against the interest of the *tabu* in the long term. Richerson *et al*. (2002:423) offer thought provoking advice,"without trust in institutions, conflicts replace cooperation along fault lines where trust breaks down ... such communities are unhappy as well as poor". These findings lead to two important assumptions of Fijian societies. The fact that Fijians may not be freely expressing views against the resource management practices like *tabu* does not necessarily mean that all fully support such a decision. When views contrary to the high chief are raised by other leaders, it is possible that this may represent not just difficulties, but in fact could indicate frustration and increasing difficulty in achieving basic needs.

The decision to establish the *tabu* is constructive as it indicates that the traditional head of Cuvu district had the interest of both present and future populations at heart. He was also concerned about the current state of the marine environment, in particular the depletion of marine resources. It is possible that the decision to suddenly establish *tabu* was politically motivated. From personal observations I infer an old rivalry between Cuvu and Rukurukulevu village. In addition it was a response to the break down of previous *tabu* and the *Turaga Na Kalevu* establishing his authority as sole decision maker regarding the management of the *i qoliqoli.*

Economic factors. The heterogeneous make up of Cuvu district is also obvious in terms of employment in families. All fishers experienced some level of difficulty in providing meals for their families but those who had working members in their families, appeared financially better off than others as they could afford the changes in diet. However, there was a difference among those with working family members. Even though some families had working members they did experience challenges.If they had larger families, there was a larger impact on their budgets. Two females and one male respondent had at least one family

member working. Their families included at least three children and a grandparent sothey too also experienced great difficulty. These families had to spend at least $25 per week on purchasing fish. This was a huge impact as they had to adjust their weekly budgets. They and their families managed to cope but not without difficulty and struggle. Based on this research it can be concluded that the impacts of tabu are most strongly felt at the *i tokatoka* or household levels.

Geo - spatial factor. Geo - spatial factors were significant and contributed to the heterogeneous make up of the district. As explained in the results chapter, the fisherman and fisherwoman who had wider personalised fishing zones prior to the *tabu* were more flexible. They claimed to catch the same amount of fish both before and after the establishment of the *tabu*. The other two fishermen and four fisher women stopped fishing as a result of the *tabu*. The results of this research indicate that personalized fishing zones had a greater impact on the fishing practices of individuals than their gender. This is perhaps under reported in existing literature.

These factors of gender, leadership, employment and geo spatial ownership interact to lend form to the heterogeneous profile of the coastal communities of Cuvu district. They also bring forth important implications related to equity or the lack of it. The reality of community participation in the management of marine resources by the communities in Cuvu district, as evident in the above discussion, is one burdened with inequities. Certain groups and individuals benefited from *tabu* restrictions more than others. Similarly, some bore the negative impacts of displacement, financial costs and dietary changes (see chapter five) more than others.

Challenges of empowerment

Having noted the different rights of community members with regards to resources, there is reason to critique the claims by advocates of community participation. Some claim that increased participation leads to empowerment and to increased chances of conservation objectives being achieved (Eketone and Shannon 2006, Nelson and Wright 1995) but the case of Cuvu district clearly indicates that in traditional Fijian communities such as Cuvu, existing governance structures empower those with traditional authority such the *Turaga Na Kalevu*

and his advisers to make decisions about the management of the *i qoliqoli*. Only a few selected individuals are key decision makers over the management of the *i qoliqoli*. Women are excluded from direct decision making. Similarly, in other developing countries women have limited decision making roles or powers about environmental issues (Green, Joekes and Leach 1998).

Traditional forms of decision making may contradict western or democratic forms of participatory approaches but are appropriate in traditional societies for it is part and parcel of local culture. Where democratic decision making is not possible in societies, leaders can display flexibility by a consideration of the views of their people. Sanga and Walker (2005) note the importance of leaders in meeting their responsibilities of making appropriate decisions when faced with challenging sitauitons and adequately informing communities of their decisions.

It is claimed that community based efforts often benefit the elite, who in traditional societies are those with decision making powers (Cooke and Kothari 2001, Hildyards et al. 2002). Rather this assumption should not be viewed as a failure but a reality of the situation in indigenous communities. Every effort should be made to effectively engage these decision makers and also to make sure that they too have good environmental awareness so that their decisions are sound, made in the best interests of the people and societies they represent. In this regard empowerment in a traditional Fijian community is mixture of a top down approach with traditional leaders having the final say. A bottom up approach is evident where the greater community participates in capacity building activities (i.e awareness raising).

Sustainability

Having constructively criticised empowerment in traditional settings, there is reason to also reflect upon it in terms of achieving sustainability. As discussed earlier, the *tabu* came with costs such as displacement and some fishers stopped fishing completely. Given the current challenges experienced in Cuvu district, a question needs to be raised. Why should villagers of the present generation have to suffer for the benefit of future generations? Inter generational equity also includes justice for the present generation. This reflects a point made earlier in the literature review - even though there is a need for sustainable management of

natural resources, it is still a highly contestable issue (The World Bank 2007, Kurien 2005, Newton and Freyfogle 2005). The principles of sustainable community based projects remain the same but the method of implementation varies depending on the local context. Outsiders need to understand and appreciate local culture. Equally important, there must be a balance between decision making by the elite and the voice or concerns of ordinary villagers.

Chapter Two notes several types of conflict (competition, unhappiness due to loss of income opportunities) as a key challenge to the successful implementation of MPAs (Christie 2004). Given the hierarchy of the social structure in Cuvu district and its heterogenous make up one may argue that conflicts are bound to occur as a result of the *tabu* as villagers have different levels of interaction and dependence on the *i qoliqoli*. Further more they are impacted differently by *tabu* sites. One may make an important assumption, that conflicts are a integral part of resource management practices related to the use of the *i qoliqoli*. The conflicts found in this research reiterate views the no fishing zones "create winners and losers" (Oracion et al. 2005:396). Those men and women with wider personalised fishing zones were least affected by the *tabu* compared to other fishers. This implies that ideally sustainable *tabu* sites cannot be achieved as the impacts of *tabu* are not equally borne gender wise. Some have to bear the costs of such a management regime more than others but done for the greater good of the villagers of Cuvu district. It has been increasingly clear that the management of *tabu* sites must also factor in conflict management strategies.

Implications on Vanua

The *vanua* is an important component of identity for Fijians but given the difficulties experienced by villagers in Cuvu district, there is reason to suspect that the *tabu* has implications in terms of the vanua. It is possible that some villagers in the district may question the meaning of *vanua* given that some have experienced displacement and now have to fish at an adjacent *vanua* (i.e. Malolo) for fish and invertebrates for their subsistence needs.

Continued fishing pressure exerted by people of Cuvu district in the Tuva district *i qoliqoli* may result in conflicts between villagers from the two districts over time. On a personal level, villagers from Cuvu district may experience a sense of loss

identity when they physically reside within the bounds of their *vanua* and observe increasing fish populations in the *i qoliqolqi* but are not permitted to fish. In addition, they had no indication of how long these restrictions would continue for. This is perhaps a significant cultural impact of the *tabu* sites as it has direct negative implications in terms of their identity. The longer the *tabu* continues, without any indication of its duration, the greater stress it is likely to place on ordinary villagers. Consequently, stress may filter through to higher levels of the social structure i.e. from the *i tokatoka* to *yavusa*. This could lead to internal friction within the *vanua*.

On the one hand, one could argue that the two districts (Tuva and Cuvu) have close traditional ties and relationships but it may upset some villagers of *Malomalo* district given the increased pressure on their traditional fishing grounds. In addition to the pressure exerted by existing fishers of Malomalo, fishers from Cuvu district could exert greater pressure on marine resources of the *i qoliqioli* of Malomalo. Similarly, as fishers from Yadua fish converge in the open area adjacent to the village, it is likely that increased pressure is being exerted on this small area. This relates to concerns highlighted by Pomeroy *et al*. (2006) who cautioned that fishing restrictions in one area will often divert fishing pressure and conflicts to other areas. Questions about the sustainability of *tabu* sites are likely to be raised if fishing is reduced in one *i qoliqoli* but intensified in another *i qoliqoli*. With more people fishing confined to open areas it is likely that there will be increased over fishing and consequent decrease in abundance of marine life in these locations.

Malomalo is a coastal community like Cuvu district.It has a similar dependence on the marine environment for their daily survival. Conflicts are likely to emerge as Cuvu villagers fishing in their *i qoliqoli* may reduce their catches for subsistence and artisinal needs.In the Fijian context, the concept of sharing and caring for each other may prevail as it is customary to make personal sacrifices for the benefits of others. However, there is a question of how long can villagers tolerate the additional fishing pressure? The major concern here would be the negative impacts of Cuvu fishers fishing in Malomalo waters. This may lead to local villagers finding it increasingly difficult to fetch decent catches as a result of

increased fishing pressure. If traditional leaders of Malomalo declare a *tabu* , then it may have serious implications as the potential for dissatisfaction amongst villagers of Malomalo may increase.

Cultural dilemmas

The majority of respondents have been experiencing both a social a cultural and cultural dilemma. On one hand, as explained in Chapter Five villagers are required to respect the decisions of their chief. On the other, confirming to local culture is severely hindering their ability to fetch fish and invertebrates for both family diet and for artisinal purposes. It undermines their ability to earn income. The state of well being amongst villagers often reflects upon the leadership of their chief. Should respondents continue to respect their chief's decision and tolerate hardship at their expense their family's source of proteins? To what extent and for how long can they contain their limits of tolerance? There is certainly a clash between personal views and individuals having to conform to culture.

Perceptions of respondents changed over time. From initially fully supporting the present *tabu* three females and three males strongly believed in the need for greater flexibility with regard to current fishing restrictions. Schooten (2003:78) reiterates:

> The ways in which the social change processes are perceived, given meaning or valued depend on the social context in which various societal groups act. Some sectors of society, or groups in society, are able to adapt quickly and exploit the opportunities of a new situation. Others (for example, various vulnerable groups) are less able to adapt and will bear the negative consequences of change. Social impacts, therefore, are implicitly context dependent.

Traditional leaders are no exception as highlighted by two leaders who requested temporary openings of the *tabu* at a district council meeting but were declined. They were aware of the hardships experienced by their people but could not do much except to wait and hope that someday soon, open areas would be declared. Leaders from Cuvu and Tore appeared resolute in their support of the *tabu*. One leader likened the abundance of octopi in their *i qoliqoli* to a blessing for abiding by the high chief's decisions and said if this continued then the *vanua* would be blessed.

The management of the *i qoliqoli* and implementation of systems such as *tabu* sites is a mixture of state property and communal property. As noted earlier villagers only have customary rights whereas legally, ownership is still under the state. Hardins' (1968) opinion does have direct relevance and legitimacy with regards to this research. Firstly, his pessimism about the ability of resource users to manage resources independently, may have justification given the fact that majority of men and women experienced a number of negative impacts as a result of the *tabu* and were therefore frustrated. If these issues are not adequately and timely addressed it may lead to greater internal friction and decreasing support for the *tabu.* NGOs and natural resource government departments play crucial roles by providing important awareness that complements existing community knowledge about the marine environment. The intervention of the state or external agencies such as NGOs, in light of this, may be a legitimate solution. However, to call for the intervention of state, is to show a lack of confidence in the management of marine resources by traditional leadership structures.

This lack of confidence cannot be totally justified. The involvement of the *Turaga Na Kalevu* is perhaps a crucial cultural link in the *tabu* initiative As traditional head of the district, it is likely that villagers, both male and female, are likely to abide by his decision unlike the first set of *tabu* in 1999 where by the late chief was not directly involved in deciding on details such as the location and duration of the *tabu*. This customary practice, involvement of the high chief in the management of the *i qoliqoli*, is more than likely to strengthen the sustainability of the *tabu*. He can do so by making modifications to *tabu* practice and execute this. Part of modifications could also be the consideration of alternative livelihoods.

Alternative livelihoods

Three female and two male respondents experienced greater difficulty in providing meals for their families and consequently faced much hardship. This concurs with the thoughts of Pollnac and Crawford (2000) who stressed the need for alternative sources of livelihoods. Sea food was part of the daily diet for most families in Cuvu district but this has certainly changed given the new resource management system. There is a serious need for alternative sources of livelihoods

and/or modifications to the existing *tabu* or else the level of hardship currently being experienced will most likely continue to increase and may be counter productive in the long run; community support for the *tabu* and respect for their high chief may gradually decrease. King and Faasili (as cited in Johannes 2002a, 330) state that it is:

> unreasonable to expect communities to adopt conservation
> measures, which would (at least in the short term) reduce present
> catches of seafood even further, without offering alternatives

In circumstances where community conservation is not reflexive in relation to changing local situations and people's needs it is likely that such efforts may instead decrease in popularity amongst local populations even though they them respect for cultural reasons. As their struggle to meet daily nutritional needs continues there is an increasing likeliness that someone will in time disobey the *tabu* by fishing in restricted areas.

The literature emphasises the importance of ensuring economic alternatives when establishing MPAs (Pollnac, Crawford and Gorospe 2001, Johannes 1978, Pomperoy et al. 2005) but in the case of traditional resource owning communities like Cuvu district one may conclude that more importantly, such regimes must ensure that villagers daily needs (i.e. protein sources) are ensured. In other words ther is a need for adequate open areas so thatr male and female fishers can fish. Rather than introducing alternative sources of proteins it would be wiser to find solutions from within the *tabu* systems. Without a doubt this research has found re emphasized calls by some authors for greater focus on the socio- cultural impacts of MPAs as opposed to just biological impacts (Alcala 1988, Bailing 1995, White 1988, White and Savina 1987). It was noted that male and female participants were more concerned about the qualitative aspect of the *tabu*, the increased fish and shell fish stocks was interpreted as *sau tu*. It emphasises the value on intangible impacts in traditional settings (Altman 1983, Freundenburg 1984, Burdge and Vanclay 1995)**.** They were less interested about the actual quantity of marine life stock.

Appropriateness of alternative livelihoods

Having stated the importance of alternative sources of proteins, one ought to treat this with caution as they are often portrayed as end solutions but like any other development, alternatives require management and secondly, they must be proven to work in local circumstances. In Driti (Fiji), an aquaculture project was successfully implemented by females although the community had a different socio-cultural context from that of Cuvu district (Department of Environment 2003). Given the large number of villages (seven) and the fact that they are spread across the district, the introduction of alternative sources of proteins may not be definite. If an alternative (e.g. fish ponds) were introduced where would they be located and, would all community members actively participate in their management? If some do not, then should they be allowed equal access to others? An alternative may lead to further conflicts and pose threats of greater social disintegration. Throughout this research one point has strongly emerged; respondents' dependence upon the marine environment as a daily source of protein. The most cost effective and appropriate solution is establishing open areas as part of the present *tabu* regime. I am rather critical of the existing literature as it often promotes the idea of alternatives but appears to seldom discuss their disadvantages (Gonslaves 2006, Pollnac et al. 2001).

Communities in Cuvu may not be willing to make further sacrifices (in addition to managing their *tabu*).It has been over five years since government departments and non governmental organisations have been working in the district and to date have not come up with any alternative sources of livelihoods. Given that there appears to be some level of conflict between leaders of two villages in Cuvu district, it is likely that an introduction of alternative protein sources like fish ponds may further aggravate these conflicts. More importantly, alternative livelihood initiatives present their own challenges and sustaining them may be easier said than done. If alternative livelihood opportunities are provided in the Cuvu district, then they will have to be implemented at a district level, for a total of seven villages. I am of the view that the greater the number of villages involved in an alternative livelihood initiative, the more likely challenges are to increase and present more difficulties.

The findings of this research highlight the importance of the appropriateness of alternatives for *tabu* sites, suitability and adaptability of resource management practices and impact assessments. This reiterates the importance of impact assessments which have a socio - cultural focuses and has led to some challenging questions:

- How best can decisions makers encompass the differing values of their people in the management of *tabu* but simultaneously implement restrictions for the benefits of all groups across the district despite the differential impacts experienced by villagers?

- What are the best ways to avoid or minimize the negative impacts of *tabu* sites given the local context of traditional resource owning communities? Stern *et al* (2002) argue that a principle feature of *tabu* is ensuring the livelihood and well being of resource owning communities.

- How can decision makers ensure that the benefits of *tabu* outweigh the costs involved? It must be emphasised that changes lead to other changes and secondly, community perceptions (both male and female) change over time.

- How community can based conservation efforts accommodate the temporary openings but prevent the exploitation of *tabu* sites?

These questions allow external stakeholders to reflect upon best practice strategies in the management of marine resources at the community level

Opinion of external stakeholders

Based upon the responses of external stakeholders there are reasons to question the approach development agencies adopt in community development. It appears that the two different stakeholders (government department and NGO) involved in the Cuvu project may have overlooked the heterogeneous nature of the communities and its implication in terms of the impacts of the *tabu.* This may have over simplified the challenges encountered (e.g. gender issues, economic

impacts etc). The views of external stakeholders strongly reflect the need for awareness programmes. They also need to incorporate community views about the involvement of the high chief in establishing *tabu*. Environmental awareness is crucial but more importantly, how it is done is another issue that has strong implications. Surprisingly, only one of the three interviewees made relatively minor suggestions about different impacts of the *tabu* between men and women and this perhaps reflects the views of Matthews (1995) which stresses that most development projects are often male focussed and at the end of the day ignore women's concerns. This result is surprising as one would have expected key stakeholders such as non - governmental organisations to have been more aware of differences in impacts experienced by men and women. This may result from project objectives focussing on the community as whole but not specific groups such as females. From their responses, one should note the need for external agencies to have greater awareness of the impacts of *tabu* on groups such as men and women and more importantly their implications in terms of achieving sustainability in community based conservation.

Perceptions of best forms of marine management

The level of respondents' dependence on the marine environment for their daily livelihoods and their experiences over time influenced their perceptions on the best form of marine management. While there were a few respondents that strongly supported the existing *tabu*, the majority of males and females thought that there was a need to have open areas as well as closed areas. All except one female opted for having a more flexible *tabu* which consisted of open as well as closed areas. One respondent noted how she had initially fully supported the present *tabu* but given the cultural difficulties such as providing adequate sources of daily proteins and imbalances to their family budget, she later changed her opinion.

Intangible factors

Even though there were differences in opinion about how the *tabu* should be implemented, one theme which stood out and that is, the involvement of the *Turaga Na Kalevu* was important for cultural and spiritual reasons. Respondents believed that community members were more likely to respect the fishing restrictions and that it was likely being more spiritually blessed. This spiritual

component is an intangible value that respondents feel about the *tabu*. Even though it is not quantifiable it is an important aspect of development as explained in the literature review chapter (Freundenburg 1984, Grieder and Garkovich, Burdge and Vanclay 1995, Altman 1983). All respondents were fearful of the repercussions of disobeying the *tabu*. Ravuvu (1983:91) explains the spiritual component of *tabu*:

> two elements in the belief in supernaturalism which act as a means of political and social control are the concepts of *tabu* and *mana.* *Mana* is power to the effect. *Mana* and *tabu* reinforce each other. The magical or political principle which legitimizes and enforces the *tabu* is based on *mana*, it needs to be treated with reverence and sacredness and imbued with a certain degree of *tabu*. An object which is considered *tabu* is believed to be either imbued with super natural power or protected by it, thus its *mana*

The way forward. There are numerous community based *tabu* sites throughout Fiji but Cuvu is a special case because of the involvement of a paramount chief and secondly, its experience of three forms of marine resource management .Equity issues explained earlier have revealed the challenges that must be dealt with in a sensitive manner. Some outsiders may criticise the high chief for the size of the *tabu* but as traditional head of the district, it is important that the *Turaga Na Kalevu* is directly involved. Ruddle (1998:119) argues that community based management offers a solid foundation for sustaining coastal fisheries especially in communities where "traditional authority remains strong". Given the break down of previous *tabu* the declaration of a larger portion of the *i qoliqoli* as *tabu* is justified. In my view pursuing alternatives sources of livelihoods may give false hopes because firstly it will have to be tested and proven to work given the context of Cuvu district.It is not guranteed that alternative livelihood projects that work in other parts of Fiji, will work in Cuvu district. Rather, the solution to sustaining *tabu* sites lies in not just why but more importantly how it is implemented.

Given the current hardships experienced by most fishers it is important that their voices are heard and relayed to the *Turaga Na Kalevu* through their leaders who have the privilege of directly conversing with the *Turaga Na Kalevu* or at district council meetings. If the views of ordinary villagers are not considered, then there may be limitation to the success of the *tabu* site. As discussed earlier it appears

that temporary openings of *tabu* sites leads to similar short comings described by the tragedy of commons as described under the common property theory.**.**When opened for a day, villagers had little incentive to sustainably harvest edible species and took as much as they could for they had no idea when the next temporary opening would occur, clearly therefore, defeating the purpose of *tabu* sites. Based on the challenges of the *tabu* in Cuvu it is only appropriate that any *tabu* is inclusive of people's daily dependence on the marine environment

Based upon the suggestions of a traditonal leader, a **TOP** *tabu* model is proposed for Cuvu district and with the *Turaga Na Kalevu* still in charge. It consisting of three sections which can be simultaneously implemented and they are:

(a) **temporarily** closed areas: which are closed but declared opened temporarily to cater for special events such as new year celebrations and the hosting of traditional functions

(b) **open** areas: areas which have no restriction but open to fishing to all community members

(c) **permanently** closed areas: these are areas which are not opened under any circumstances as they would have important roles of regenerating fish and invertebrate stocks

The **TOP** model is perhaps the most flexible *tabu* which encompasses conservation interest as well as providing opportunities for communities to meet their daily protein needs and earn income, unlike the present *tabu* which inevitably leads to increased fishing pressure in open areas. This is strongly reflected in comments by Pomperoy (1995:143):

> The primary concern of fisheries management, therefore should
> address the relationship of fisheries resources to human welfare
> and the conservation of future generations. That is, the main focus
> of fisheries management should be people, not fish per se.

Based on the Cuvu experience, it is logical to infer that any *tabu* project in Fijian societies which are not fully considerate of local livelihoods are likely to experience problems which, if not addressed, can seriously undermine the success

of community based projects. To a certain extent, the management of the *i qoliqolqi* appears to reflect properties of co- management both at national level and local levels. While government has legal ownership status of the *i qoliqoli* it respects customary rights of usage and supports community based conservation efforts. The high chief and other traditional leaders have direct decision making influence over the use *i qoliqoli* but at the end of the day successful management also depends upon the commitment and cooperation of all villagers. For example, despite having the endorsement of village councils and the district council, the establishment of the three *tabu* sites over the years broke down because local villagers kept fishing despite the previous *tabu* being temporarily open for a day. Clearly, there was a lack of respect for leadership at the district level. Poor leadership can be attributed as a factor because leaders did not act accordingly to contain the situation.

Conclusion:

This research has affirmed the realities of community based management of natural resources such as the *i qolioli*. Communities are heterogeneous. This reality makes achieving the sustainable management of *tabu* sites complex. Such a management regime at the community level is bound to encounter conflicts given the different levels of interaction and values individuals place on the marine environment and power associated with one's position in relation to the social strusture This was obvious in the different levels of dependence respondents had on the *i qoliqoli* in terms of livelihood dependence. To achieve sustainable management of *tabu* sites, sacrifices have to be made.This research has raised some important questions. At what cost and who pays the price? Existing literature emphasises conflict as a key challenge in the management of *tabu* or MPAs but this research has illustrated that it was more than social conflicts. There were other impacts such as dietary, economic hardship and nutritional costs. Sustainability can be achieved in maintaining a balance between the socio – cultural cost of *tabu* and ensuring that the livelihoods of men and women are sustained. Gender based impacts were a significant finding but as illustrated in this discussion,there were other equally important factors.

Chapter 7:   Conclusion

This research identified significant socio-cultural impacts and noted the complexities encountered when implementing community based *tabu* sites in a heterogenous society like Cuvu district.

Some impacts of the *tabu* were gender specific while others displayed similarity as well as differences between male and female fishers. On a gender basis, females paid a higher price as culturally their fishing zones were restricted to inshore areas whereas it was culturally acceptable for men to dive in deep waters along the outer edges of the reef and use sophisticated equipment.

Fishermen and fisherwomen had different levels of interaction and values associated with the *i qoliqoli*. Therefore impacts were perceived differently by male and female. Non gender specific impacts commonly experienced by majority of male and female fishers included displacement, complete abandonment of fishing by the most fishermen and fisher women, changing diet, nutritional costs, loss of income and frustration. In addition, these impacts were also felt by their immediate family members or the *i tokatoka*. The greatest concern amongst these fishers was without a doubt the inability to provide protein sources for their families. In addition, the lack of open areas (for fishing) and uncertainty over the duration of the *tabu* probably resulted in increased frustration. A male and female respondent with wider fishing zones prior to the establishment of the *tabu* were more flexible and unaffected.

This research has shown that even though the establishment of *tabu* sites has resulted in increased fish stocks, there are many socio–cultural aspects which have had profound impacts on fishers. There is a need for greater consideration of these issues in the planning and management of community based *tabu* sites. At the very core of these issues, is the level of dependence of villagers upon the marine environment for their livelihoods, how this is affected by the establishment of

tabu sites and how best challegnes can be minimised. The direct involvement of the *Turaga Na Kalevu* in the establishment of the district wide *tabu* is important for it raises the cultural significance of the *tabu*. Villagers are also more likely to respect it compared to the initial *tabu* which was established in 1999.

Without a doubt, the majority of male and female respondents (except for those with strong traditional roles/closer to the *Turaga Na Kalevu*) believed in the need for *tabu* and were pleased with the direct involvement of their chief. They respected their leaders decision but because of the challenges being experienced, they preferred having open as well as closed areas. As a coastal community, villagers of Cuvu district logically consumed sea food daily prior to the establishment of the *tabu*.

It was found that the factors which were most influential in perceptions of men and women were the level of dependence on the marine environment for their livelihoods (including respondents and their families), personalised fishing zones prior to the establishment of *tabu*, traditional status and/or responsibilities and the socio- economic status of a family.

The community based *tabu* site in cuvu district had profound socio-cultural impacts on fishermen and fisherwomen of Cuvu district as well as traditional leaders. The findings of this research support the need for a broader understanding of the social implications of community based *tabu* sites (Christie 2004).

Recommendations

Based upon the findings of this research a **TOP** model is recommended for the Cuvu district. I would suggest the reef immediately surrounding Yanuca Island also as both a permanent *tabu* and a marine park with the intention of establishing an environmental trust to provide funds for development in the district. Under the trust fund every guest who stays at the Shangri La Fijian resort is expected to pay a fee: 10 dollars for adults above 17 years and five dollars for 16 years and below. The Shangri La Fijian resort then deposits money into the trust funds which is administered by a group of trustees who are selected by the Cuvu District Council. The **TOP** model includes permanent and temporarily opened areas and is

advantageous because it provides areas for is likely to reduce fishing pressure (unlike the present *tabu* which appeared to divert increased fishing pressure in open areas. The results of this research made clear the heterogeneous make up of Cuvu district but more importantly the dependence of local fishers on the marine environment. In this regard, I am of the view that the **TOP** model is the most appropriate Cuvu district because the design is not only simple but also takes into account community values of the marine environment (Johnson 2001).

Future research. This research not only achieved its objectives but also identified potential areas for future research:

- There is a need for comparative studies of change in fishing practices amongst fishermen and fisherwomen as a result of *tabu*: the intensity of fishing practices amongst key fishermen and fisher women in open areas both before and after has received relatively little investigation.

- There is a need for comparative studies of the socio - cultural impacts of *tabu* on men and women at district level and village level.

- There is a need for conflict management in the face of *tabu* – just as much as there is increasing advocacy for the *tabu*, the results of this research have illustrated that there can equally be a good number of challenges and conflicts. How best can conflicts be managed in view of the different hierarchical structures in traditional Fijian societies? This has important implications for the success of future *tabu* sites at local and national level.

- There is a need for comparative studies of between an island community and mainland coastal communities (on mainland) on the level of dependence of local residents on the marine environment for livelihoods and how they have been impacted by the establishment of *tabu* sites. The comparative study shall also help determine conditions under which the costs of *tabu* best managed or minimised.

- There is a need for a study on the changes in pressure of fishing in *i qoliqoli* of Malomalo district as a result of the *tabu* in Cuvu district. This is perhaps an interesting area of research because the impacts of restriction in one district are likely to be felt by two districts and there appears to be a lack of such studies conducted in the Fijian context. Secondly, the study will help determine from a social perspective whether *tabu* actually achieve their objectives. Thirdly, do the costs of such *tabu* outweigh the benefits?

APPENDIX 1

THE PARTICIPANT CONSENT FORM SEMI STRUCTURED INTERVEIWS

(For interviews with community members)

The University of Waikato

Faculty of Arts and Social Sciences

Department of Geography, Tourism and Environment Planning

Private Bag 3105

Hamilton

The impacts of community based tabu site on men and women sites: a case study ofCuvu district, Nadroga, Fiji. The contents of this consent form will be read out to participants prior to conducting the interview.

Researcher: Floyd Boy Robinson

Email: fbr2@waikato.ac.nz

NZ Contact Phone: 0212671203

Supervisor: Associate Professor John Campbell

Email: jrc@waikato.ac.nz

Contact Phone: 64 7 838 4466 extension 8089

CONSENT FORM

1.   I am undertaking field research as part of requirements for a Masters of Social Science Degree (GEOG 594). The aim of this research is to determine the gender based impacts of community based *tabu* sites based on a case study of Cuvu district.

2. I would like to interview you about your knowledge, experiences and perceptions of the

tabu sites that were established in Cuvu district. *The data collection component of this research is being partly funded by the* New Zealand Overseas Development Assistance *(NZODA).*

3.   The interview will take between forty five minutes to one hour.

4.   I would like to tape record the interview for transcription.

5.   You may withdraw your consent and be given all material relating to you at any time

     up to two weeks from the completion of this interview

6.   Following the completion of the research project all tape records and transcripts will be

    destroyed.

7.   If you agree to take part in this interview *(by signing this form or giving you oral*

    consent which will be recorded with a tape recorder), you have the following rights:

(a)To refuse any particular question, and to terminate the interview at any time

(b)To ask further questions about the interview or research project that occur to you, either during the interview *or any time up to two weeks* from the date of this interview

(c)To provide information on the understanding that it is confidential to the interviewer and supervisor

(d)To remain anonymous – anything that might identify you will not be included in the final report or other outcome of the research without your prior approval

(e)To discuss further the conditions of your consent at any stage

(f)When I complete my analysis and writing up of my thesis the tape recording and transcript will be either returned to you, if you wish, or destroyed six months after February 24th 2008, the deadline for the submission of my thesis.

(g) To take any complaints that you have about the interviewer or the researcher to my supervisor or to the Human Research Ethics Committee of the Faculty of Arts and

Social Sciences *(fass-ethics@waikato.ac.nz).*

" I consent to be interviewed for this research on the above conditions"

" I wish to confirm my consent through the following means"

□ *oral confirmation* to *be recorded*

□ *by signing this form*

10. "I wish to receive a copy of the interview transcript"

□ *YES*   □ *NO*

Interviewee Name: _____

Village: _____

Phone number: _____

Interviewee Signature: _____

Date: _____

"I agree to abide by the above conditions"

 Researchers Signature: _____

Date: _____

APPENDIX 2

THE SCOIO – CULTURAL IMPACTS OF TABU SITES ON MEN AND WOMEN

SEMI STRUCTURED INTERVEIWS (COMMUNITY PARTICIPANTS)

THANK YOU FOR AGREEING TO PARTICIPATE IN THIS INTERVEIW

As you are aware that I am studying the impacts of *tabu* sites on men and women, all your answers shall be treated as confidential.

SEMI STRUCTURED INTERVEIW

1. What is your understanding of a *tabu* site?

   Do you believe in *tabu* sites? Please explain your views.

2. *Benefits:* What are the benefits (if any) of *tabu* sites? Please identify which group/groups experience the benefits and explain how?

   - men
   - women
   - village/community cohesion
   - traditional leaders
   - fishermen
   - fisherwomen
   - clans (*mataqalis*)
   - social groups (e.g. women, youth groups)
   - other groups outside the village
   - decision making processes (e.g. village and council meetings)
   - dietary habits/food supplies
   - families

3. *Costs:* What are the any costs (if any) of *tabu* sites? Please identify which group/groups experience the benefits and explain how?

   - men
   - women
   - village/community cohesion

- traditional leaders
- fishermen
- fisherwomen
- clans (*mataqalis*)
- social groups (e.g. women, youth groups)other groups outside the village
- dietary habits/food supplies
- families

4. *Fishing practices*: has the *tabu* impacted any of your fishing practices?
  - time spent fishing
  - fishing methods used
  - effort required
  - fishing locations
  - catch
  - frequency (how often)
  - fishing alone or with others

5. Think of the negative impacts of the *tabu*.
  - Which of these would you be willing to tolerate? Please explain why.
  - Which of these do you think that you cannot tolerate? Please explain why.

6. *Relationships:*

Has the *tabu* site affected your relationships in the village with:
  - other *women*
  - other men

Has the *tabu* affected relationships between:

  - other men
  - other women
  - your village and other villages

If so, please explain how and why?

7. What is the best form of marine resource management? Are there other ways of implementing a *tabu* or other alternatives? Please explain your views.

- *tabu* on all species inside *tabu* site
- no *tabu* at all
- rotational *tabu* on all species inside *tabu* site
- permanent *tabu*

- open acess but *tabu* on particular species

- open access but *tabu* on particular fishing methods

- open access but *tabu* on particular species

- other means (specify)

8. What do you consider as the most important factors for successful *tabu* sites? Please
     explain your views

- size of *tabu*
- duration of *tabu*
- permanency of *tabu* (permanent/temporary)
- leadership
- enforcement
- endorsement by chiefs and traditional leaders
- continued support from government, non governmental organisations

APPENDIX 3

THE PARTICIPANT CONSENT FORM: SEMI STRUCTRUED INTERVEIWS

(for interviews with formal stakeholders)

The University of Waikato

Faculty of Arts and Social Sciences

Department of Geography, Tourism and Environment Planning

Private Bag 3105

Hamilton

The gender impacts of community *tabu* sites: a case study of Cuvu district, Nadroga

Researcher: Floyd Boy Robinson

Email: fbr2@waikato.ac.nz

NZ Contact Phone: 0212671203

Supervisor: Associate Professor John Campbell

Email: jrc@waikato.ac.nz

Contact Phone: 64 7 838 4466 extension 8089

CONSENT FORM

I am undertaking field research as part of requirements for a Masters of Social Science Degree (GEOG 594). The aim of this research is to determine the gender based impacts of community based *tabu* sites based on a case study of four Fijian villages selected from two different locations.

2. I would like to interview you about your knowledge, experiences and perceptions of the *tabu* sites that were established in Cuvu district The data

collection component of this research is being partly funded by the New Zealand Overseas Development Assistance (NZODA).

3. The interview will take between forty five minutes to one hour.

4. I would like to tape record the interview for transcription. If you wish, I will send you a

verbatim (word for word) transcript of the interview.

5.You may withdraw your consent and be given all material relating to you at any time up *until two weeks after the interview.*

Following the completion of the research project all tape records and transcripts will be destroyed:

If you agree to take part in this interview *(by signing this form or giving you oral*

consent which will be recorded with a tape recorder), you have the following rights:

To refuse any particular question, and to terminate the interview at any time

To ask further questions about the interview or research project that occur to you, either during the interview or any time *up to two weeks from* the date of this interview

To provide information on the understanding that it is confidential to the interviewer and supervisor

To remain anonymous – anything that might identify you will not be included in the final report or other outcome of the research without your prior approval

To discuss further the conditions of your consent at any stage

When I complete my analysis and writing up of my thesis the tape recording and transcript will be either returned to you, if you wish, or destroyed six months after February 24th 2008, the deadline for the submission of my thesis.

(g) To take any complaints that you have about the interviewer or the researcher to my supervisor or to the Human Research Ethics Committee of the Faculty of Arts andSocial Sciences *(fass-ethics@waikato.ac.nz).*

" I consent to be interviewed for this research on the above conditions"

" I wish to confirm my consent through the following means"

□ *oral confirmation to be recorded*

☐ *by signing this form*

" I wish to receive a copy of the interview transcript "

☐ *YES* ☐ *NO*

Interviewee Name: _____

Department/Organisation _____

Contact Details: _____

Interviewee Signature: _____

Date: _____

"I agree to abide by the above conditions"

 Researchers Signature: _____

Date: _____

APPENDIX 4

THE GENDER IMPACTS OF TABU SITES

Appendix 8: Semi structured Interview for external stakeholders (governments departments, NGO's and statutory bodies)

THANK YOU FOR AGREEING TO PARTICIPATE IN THIS SURVEY

As you are aware that I am studying the impacts of tabu sites on men and women, all your answers shall be treated as confidential.

WHERE APPROPRIATE PLEASE TICK THE OPTION THAT BEST REFLECTS YOUR ANSWER OR WRITE ON THE LINES PROVIDED.

Date: _____   Department/Organisation_____

 Name: _____

Responsibility_____

What was your department's/organisation's involvement in the Cuvu *tabu* initiatives? Please indicate how, why and for what reasons your department was involved.

What were benefits of the *tabu* sites on :

- on village men

- on village women

- on the village as a whole

- between villages

- at the district level

- at the national level

- at international level

What were cost of the *tabu* sites on

- on village men

- on village women

- on the village as a whole

- between villages

- at the district level

- at the national level

- at international level

Was there a difference in the impacts between men and women? Yes/No.

If so, please explain how and why?

Did the *tabu* sites meet any needs of the villagers? Yes/No. If so, please explain what and how?

In your opinion, what did communities want out of the tabu sites and did this actually happen? Please explain.

Were more there benefits than costs arising from the *tabu* site. Please explain your views.

Could you please tell me which members of the community benefited the most from the *tabu*? Please explain your views.

Below is a list of the possible forms of marine management for indigenous communities. Please note other options that may not be listed. Taking into account the impacts of resource management practices what in your view is the best form of marine resource management for indigenous communities? Please explain your views.

- *tabu* on all species inside tabu site

- no *tabu* at all

- rotational *tabu* on all species inside tabu site

- permanent *tabu*

- open access but *tabu* on particular species

- open access but tabu on particular fishing methods

- other means (specify)

    Did the impacts of the *tabu* on the communities change over time:

- seasons
- social gatherings/obligations

- temporary

- permanent

- scale/magnitude

12.   Taking into account the impacts of the *tabu* on men and women in Cuvu, how would you improve the planning and management of a tabu project in future? Please explain.

Thank you

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