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**The influence of the Fijian way of life
(*bula vakavanua*)
on community-based marine conservation (CBMC)
in Fiji,
with a focus on social capital and traditional ecological
knowledge (TEK)**

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Abstract

This doctoral research explores the role of *bula vakavanua* (traditional Fijian way of life) in implementing community-based marine conservation (CBMC) in Fiji, with a focus on indigenous Fijian social capital and traditional ecological knowledge (TEK).

A combination of western and indigenous methodologies was utilised with a particular focus on CBMC experiences at three case study sites, namely Navakavu (Rewa); Kubulau (Bua) and Verata (Tailevu). The Vanua Research Framework (VRF) developed by Nabobo-Baba (2007) was adapted to elicit stories from these communities based on indigenous practices of *talanoa*, which literally means ‘to tell a story’. I am an indigenous Fijian female researcher, and consequently needed to respect and follow traditional protocols pertinent to females and indigenous Fijians with regards to gender issues and tribal and kinship links.

The three key findings of my research are: the interconnectedness of all things in the *bula vakavanua*; *talanoa* as dialogue and negotiation to facilitate adaptation of the *bula vakavanua* to external factors; and kinship (*veiwekani*) as the hub through which TEK and social capital actions and behaviour are lived out. First, to indigenous Fijians, all creation is interconnected. The common Fiji mud crab¹ (*qari*) is used as a metaphor to illustrate interconnection between all aspects of the *bula vakavanua* in an indigenous Fijian world. There is a ‘crab’ saying in Fijian society that is translated “I’ll walk how you walked, mother”. In CBMC initiatives, *bula vakavanua* (the crab) lives in an environment influenced by other factors, including political, social and economic factors. These factors have to be continually and appropriately integrated into the *bula vakavanua* so that the crab adapts and flourishes.

Second, this integration can be facilitated by *talanoa* as dialogue and negotiation so that community members and CBMC partners can share, reflect upon and reframe their worldviews, perceptions and ultimately practices. *Talanoa* is facilitated by developing listening and communication skills that enable participants to clarify, critique and re-

¹ *Brachyura species*.

align their perceptions. This re-alignment may require the change in norms, behaviour and practices in prevailing Fijian culture in order to adapt to the changing environment. I use examples from my case studies to show where *talanoa* as dialogue and negotiations have worked and, where *talanoa* is still ongoing to develop shared understanding and resolve conflicts.

Third, kinship (*veiwekani*) is the basis upon which most aspects of the *bula vakavanua* are lived out. Kinship may be based on blood links, Vanua links or through marriage. In Fiji both TEK and social capital are embedded within the kinship system of the *bula vakavanua*. For instance in TEK, skills and knowledge are inherited through birth and reinforced by oral transmission and training throughout the generations, emphasising the embeddedness of TEK in families and kinship systems.

The impacts of this research are centred round the three key findings. Indigenous Fijians must appreciate that, just like the metaphorical crab, the *bula vakavanua* has to continually adapt to a changing environment through *talanoa*, or it will not survive. These adaptations will require different degrees of change in cultural behaviour and norms in order to make it suitable and relevant for the current times. The *bula vakavanua* (or other indigenous way of life) must be appreciated and how it plays out in the CBMC work must be understood, and appropriately facilitated, to help ensure the sustainability and success of the work. NGOs can play a more prominent role in facilitating *talanoa* sessions for unresolved issues in CBMC work, while indigenous Fijian individuals in the partner organisations can provide a crucial link between the organisation and the community. The government also needs to exercise the political will to resolve some issues such as legal recognition of community-appointed *qoliqoli* wardens, MPAs and the issue of *qoliqoli* ownership by the Vanua.

This research is not only relevant to Fiji, but to other Pacific Island sites, or any CBMC sites where indigenous knowledge and way of life exist.

Dedication

This paper is dedicated to two people who have greatly influenced my life;

My late mother: Adi Eceli Bonacibau Vueti

and

My husband: Vivian Joave Guy Nainoca.

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Acronyms

BLV	<i>Bose Levu Vakaturaga</i>
CBMC	Community-Based Marine Conservation
CFG	Customary Fishing Ground
CI	Conservation International
CORAL	Coral Reef Alliance
DOE	Department of Environment
EBM	Ecosystem Based Management
EIA	Environmental Impact Assessment
EMA	Environmental management Act
FAB	Fijian Affairs Board
FIT	Fiji Institute of Technology
FLMMA	Fiji Locally Managed Marine Area
FNU	Fiji National University
FSPI	Foundation for the Peoples of the South Pacific
GCC	Great Council of Chiefs
IAS	Institute of Applied Science
ICM	Integrated Catchment Management
LMMA	Locally Managed Marine Areas
MES	Mamanuca Environment Society
NGO	Non-Government Organisation
PCDF	Pacific Community Development of Fiji
TEK	Traditional Ecological Knowledge
TIK	Traditional Indigenous Knowldge
USP	University of the South Pacific
WCS	Wildlife Conservation Society
WI-O	Wetlands International (Oceania)
WWF	World-WideFund for Nature

Chapter 1

General Introduction

Many successful co-management organisations are built on customary and local organisations and rules.... a great diversity of local knowledge, skills and institutions can be effectively employed.... Co-management is an effective way to build upon what people already have, know and do to secure their identity, culture, livelihoods and the diversity of natural resources on which they depend (Borrini-Feyerabend, Pimbert, Farvar, Kothari, & Renard, 2004, p. 55) .

1.1 Preamble

The focus of this research was to develop and deepen understanding about how the Fijian way of life, *bula vakavanua*, affects the implementation of community-based marine conservation (CBMC), with a particular focus on social capital and traditional ecological knowledge (TEK). I decided to look at this topic for several reasons. Firstly, because of my indigenous² cultural origins, especially when my ancestors were welcomed to stay in a new place because of their traditional fishing skills; and my career interest as an environmentalist; both of which I will further discuss below.

It was during the time of preparation for the occasion of the then Prime Minister's³ children to be traditionally taken⁴ to their mother's village in the Rewa province in the 1980s, that I learnt about the true origins of my people. The whole province was getting ready since the children's mother (the Prime Minister's wife) happened to be the paramount chief of Rewa, the *Roko Tui Dreketi*⁵. The eight villages from our Noco district (one of the five districts in the province) were arriving village by village to the Noco gathering at a particular venue in Suva, each village bringing and traditionally presenting their contributions. These contributions include mats, mattresses and bedding (apart from food) to help with the catering in Rewa. Our village elders decided that our village, Naivilaca, would be the last to arrive. I did not know the reason for that decision

² Some indigenous writers have used the capital 'i' to show respect for indigenous people. In this thesis I will use the lower case 'i' and I have respect and honor for indigenous people. I use the lower case I since some readers have stated that a capital I is distracting and also it is easier for me to type a lower case I considering the numerous times I use the word indigenous in this thesis.

³ The late Ratu Sir Kamisese Mara.

⁴ *Kau mata ni gone* – when the eldest child (and siblings) are traditionally taken to their mothers' village.

⁵ The title of the paramount chief of Rewa.

at that point in time and was puzzled since a few of my uncles were always conscientious about being on time. When we entered the hall at the venue, the *Vanua*⁶ of Noco and *Tui Noco*, the chief of the district of Noco, were all present. I was sitting with my older sister about two rows behind my father who was traditionally presenting our village's contribution to the *Tui Noco* and the *Vanua* of Noco. In my father's speech he apologised, saying that we were not being disrespectful or disobedient by also bringing some contribution to the gathering. He said this because we are traditional fisherman (*gonedau*) by birth and our traditional duty at such occasions is to bring fish. My father explained that we had met our traditional obligations by sending fishing equipment and fuel to our village, but we still had some leftover money with which we bought the contributions being presented. In reality, however, it was not left over money we used, because we had deliberately bought these extra contributions. In traditional Fijian presentations the presenters have to make the other party (the receiving party) feel that the presenters did not go out of their way to come and contribute to a traditional function. This is because meeting traditional obligations is an important part of reaffirming and consolidating kinship ties (*veiwekani*). My father added that we would gladly contribute to this function and do more, because of the gratitude we felt about the generosity and hospitality kindly rendered to our ancestors. Our contributions were a response to how our ancestors were welcomed to stay by their ancestors. Tears were flowing freely on both sides of the floor. Some significant historical event was being fondly remembered.

Meanwhile, I was sitting there shocked, with questions swimming around my head. Greatly disturbed, I frantically nudged my sister and gave her a desperate questioning look, mouthing the words; "What's he talking about? Who are we? Where did we come from?" only to be shushed into silence. It was the longest wait to the end of the traditional ceremonies before I could be informed of my ancestral origins. At first, I was astonished that I had never been told of my ancestral origins before. Surprisingly all my three brothers knew and two of them were younger than me! I put it down to being born a female. This is because in Fijian society a female gets married and becomes a part of

⁶ In this thesis *vanua* meaning land will be in lower case and italicised, *Vanua* referring to a tribe (people) will be written with a capital V and italicised, and Vanua referring to the physical, social and cultural dimensions is spelt with a capital V and not italicised. (e. g. Vanua Verata).

the husband's family. The males on the other hand carry on the family name, traditional obligations and knowledge of their ancestral origins.

I learnt that my ancestors were originally from Bau in the Tailevu province. They had left their original home for reasons I am not sure of, and were looking for a new place to settle. They were skilled and traditional fisherman (*gonedau*) by birth. During their journey in search of a new home, some of their families were left at particular points along the way until they arrived in the province of Rewa. This is why my people have kinship ties in other villages along this route taken a long time ago when they left Bau to look for a new home. Finally, my ancestors arrived in the Rewa province. The then *Roko Tui Dreketi* kept the older brother as his traditional fisherman and now these kinspeople of mine reside in Nukui Village in Rewa. The younger brother, my ancestor, resided in Naivilaca village in Noco, a district also in the Rewa province, and became the *Tui Noco's* fisherman. As a result of this separation of brothers, my kinsmen that reside in Nukui village (*Roko Tui Dreketi's* fishermen) belong to the *yavusa*⁷ Matanikoro (I) while we as descendents of the younger brother belong to the *yavusa* Matanikoro (II). My people still derive their living from the sea, but some now commute to Suva, about 40 minutes away, to work. The fact that my ancestors were welcomed because of their traditional skills and that my people still fish for a living is one of the main reasons that motivated me to embark on this research – for them and for the other traditional fishermen and traditional fishing villages in Fiji, the Pacific and beyond. This is why I focused on community-based marine conservation (CBMC) in Fiji.

There were other reasons that drew me towards exploring this topic. In 2003, I was invited by the New Zealand Landcare Group to present a paper at a conference in Hamilton on indigenous involvement in Integrated Catchment Management (ICM) in Fiji. I had to look at conservation initiatives in Fiji and came across marine conservation endeavours which were of particular interest to me because of my origins. I found out the CBMC was happening at several coastal villages with the indigenous resources owners actively involved. Meanwhile, I became part of an Environmental Impact Assessment

⁷ *Yavusa* is defined as “the largest kinship and social division of Fijian society, consisting of the descendents of one originator (*vu*)” (Capell, 1991, p. 291).

(EIA) team at my workplace⁸. The team was divided into two sub-teams: scientific survey and socio-economic survey. Because of my scientific background, I was part of the scientific baseline survey team. Several of the EIAs were for coastal developments. I was drawn to the work of the socio-economic survey team, especially as it related to the indigenous perspectives of natural resource management, and marine conservation in particular.

In 2006, the Environmental Management Act (EMA) came into existence but the Department of Environment was too understaffed and underequipped to effectively implement it. Fortunately, conservation-focused non-government organizations (NGOs), especially the Fiji Locally Managed Marine Area (FLMMA)⁹ Network, partnered with villages, government departments and other stakeholders, in a co-management arrangement for marine conservation of native-owned customary fishing grounds, or *qoliqoli*¹⁰, in the country. There are various definitions of co-management, but in this work I will use the definition by Borrini-Feyerabend, et al (2004, p. 69) which states that “co-management is a partnership by which two or more relevant social actors collectively negotiate, agree upon, guarantee and implement a fair share of management functions, benefits and responsibilities for a particular territory, area or set of natural resources”.

Indigenous resource owners are becoming increasingly involved with the environmental management of these resources as CBMC continues to gain momentum in Fiji. Significantly, indigenous Fijians still own 87% of the land and 31,000sq km of the surrounding sea, made up of 406 customary fishing grounds, *qoliqoli* (LMMA Network, 2009; Veitayaki, 1998, p. 54). The Native Fisheries Commission as stipulated in Section 13 of the Fiji Fisheries Ordinance [Cap 135] is responsible for ascertaining the boundaries and ownership of the *qoliqoli*. When Fiji was ceded to Great Britain in October 1874, Fijians were assured of undisturbed possession to their lands, forests and fisheries, but in the Deed of Cession texts there was no mention of the foreshore or seabed. *Qoliqoli* legally means the fishery in a *designated* area. It does not mean seabed

⁸ The School of Applied Science at the Fiji Institute of Technology (FIT) which is now a part of the newly established (2010) Fiji National University (FNU).

⁹ FLMMA is made up of several conservation focussed NGOs (see Chapter 3 for more details).

¹⁰ *Qoliqoli* areas comprises any area of seabed or soil under water, sand, reef, mangrove swamp, river, stream or wetland included in the Fisheries Act of Fiji as customary fishing grounds.

or foreshore (land up to the highwater mark) which is still owned by the government, according to the State Lands Act [Cap 132]. There exists therefore, as Clarke and Jupiter state (2010, p. 101), a “discord between legal and customary recognition of sea tenure, whereby the Fiji Fisheries Act [Cap 158] recognizes subsistence fishing rights of traditional resource owners, but not customary tenure over marine areas” (see also Chapter 3). One of the consequences is that fisheries licenses are issued by the state with minimal or even no consultation with the *qoliqoli* owners. The indigenous Fijian community are understandably not satisfied with the ownership arrangement. Because of this *qoliqoli* ownership arrangement, licensed fisherman apart from poachers are able to access *qoliqoli* areas that indigenous Fijians have put aside as taboo areas (*tabu*). The indigenous Fijians have refrained from extracting resources within these *tabu* areas. Also, in the community, sometimes there are misunderstandings about the boundary and ownership of the *qoliqoli*. I had attended a workshop at one of my case study sites in which a legal specialist was brought in to explain the ownership and other legal implications.

This section has discussed the reasons which led me to carry out research on CBMC in Fiji, focussing on social capital and TEK. Various stakeholders such as conservation focussed NGOs; government departments: and communities work together to co-manage marine resources within native owned *qoliqolis*. Some recurring problems such as poaching and other issues are not conducive for CBMC work and these are further discussed in the following section.

1.2 Problem Statement

In my research for the preparation of the NZ Landcare conference presentation in 2003¹¹, it was apparent that there were recurring problems existing in marine conservation sites in Fiji. There was repeated poaching from the *qoliqoli* by the owners themselves, and from neighbouring villages sharing this *qoliqoli*, because it was also their *kanakana*¹². *Kanakana* is the land or fishing area allotment for the different social units to feed or fish from (see Figure 1.1). The social unit could be a sub-clan (*mataqali*)

¹¹ Held in Hamilton, NZ in November 2003.

¹² Customary *qoliqoli* usage allowing the resources within the *qoliqoli* of each group to be used by others who need it.

or even a village. *Kanakana*¹³ is part of the *qoliqoli* which is owned at the district (*tikina*) level. The question then arises that if the owners themselves are breaking the *tabu*, would it be termed poaching since they are simply feeding from their fishing area allotment? In this thesis, I will use the term poachers to describe those who fish from the areas that the CBMC stakeholders have agreed to put aside as *tabu*.

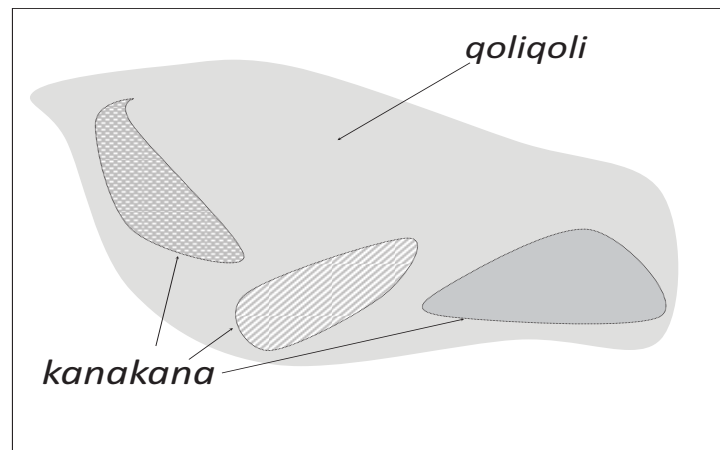


Figure 1.1: Qoliqoli and kanakana

The question that arises then is what are the reasons for poaching? The premature opening of closed-off fishing areas (*tabu*) was also a problem at one of my case study sites. This was done in spite of unanimous agreement by all stakeholders concerning the sustained closure of the *tabu* and implies that probably not all members of the community had agreed to the *tabu* in the first place. Why was there a need to harvest sooner? Are there social values or factors that are influencing decisions to break the *tabu* and harvest earlier? The catching of juvenile fish and excessive harvests was also taking place, and this was sometimes sanctioned by chiefs and *Vanua*. There was also the inappropriate use of TEK which is defined by Usher (2000) as the knowledge held by a particular group of people with respect to the environment resulting from experience and tradition (see Section 1.4.3) The community, because of their unique environmentally-specific TEK, knew where the nursery or breeding areas were and where female fish full of eggs coming to spawn. These female fish were harvested when they come to lay their eggs. Why was TEK being used in such a detrimental manner? Is ecological knowledge in TEK being used negatively in CBMC at some sites?

¹³ See Chapter 6 (Section 3.2.1) for more discussion on *kanakana*.

Meanwhile, the studies that were being conducted at the marine conservation sites were mainly scientific in nature, concentrating for instance on biodiversity and percentage-yield of fisheries. A comparison to initial baseline surveys conducted at the commencement of the initiatives showed that both biodiversity and abundance of marine species were improving at the conservation sites implying that conservation could work. Conservation efforts were working for the biodiversity and environmental perspective. My concern was for the display of certain social behaviour by indigenous community that was not conducive for CBMC such as poaching. I was convinced that there was a need, therefore, to carry out an investigation to identify the causes of this phenomenon of poaching, premature opening of *tabu* and excessive harvests that were sanctioned by the chiefs and *Vanua*, that reduced the effectiveness of these conservation initiatives. Deepened understanding about the causes of such behavior may lead to steps that could be taken to minimise or completely stop such behaviours, which are not conducive for CBMC. However, in order to understand and address these issues, particular attention needs to be focused on cultural values underpinning the decision and actions by the chiefs and the *Vanua* to break the *tabu*.

There were aspects of behavior exhibited that supported CBMC work. Individuals within the villages that had instituted the *tabu* were respecting it and refrained from fishing in these no-take areas. What I wanted to know was what had influenced them to comply with the rules of the *tabu*. The *tabu* was not opened until the agreed period had lapsed. The practice of fish-poisoning, using traditional herbs (*duva*¹⁴), had decreased considerably since the implementation of the marine conservation initiatives. Is scientific knowledge playing a role in this awareness?

I was also fortunate to become involved in FLMMA's work representing my workplace in FLMMA. My involvement with FLMMA enabled me to see some aspects of the *bula vakavanua* that were influencing the implementation of marine conservation initiatives. *Bula vakavanua* literally translates as living life (*bula*) in the ways of the *vanua* (*vakavanua*). Qalo (1998) has used *vakaviti* to refer to the Fijian way of life. Why I use the term *vakavanua* instead of *vakaviti* is explained in Section 1.3.1. *Bula vakavanua* is the Fijian way of life or culture. Positive influences include features of the *bula*

¹⁴ *Derris trifolata*.

vakavanua supporting the facilitation of CBMC implementation such as meetings, field work and other practical aspects of the conservation initiative. Some behaviours exhibited in the village which are not part of the culture but have arisen out of western influences, such as jealousy (*veiqati*); and excessive practices of aspects of Fijian culture, such as *yaqona* drinking, were not conducive to conservation work. I elaborate on the term *bula vakavanua* in Section 1.3 below. The questions that were of particular interest to me were: what are the various dimensions of the *bula vakavanua*, and how do they influence the implementation of CBMC work?

I therefore decided then to focus my doctoral research on developing and deepening understanding about the nature and roles of aspects of the *bula vakavanua*, focussing on social capital and TEK, in managing native-owned resources specifically marine resources, in Fiji. I will now discuss the concepts of *bula vakavanua*, social capital, TEK, and CBMC in the next section.

1.3 *Bula vakavanua*, social capital, TEK and co-management

This section will give background to the terms *bula vakavanua*, social capital, TEK and co-management to show their relevance in this research.

1.3.1 *Bula vakavanua*

I use the term '*bula vakavanua*' instead of '*bula vakaviti*' when referring to the Fijian way of life for three reasons: its literal translation, the presence of the word '*vanua*' and drawing from Seruvakula's (2000) book, *Bula Vakavanua*. This book is written in the Fijian language and has comprehensive information about the Fijian way of life. Being written in the Fijian language makes it readable for the indigenous Fijian population and it expresses a lot of the features of the *bula vakavanua* that are usually lost in translation when writing in other languages such as English. For translation, '*bula*' means living, and '*vakavanua*' means the *vanua* way or in the *vanua* fashion, *bula vakavanua* therefore translates as living in the *vanua* way or fashion. Secondly, I use the term *vakavanua* because of the presence of the word *vanua* which has three meanings: 1) the land, 2) the people and 3) the combination of the physical, social and cultural dimensions. Thirdly, in his book "*Bula Vakavanua*", Seruvakula (2000) explains that this is a way of life that was put in place by our indigenous Fijian ancestors, with its traditional system of governance. In the 'Introduction' section of Seruvakula's book

“*Bula Vakavanua*”, the late Ratu Sir Kamisese Mara explains that when we hear the term *bula vakavanua*, the Fijian mind is immediately taken back to our own villages and not to the urban centres where there is a mixture of peoples of different races and cultures. For the urban Fijian such as I, when I hear the term *bula vakavanua* it reinforces in my mind the cultural values and practices of my people as I continue to live it out in the urban area. I choose to use the term *bula vakavanua* to represent the Fijian way of life in this thesis, because compared to other terms, such as *bula vakaviti*, it conveys the distinctive historical richness of the indigenous Fijian way of life.

Vanua (*fonua* and *whenua* in other Pacific Island countries), for Fiji is described by Ravuvu (1983, p. 76) as literally meaning “land, but also refers to the social and cultural aspects of the physical environment identified with a social group”. This notion that *Vanua* is more than just land is also emphasised by Thaman (1997, p. 12): “In Fiji, Vanua is more than land. It is the Fijian worldview, ethos and cosmos, all living and non-living things wrapped in one”. *Vanua* is a word that symbolises the concept of interconnectedness of all creation in the Fijian worldview, since it refers to the living things with their social knowledge, practices and systems, and their surrounding environment.

The *bula vakavanua* is lived through two worldviews: the Vanua worldview and the Christian (*Lotu*) worldview. Underlying the *bula vakavanua* are the Vanua values on which all social beliefs and consequent actions are based. Some of these Fijian values are loving one another (*veilomani*) (Seruvakula, 2000; Ravuvu, 1983); respecting one another (*veidokai*) (Seruvakula, 2000; Ravuvu, 1983; Qalo 2006; Tuwere, 2002); caring for one another (*veikauwaitaki*) (Seruvakula, 2000; Ravuvu, 1983), putting others first (*veivakaliuci*), and listening and considering others’ points of view (*veirogorogoci*). Ravuvu (1983, p. 103) on the other hand, states that deference (*vakarokoroko*), showing love and kindness to all (*loloma*) and humility (*yalo malua*) are important and commonly used terms in the Fijian personality and behaviour. Fijian values take precedence over conservation values: in that a village will break a *tabu* it has put in place in order to fulfil its other village *Vanua* obligations. Two of the CBMC communities had about 40 turtles slain at each site. For one of the sites, the 40 turtles were intended for the purpose of installing a chief and, for the other site, it was for hosting a Fiji-wide traditional indigenous conference. For the Christian (*Lotu*)

worldview, Tomlinson (2004, p. 654) describes how in Oceania, ‘Christian enlightenment’ is used to describe a ‘transition from darkness to light’. Biblical teachings emphasise the values of loving one another, sharing and respect. The issue of stewardship over nature and environment is also emphasised in particular in CBMC work quoting from Genesis chapter 1 in the Holy Bible.

1.3.2 Social Capital

I remember clearly the first time I heard of the term ‘social capital’. It was during the early stages of my PhD studies when I was discussing with my chief supervisor certain aspects of community-based conservation. I was writing down some points while he was talking, so when he mentioned the term ‘social capital’ I nodded my head to indicate understanding (which I did not have at that point in time!) while I quickly wrote the term in my book. It sounded like a relevant term for Fijian society since my supervisor was referring to aspects of social capital such as trust, networks, norms and reciprocity. I could not get to the library quickly enough to find out more about this new term that seemed so relevant to the Fijian way of life (*bula vakavanua*). Surprisingly, I came across a paper by Fijian academic Ropate Qalo (1998) titled “*Vakaviti: If it is social capital then we may be more advanced than we realise*”. *Vakaviti* is defined in the Fijian Dictionary (Capell, 1991) as “in the Fijian fashion”. I prefer the term ‘*bula vakavanua*’ for reasons I have outlined in Section 1.3.1 above. I also contend that contrary to Qalo’s title, the Fijian way of life is much more than social capital, and this will become apparent in this thesis. For instance, the Fijian way of life is made up of other major aspects such as culture, protocols, traditional hierarchy and governance systems, and TEK to name a few. However, I agree with Qalo’s writings on ethnic factors in the Forestry Industry (1992) and his outline of characteristics of *vakaviti* in a Fijian family business venture (1997) which suggest that some aspects or characteristics of *vakaviti* are similar to the components of social capital. Some of these aspects of *vakaviti* suggested by Qalo include connectedness and networks (*veiwekani*), reciprocity and exchange (*veidolei*) and trust (*veivakabauti*) to name a few.

In my literature review, I also came across the concept of ‘cultural specificity of social capital’. Halpern (2005) and Robinson and Robinson (2005), suggest that social capital may be manifested in various ways in different cultures and points out the cultural specificity of social capital after working with New Zealand Maori. Edwards and Foley

(1998) propose that social capital can only be understood in its local context. My research demonstrates the cultural specificity of social capital. Kottak (2000) defines cultures as “traditions and customs that govern the beliefs and behaviour of people exposed to them” (p. 4). In the Fijian (or any other indigenous people) context this implies the cultural specific beliefs, behaviours and values which also contribute to social capital. In this thesis, I describe four aspects of social capital that are displayed in the indigenous Fijian culture which contribute towards facilitating CBMC: loving one another (*veilomani*); respect (*veidokadokai*); unquestionable duty and service (*qaravi itavi*); and Fijian borrowing (*kerekere*), all of which I will further explain in Section 4.2.

1.3.3 Traditional Ecological Knowledge (TEK)

TEK is defined by Berkes (2008, p. 7) as the “knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings, including humans, with one another and with their environment”. I have examined TEK in this thesis in terms of values and beliefs, knowledge, skills and practices (see Section 5.2). These components of TEK are based on Berkes (2006) ‘knowledge-practice-belief’ and Houde’s (2007) ‘six faces of TEK’ (see Section 5.1.1 for why I chose four components). Totems, *icavu*, or what Garibaldi and Turner (2004) term as cultural keystone species (refer to section 5.2.1) are also important and were the reason the first FLMMA site in Fiji, at *Verata*, was set up. TEK is also embedded within the kinship system where traditional knowledge may be held by custodians at the *yavusa* (the widest Fiji patrilineal kinship unit), *mataqali* (sub-clan: sub-division of *yavusa*) or *tokatoka* (the enlarged family unit: a sub-division of *mataqali*) level, and showing the importance of kinship and interconnectedness in the indigenous Fijian world.

1.3.4 Co-management

Centralised resource management initiatives have not been able to prevent environmental degradation and have often failed to improve peoples’ lives (Agrawal, 2003; Schelhas, E. Buck, & Geisler 2001). Attention has turned, therefore, to collaborative processes and co-management arrangements, to facilitate a ‘bottom-up’ as opposed to a ‘top-down’ approach. Purely local management efforts are insufficient to deal with increasingly regional and global environmental concerns, hence the need to move to co-management. Co-management engages the state, local communities and

other stakeholders in more collaborative environmental management. A broad definition of co-management by Borrini-Feyerabend et al. (2004, p. 67) is that it is “a partnership by which two or more relevant social actors collectively negotiate, agree upon, guarantee and implement a fair share of management functions, benefits and responsibilities for a particular territory, area or set of natural resources”. Borrini-Feyerabend et al. (2004) further state that co-management builds upon what exists, in particular local, traditional institutions for resource management. Berkes (1994) and Sen and Nielson (1996) have described various types of co-management regimes within various community-based management initiatives, and outline the government and user group roles within a community. For instance, in some cases, government has a more pronounced say and influence thus implying more of a top-down approach. In other cases, the local community may play a more dominant role.

According to these writers, co-management involves a partnership and power sharing between the government and user-groups in managing the resources. Success is not always guaranteed for co-management initiatives and some authors have argued that it is over-rated (Pretty, 2003). Mitraud (2001, p. 3) observes that “while building social capital has in some cases led to valuable results, in other cases it has intensified or created new local conflicts, demobilized local groups, and strengthened unequal distribution of power and resources”. For instance, Campbell et al. (2001) describe how different groups within villages in India can have very different needs from what can be provided by the commons¹⁵. As a result, village elites who typically dominate local politics and local organizations will have their needs realized at the expense of the poorer members of the villages. Lane (2005), states that in Fiji there are four categories of actors involved in environmental use, management and policy: the customary landowners, the national and local government¹⁶, a ‘robust civil society’ and a number of bi- and multi-lateral donor agencies are active in the country and network with government, civil society and customary landowners. Lane (2005), uses the term ‘robust civil society’ to describe a range of local and transnational NGOs that participate actively in policy development at a national level, and are also directly involved in a range of experimental projects in environmental management. Today civil society

¹⁵ Common property resource, specifically a communal property as defined by Feeny, et al. (1998).

¹⁶ The government provides a legislative and policy regime across all major natural resource sectors (see Evans, 2004).

continues to play an important role in environmental conservation in Fiji (Lane, 2005). For marine conservation in Fiji, apart from the resource owners, other stakeholders include the private sector, specifically commercial fishers who have to make a livelihood, and scientists from tertiary institutions who are shaping the community's western scientific knowledge (with some efforts to incorporate TEK), and the media disseminating and publicising the conservation initiatives in the newspapers, TV and over the radio.

This section has briefly outlined the main concepts in this thesis, that are used to investigate the nature and influence of the *bula vakavanua* aspects in the implementation of marine conservation work; and the significance of which is outlined in the next section.

1.4 Significance of the Work

This work is significant since the answers to the questions arising out of recurring problems in marine conservation above (see Section 1.2) will be valuable in understanding existing systems and processes in the *bula vakavanua*. Some of these questions may not result in a singular simple answer, but a complex mix of answers some of which will also be influenced by context and time. However this analysis will help build understanding of the complex set of factors shaping sustainable coastal resource use, and the role of Fijian way of life in particular. The questions arising out of recurring problems in marine conservation above (Section 1.2) are rephrased for field work in Section 1.5.

A deepened understanding of the *bula vakavanua* will be valuable to CBMC initiatives implemented in Fiji and CBMC in general. In a village setting, the place where CBMC is being carried out, there are indigenous traditional systems and structures already in place. Hunn and Barries explain that “new ideas and techniques may be incorporated into a given tradition, but only if they fit into the complex fabric of existing traditional practices and understandings” (1993, p. 13). The village systems in Fiji are based on traditional social lifestyle, governance, culture and religion. CBMC is happening in this village setting, and any foreign initiative brought into this village setting should fit into the existing system and dynamics to increase its chances of success and ensure the initiative's sustainability, bearing in mind that ‘village’ life is not static. There should be

an ongoing dialectical flow and interaction between external initiatives brought into this village setting and local village ‘life’, which will invariably be shaped and reshaped by village reality. Consequently, both the external initiative and the village life (and *bula vakavanua*) will undergo changes since they are all interconnected.

As a consequence of my case study analysis and literature review, there are three key findings which are important to, and significant in, this thesis: the interconnectedness of all things in the *bula vakavanua*; *talanoa* as dialogue to facilitate adaptation of the *bula vakavanua* to external factors; and kinship (*veiwekani*) as the hub of TEK and social capital actions and behaviour.

1) **Inteconnectedness:** In an indigenous world, all things are interconnected. I use the common Fiji mud crab¹⁷ (*qari*) (see Figure 1.2) as a metaphor in this thesis to illustrate how aspects of the *bula vakavanua* (social capital and TEK) are interconnected in the implementation of CBMC in Fiji. For instance, knowledge and associated practices “require social networks and an institutional framework to be effective” (Olsson, Folke, & Berkes, 2004, p. 77). In Fiji, both TEK and social capital are embedded within the social network and structure of the *bula vakavanua*, and especially within the kinship network.

Like other indigenous Fijian children, I grew up in an environment where metaphors and sayings are used as tools to emphasise, explain or teach concepts. These metaphors and sayings are usually based on nature such as the traits of plants and animals. In Fijian society, certain animals have specific sayings or proverbs and one of these sayings belong to the crab. Why did I use the crab? The crab lives in both aquatic and terrestrial environments, symbolic of marine conservation carried out in both environments. The crab is commonly found in the Rewa delta where my village is situated.

The crab represents the *bula vakavanua* which has various aspects (including the focus of this research: social capital and TEK), and is influenced by initiatives, and activities such as marine conservation. In terms of the crab’s ecology, like the *bula vakavanua*, this crab’s existence and survival in the environment is influenced by other factors such

¹⁷ *Brachyura species*.

as governance systems (such as national government and non-government organizations, NGO, laws and/or policies). Other factors in the environment of the crab include other cultures and other knowledge systems which I will broadly refer to in this thesis as non-indigenous knowledge. In this thesis I refer to indigenous knowledge as knowledge specifically for the sites being discussed, as opposed to knowledge from outside of the sites: non-indigenous knowledge. I have put these other influences in the environment surrounding the crab in the diagram Figure 1.2.

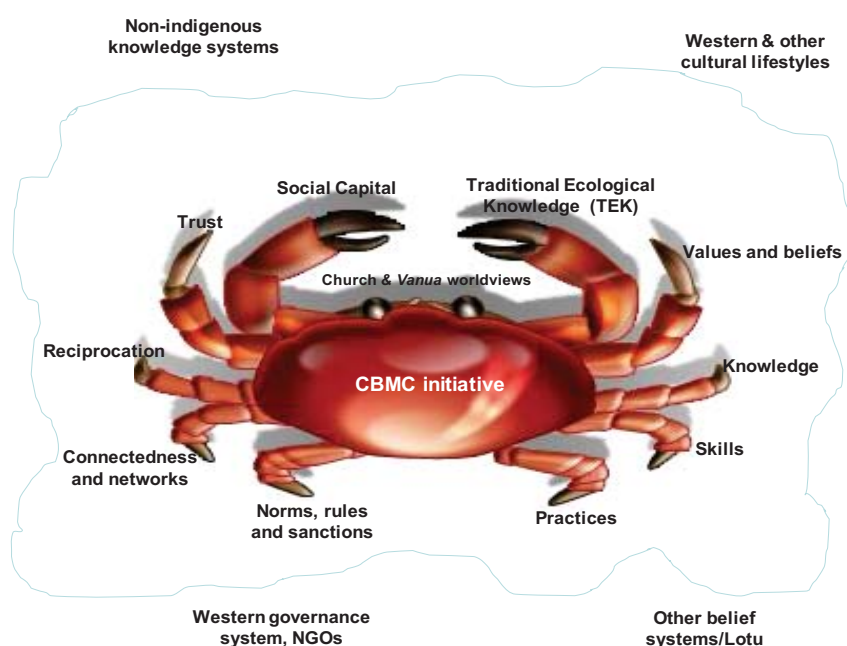


Figure 1.2: The crab metaphor: interconnectedness in the *bula vakavanua*.

The crab saying (*I bole nei Ra¹⁸ qari*) is “*Na nomu i qaiqai ga Qei, na noqu i qaiqai*” translated as “I’ll walk how you walked, mother”. The saying is in the Rewan dialect (my dialect) which is learnt all over Fiji, and serves as advice both to the mother (or ancestors) and the child (or descendents). For the mother (or ancestor), the warning is to walk bearing in mind that your offspring is watching and learning. For the child (or descendent) it is to walk in the worthy manner that the mother (or ancestor) walked. This is exactly how the *bula vakavanua* is passed down from one generation to the next: by looking, learning and imitating.

¹⁸ Capell (1991, p. 168) explains that the term *Ra* is “a personifying particle in the Fables with names of creatures; *Ra belo*, the heron”.

The saying “*Na nomu i qaiqai ga Qei, na noqu i qaiqai*” (“I’ll walk how you walked, mother”) is central to my thesis since the indigenous Fijian society, while living out the *bula vakavanua* and carrying out marine conservation, is affected by factors in the environment which affect how it ‘walks’. These factors have to be continually and appropriately integrated into the *bula vakavanua* so that the crab survives and continues to ‘walk’ in a worthy manner.

I have placed a ‘wavey’ circle around the periphery of the crab’s environment to depict the permeability of the surroundings of the crab, being affected by the change in the environmental factors in which the crab lives: environmental, social, cultural and economic. This encapsulates the notion of an evolving crab that lives in a changing context and is being shaped by and is adapting to these changes. The indigenous Fijian community is also influenced by other factors (Ravuvu, 1983b; Seruvakula, 2000; Tuwere, 2002; Veitayaki, 1998) such as governance (Government and NGOs), socio-economic changes, non-indigenous knowledge and other cultures. However, the focus of this research is to look at how social capital and TEK in the *bula vakavanua* influences CBMC. There are factors influencing the *bula vakavanua* that I came across during the course of this research such as modernisation and the influence of other cultures. These factors, are outside the focus of my research and will be discussed briefly when appropriate.

Another factor that is affecting marine conservation efforts, and contributing positively or negatively towards social capital and TEK, is the church (*Lotu*) (see Chapter 6). In the village setting, factors such as church and traditional (*vanua*) obligations are part of the Fijian way of life and also place pressure on natural resource use. Obligations to the church place pressures on the community livelihoods including funding the reverend’s furnished house, building a new church, hosting a provincial, district or village church service or church conference and the compulsory tithe to the church (*vakamisinari*). Apart from this, other economic considerations such as the cost of educating one’s children are also factors that are important. Overexploitation of marine resources and the use of destructive fishing methods are usual as these villagers attempt to attain a reasonable livelihood from their traditional fishing grounds (*qoliqoli*) (Veitayaki, 1998).

2) ***Talanoa as dialogue in adaptation:*** In CBMC initiatives, *bula vakavanua* (the crab) is living and growing, and in order to survive it has to adapt to its surrounding environment. Borrini-Feyerabend et al. (2004, p. 299) states that “co-management is an effective way to build upon what people already have, know and do to secure their identity, culture, livelihoods and the diversity of natural resources on which they depend”. As the Fijian community attempts to secure its livelihood and culture, it has to continually and appropriately integrate these factors into their *bula vakavanua* so that the ‘crab’ survives and continues to ‘walk’ in a worthy manner.

I use the word worthy to represent a culture that is dynamic in order to adapt to changes in the environment, and to remain relevant and useful for its people. This is encompassed in the crab’s Fijian proverbial saying “I’ll walk how you walk, mother” (see Chapter 6). In order for the ‘metaphorical crab’ to grow and survive, it must be able to adapt to the environment by using strategies such as integration. By integration I mean the incorporation of new ideas, and ways of doing things, brought in by external influences into the existing Fijian culture. Integration involves processes such as *talanoa* or dialogue (Halapua, n.d., Vaioleti, 2006) which must take place at many levels. *Talanoa* is described by Vaioleti (2006, p. 23) “as a conversation, a talk, an exchange of ideas or thinking, whether formal or informal”. An aspect of ‘adaptive co-management’ is the integration between TEK and non-indigenous knowledge bodies of knowledge (Armitage, Berkes, & Doubleday, 2007, p. 5). Uncritical support and blind support for TEK, even romanticising TEK, and its associated management practices is just as unwise as single-mindedly focussing on destructive management practices by indigenous peoples. Foale (2006, p. 129) points out there are “empirical gaps in both scientific and indigenous knowledge”. There are possibilities of cultural hybridisation by sharing between the two bodies of knowledge (Farrelly, 2010). These gaps that Foale points out provide spaces for dialogue and negotiations (see Figure 1.3 and also Chapter 5) as “significant management outcomes can be achieved simply with some careful and intelligent communication”(Foale, 2002, p. 2). Personally this has been an educational journey for, coming in as a science graduate, I have developed I have developed a much more deeper appreciation of indigenous knowledge and the role it does play and can play when integrated with non-indigenous knowledge in CBMC work.

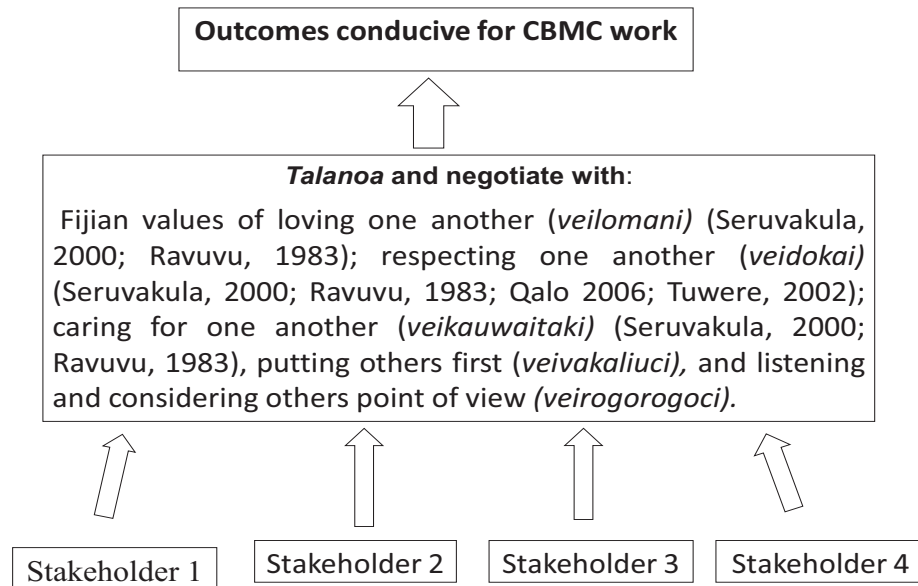


Figure 1.3: *Talanoa* as a dialogue for reaching new outcomes.

In this dialogue situation, I emphasise the term ‘exchange of ideas or thinking’ with careful communication by stakeholders in CBMC in order to agree on outcomes that are beneficial for CBMC work. I draw upon experiences from the field in this research, writings by Fijian scholars as outlined in Section 1.3.1 (Ravuvu, 1983; Seruvakula, 2000; Tuwere, 2002; Nayacakalou, 1978; Qalo, 2006) and my own life experience to present a model of *talanoa* as dialogue in Figure 1.3. However, as will be described later in chapters 4 to 6 of this thesis, from the findings of this research there are numerous barriers to successful dialogue in CBMC.

3) **Kinship (*veiwekani*).** Kinship is the basis on which most aspects of the *bula vakavanua* is lived out. Kinship may be based on blood links, *Vanua* links or through marriage. Newly fostered links are those formed with other church members (*veiwekani vakalotu*) and links formed with those at one’s place of employment (*veiwekani vakacakacaka*). A kinship (*veiwekani*) network is recognized as a hub through which all these forms of social capital and TEK in the *bula vakavanua* are largely played out (see Figure 1.4). I will elaborate on this in Section 4.4.1.

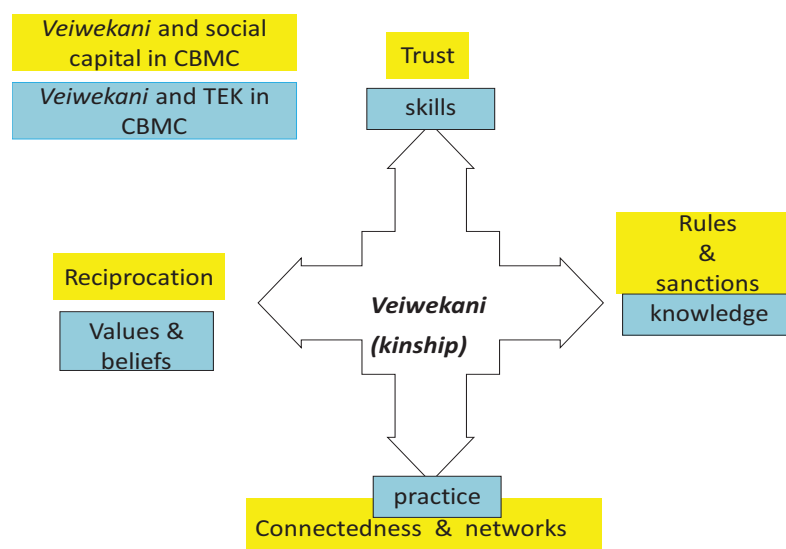


Figure 1.4: Kinship as hub through which social capital and TEK are carried out.

Becker (1995, p. 16) states that “Fijian identity is grounded in one’s connections to the immediate kinship group and social network. Ideally individual activity is devoted to developing and re-inforcing social relationships and promoting collective interest”. This collective interest includes a sustainable livelihood, resulting in the collective action of CBMC for the management of the *qoliqoli*. An indigenous NGO worker that I interviewed as part of this research acknowledges that *veiwekani* (kinship) is the ‘biggest asset’ in the community that the NGO partners involved in CBMC work are capitalising upon. A child is born into a family (*vuvale*) with its traditional roles (and TEK) and standing (social aspect) in the Fijian village. Values and practices of TEK and social capital are embedded in the *veiwekani* network within Fijian society and are interconnected to other aspects of the Fijian way of life.

In my research, I found that there are numerous aspects of Fijian cultural and social capital that are conducive for CBMC work. Bourdieu (1986) differentiates cultural capital from social capital by stating that cultural capital can be ‘embodied’ as a state of mind, ‘objectified’ as cultural goods and institutionalized. In relation to environmental conservation, Berkes and Folke (1992) describe cultural capital as ‘rules of society’ or factors that societies have in order to adapt to the natural environment. Robinson & Williams (2001, p. 55) connect cultural capital and social capital by asserting that the latter is the expression of the former in practice, and that social capital is “based on and

grows from the norms, values, networks and ways of operating that are the core of cultural capital”.

This section has outlined the significance of this research with respect to the influence of *bula vakavanua* on CBMC work in Fiji. I set out to carry out the research out of interest as a member of the fisher tribe and because my career was in the environmental conservation area. However, it has also been a personally enlightening journey for me, as I find that I am able to give voice to the three things that I am: an indigenous Fijian, a woman, and a member of the fisher tribe. This I will discuss in the next section.

1.4.1 Indigenous Fijian woman fisher tribe member voice

As an indigenous Fijian woman from a traditional fisher tribe I am also privileged to be able to give a voice to indigenous people, women and the traditional fishermen. I did not set out at the commencement of the research purposefully to do this, but as I listened to the community responses, I was initially surprised at how I could understand the point of view of women and fisher tribes, and then I realised that I was one of them and so I could hear their stories and understand the cultural context. Some of their concerns, aspirations and recommendations are incorporated into this thesis. For instance, women are usually involved in catering during marine conservation workshops and the proportion of women sitting in meetings is much less compared to men. This is a disadvantage to the conservation initiative implementation since women’s potential is not fully utilised. In addition, women are the main users of the natural resource as their role is to harvest resources to feed the family. The fisher tribe on the other hand, is traditionally not allocated much land for planting due to the nature of their traditional role. They therefore, rely heavily on the *qoliqoli* as the source of income and livelihood. The placing of *qoliqoli* under the *tabu* needs equitable compensation for fisher tribes who have less land compared to other clans such as the traditional warriors (*bati*). The implication is that when the *tabu* is in place, these other clans can still have a livelihood from their plantations and even in some cases, earnings from logging. This thesis will discuss and also propose recommendations to address some of the inequities noted here (see Sections 6.3 and 6.4).

I did not set out at the commencement of the research to give voices to the indigenous Fijian; woman; or fisher tribe member; but these voices arose out of the field work. In

the next section I will discuss the key questions and ideas that I had as I went out for the field work.

1.5 Key Question and Ideas – Main Aim and Objectives

The main question is how does the indigenous Fijian way of life (*bula vakavanua*) affect the implementation of CBMC, with a particular focus on social capital and Fijian TEK? In using the term CBMC I am referring to the conservation of Fijian marine flora and fauna, while at the same time also emphasising the conservation of the Fijian way of life that is associated with the marine environment. This conservation of the *bula vakavanua* as mentioned in Section 1.3 draws from Borrini-Feyerabend et al. (2004, p. 299) definition of co-management suggesting the securing of “identity, culture, livelihoods and the diversity of natural resources” as a consequence of CBMC.

The identification of the causes of unsustainable behaviours and steps to address these by minimizing or removing these causes would contribute positively towards the implementation of CBMC in Fiji. I use the words negatively or positively in this thesis. Unless specified, it refers to negative and positive from the perspective of the co-management initiative (CBMC). This research aims to improve understanding of the basis of behaviours which positively influence the CBMC initiative, and reinforce these in order to continue to enhance CBMC initiatives. The wider implication and further research potential includes exploring the application of lessons learned and insights gained from Fiji to CBMC involving indigenous communities in other cultural contexts. This will hopefully contribute to the reduction of recurring problems such as poaching from the *qoliqolis* by the owners themselves.

Given the focus of this research, the principal question therefore, is **what are the current and possible future roles of social capital and TEK in the implementation of CBMC initiatives in Fiji?** I developed a fieldwork based research approach that sought to answer the following subsidiary questions:

- How are social capital and TEK manifested in CBMC in Fiji?
- How do social capital and TEK influence the implementation of CBMC?
- What are some other Fijian cultural values and practices that impact implementation of CBMC?

- Do local communities have to trade-off some aspects of *bula vakavanua* in order to support CBMC initiatives?
- What are some strategies and processes that can be recommended and encouraged locally, to enhance the facilitation of CBMC?
- What are some possible areas requiring further research?

1.6 General Comment on Study Approach

A combination of western and indigenous methodologies was utilised in the research process, using an overall qualitative approach and ‘collective case study’ using on three ‘instrumental’ case study sites (see Section 2.2.1). Nabobo-Baba’s (2007) *Vanua* Research Framework was used as the basis of field approach (see Chapter 2 for details of methodology). I have also suggested a code of ethics for indigenous research in Fiji in the Methodology chapter. *Talanoa* was used extensively, as a methodology as I tried to gather information, in order to let the authentic voices of the people be heard in my writing. *Talanoa* is described by Vaiolleti (2006, p. 23) “as a conversation, a talk, an exchange of ideas or thinking, whether formal or informal”. I have thus presented their narratives, in their original language and translated for the benefit of all. These narratives also provide a space for the real life scenarios, contradictions and points of view of the minority, such as the women, who are usually not involved in decision making, to be heard. The English translation is included in the body of the thesis but the original response in the Fijian language is found in the Appendix, so that any Fijian language reader may refer to them should they wish to.

1.7 Structure of Thesis

The structure of the thesis is outlined in the diagram below (Figure 1.5). There are seven chapters in total. Chapter 1 introduces the objectives of this study. Chapter 2 outlines the Methodology used in this research, including the explanation for the choices of the case study sites. Chapter 3 describes the context, and Chapters 4 and 5 elaborate on findings of social capital and TEK respectively. In Chapter 6 I use the metaphor of the crab to illustrate connectedness between humans and their natural environment in the indigenous Fijian world while Chapter 7 outlines the conclusions.

Chapter One: Why the Thesis Topic?

Chapter Two

The researchers experiences in conducting field work. This includes a discussion of the research methods

Key theoretical concepts

- Indigenous methodology (Smith, 1999; Thaman, 2003)
- Qualitative research (Bryman, 2004; Babbie, 1998)
- ‘Collective case study’ (Stake 1995, Yin ,2003, Harling, 2002)
- Talanoa* (Otsuka, 2006; Vaoleti, 2006)
- Vanua* Research Framework (Nabobo-Baba, 2006)

Other relevant concepts

- Case Study
- Protocols (Weber- Pillwax, 2004)
- Traditional relationships

Chapter Three

Gives a background of the CBMC in Fiji, case study sites and NGOs especially FLMMA

Key theoretical concepts

- Vanua concept & values (Ravuvu, 1983; Tuwere, 2002; Seruvakula, 2000;)
- Bula vakavanua* (Seruvakula, 2000)
- Locally managed marine area (LMMA)
- Co-management (Borini-Feyerabend, *et.al*, 2004)

Other relevant concepts

- Traditional governance systems
- Fisheries legislation
- Qoliqoli*

Chapter Four

Findings including the respondents’ view of how social capital positively and/or negatively influences the implementation of CBMC, specifically marine conservation

Key theoretical concepts

- Vanua concept & values (Ravuvu, 1983; Tuwere, 2002; Seruvakula, 2000;)
- Social capital (Pretty & Ward, 2001)
- Cultural social capital (Halpern, 2005; Robinson & Robinson, 2005)
- Kinship (*Veiwekani*) (Ravuvu, 1983)
- Dialogue/*talanoa*/negotiation (Halapua, *n.d*; Reid et al, 2006; Foale, 2006; Armitage, et al, 2007).

Other relevant concepts

- Bula vakavanua* (Seruvakula, 2000)

Chapter Five

Findings including the respondents view of how TEK positively and/or negatively influences the implementation of CBMC, specifically in marine conservation

Key theoretical concepts

- Faces of TEK (Houde, 2007)
- Knowledge-practice-belief (Berkes, 2008)
- Traditional Management in Fiji (Veitayaki, 1998;2002)
- TEK – values and beliefs, skills, knowledge and practice
- Dialogue/*talanoa*/negotiation (Halapua, *n.d*; Reid, et al, 2006; Foale, 2006; Armitage, et al, 2007).

Other relevant concepts

- Vanua concept & values (Ravuvu, 1983; Tuwere, 2002; Seruvakula, 2000;)
- Totems (Garibaldi & Turner, 2004)

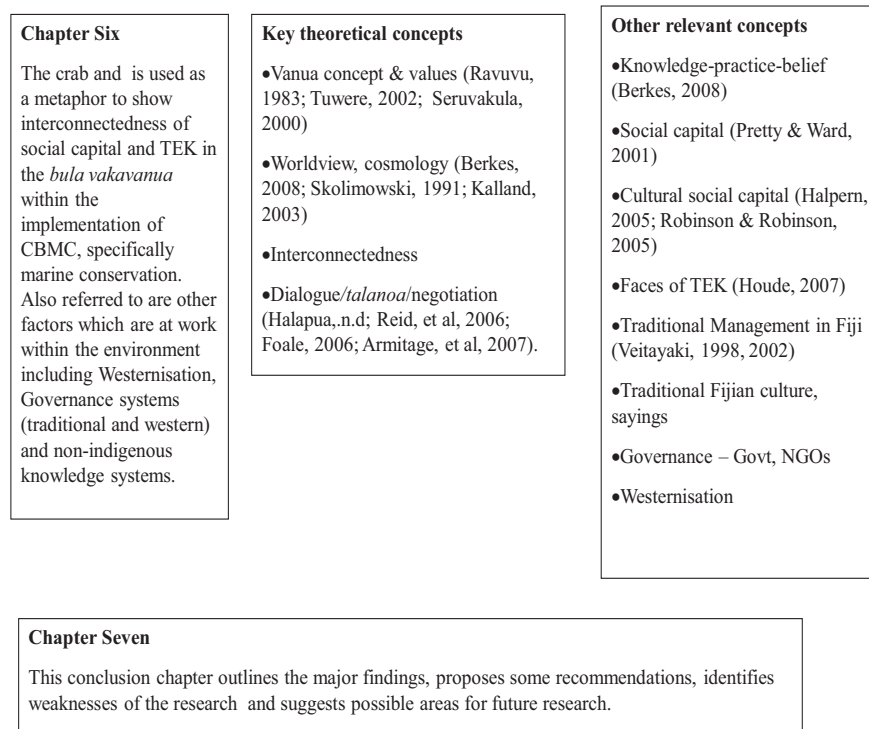


Figure 1.5: Thesis Outline and Key Theoretical Concepts

Chapter 2

Methodology

“If we have been researched to death, maybe it’s time we started researching ourselves back to life” (Canadian Aboriginal Elder)... Researching ourselves may mean self-initiated action or it may mean entering into effective partnerships. In either case, the ground rules that should guide new practices are not immediately evident (Brant-Castellano, 2004, p. 98).

2.1 Introduction: Research Approach

This chapter describes the approach and methods used to guide my investigation on the influence of the *bula vakavanua*, on the implementation of CBMC in Fiji, with a particular focus on the roles of social capital and TEK.

This research uses a combination of, and draws on, the strength of both conventional western research methodologies and indigenous methodological approaches. I begin by briefly outlining the distinctions between western and indigenous methodology approaches. Indigenous methodologies, “describe the theory and method of conducting research that flows from an indigenous epistemology” (Kovach, 2009, p. 20). In the same way, western methodology flows from a particular “sociological, epistemological, sociological, and ideological way of thinking and being as differentiated from Eastern thought, an indigenous worldview, and so forth” (Kovach, 2009, p. 21). In the Pacific indigenous methodologies have been developed and utilised in various Pacific island countries and cultures such as the *Kakala* in Tonga; and the *Vanua* Research Framework (VRF) for Fiji. I elaborate on indigenous methodologies in Section 2.2.2. There are certain aspects of fieldwork in the western methodologies such as filling of research questionnaires and signing of consent forms which are not quite appropriate with respect to carrying out research in the Fijian context, as I will discuss later. However, the western approach to methodology was significant in the selection of an overall qualitative approach and the use of the case study research strategy in this thesis. When it came to the field work and interpretation of data, an indigenous methodological approach was more significant and appropriate due to the nature of my topic – Fijian social capital and TEK. The indigenous approach, for instance, was appropriate in information gathering in the utilization of indigenous practices of *talanoa* and

interpreting action, words and behaviour within the Fijian context. *Talanoa* literally means ‘to tell a story’ (verb) but is now being increasingly used in the field in Fiji and other Pacific Islands for information gathering in research and community work (Havea, 2010, p. 11). I will elaborate on *talanoa* in Section 2.4.3. The use of *talanoa* is also due to my becoming increasingly aware of, and deeply appreciative of my status as an indigenous Fijian woman, from a fisher tribe as my research progressed. Personally this was a significantly educative experience since I had an undergraduate degree in chemistry and biology. In the fieldwork, I have comfortably adopted an indigenous Fijian methodological approach (based on the Vanua Research Framework). Earlier during the course of my writing, I found it harder to write about the *bula vakavanua*, an integral part of my life, in an impersonal, strictly academic style as I had been doing in my science-related work. However, as I reverted to the personal narrative approach, I was more comfortable and concepts and ideas easily flowed out through the pen nib. However, it is unfortunate that in writing, it is inevitable that the actual meaning of *bula vakavanua* concepts cannot be fully expressed in English since some of the meanings are ‘lost in translation’. This research was also guided by my insider ‘knowledge’ (Robson, 2002) as an indigenous Fijian researcher. I live and experience the Fijian way of life: being familiar with the Fijian ways of knowing and worldview, derived from my position as an indigenous Fijian.

The indigenous methodology I used as outlined in Section 2.4 was based on the Vanua Research Framework (Nabobo-Baba, 2006). I have also put forward a Vanua ethics guideline. The Vanua methodology process and Vanua ethics guideline were based on other indigenous methodology approaches of Tonga, New Zealand, Australia, Asia, North America and Canada. I also referred to the Fijian Research Guidelines currently under development by the Fijian Affairs Board¹⁹ since the guideline outlined some cultural information that was important for use in the field. An example of this is the *cavuti* (the name of the *Vanua*) to refer to my hosts by, during my field work.

2.1.1. Thematic areas of Inquiry

As noted in the introduction, two thematic areas from the Fijian way of life (*bula vakavanua*) were identified to guide the focus of this inquiry. These two thematic areas

¹⁹ Research Department, Institute of Fijian Language & Culture, Ministry of Indigenous Affairs, Fiji.

were suitable for ensuring an in-depth study of the case studies identified. Those themes selected for this purpose are the following:

- Social capital aspects in the Fijian lifestyle (*bula vakavanua*).
- Traditional ecological knowledge (TEK).

The rationale for using these two thematic areas was based on the following considerations. Firstly, with social capital aspects in the Fijian lifestyle, *bula vakavanua*, this theme may give valuable insight as to how the qualities and characteristics within the social interactions and relationships influence collective co-management behaviour within and around CBMC. These social interactions and relationships occur within a traditional hierarchical social structure which strongly influences social behaviour. The second theme, TEK, may offer important possibilities of how it can be relevant to modern methods of environmental management and also ways of integrating TEK into environmental management policies and plans.

2.2. Research Design and Method

An overall qualitative research method approach was used in order to “provide an insight into how people make sense of their experiences” (Liamputtong & Ezzy, 2005, p. 5). I also utilised an inductive approach for developing a conceptual understanding of the role of *bula vakavanua* in CBMC, from observation and findings (Bryman, 2004, p. 7) as opposed to deductivism, whereby a hypothesis generated from theory is tested. For me, personally, it has been a learning experience since I was more familiar with the deductive approach because of my scientific background.

Epistemology is “the theory of knowledge” with respect to “how we know what we know, and how we can (or cannot) know what is true” (Gomm, 2009, p. 114). Gomm adds that ontology is “the theory of being... what does exist” and what is their nature. What does this mean for social research? Denzin and Lincoln (2005, p. 183) aptly explain that “ontological and epistemological issues become related in the sense that the latter concerns how human actors may go about inquiring about and making sense of the former”. I grappled with what is actually meant by this until I came across the explanation of ‘ontology’ by Goertz (2006, p. 30) using the chemical element copper as an example. This helped clarify the concept in my mind since Goertz used a scientific example. Goertz explains that “a theory of a chemical element elaborates its ontology”.

A poor ontology would focus on other substances such as earth and air which are not copper, or focus on its red colour which is only a superficial property. A good ontology encompasses the analysis of characteristics that determine the property of copper, such as its atomic structure. The atomic structure of copper determines its conductivity reaction with other elements and other important properties. This example of ontology and copper made me pause every now and then during my field work, to ask myself whether I was actually looking at relevant aspects of social capital and TEK in the *bula vakavanua*, or focussing on other aspects of culture. With regards to epistemological orientation, the ‘emic’ approach was applied. This is an ‘inside’ perspective to describe the Fijian culture in its own terms rather than a more comparativist approach of an ‘outside’ perspective or ‘etic’ approach. In the etic approach “differences across cultures are explained according to a general external standard” (Morris et al., 1999, p.781).

Table 2.1: Qualitative research orientations adopted for thesis

Orientation	Approach
Principal orientation of the role of the theory in relation to the research	Inductive approach: generation of theory from observations and findings e.g. In this research, theoretical ideas such as the notion of cultural values and kinship influencing CBMC implementation) were derived from the data rather than prior to the data.
Epistemological orientation (How we know)	‘Emic’ approach : ‘inside’ perspective, describing the culture in its own terms (Morris, Leung, Maes, & Lickel, 1999)
Ontological orientation (What we know)	Constructionism: social phenomena and their meanings are continually being carried out by social actors and are in a constant state of revision

(Adapted from Bryman, 2004)

The application of the natural scientific model to the study of the social world has been criticized by social scientists (Bryman, 2004). Social scientists believe that the “subject

matter of social sciences - people and their institutions - is fundamentally different from that of the natural sciences” (*ibid.*, p. 13). Social scientists assert, therefore, that a different logic of research procedure reflecting the distinctiveness of humans against the natural order should be used. Interpretivism is a strategy that respects the differences between people and the objects of natural sciences. This means that a different approach should be used when studying people, and another approach used when studying an object of natural science, such as measuring the amount of gases in the atmosphere. The ontological orientation of this thesis is ‘constructionism’ involving social constructions built up from the perceptions and actions of social actors. Bryman (2004, p. 14) comments that this “implies that social phenomena and categories are not only produced through social interaction but they are also in a constant state of revision”.

2.2.1. Case Studies

Case studies were used in this research. Yin suggests (2003, p. 13) that a case study approach should be used when the ‘how’ or ‘why’ questions are being asked of “a contemporary phenomenon within its real-life context”. Case studies involve the detailed and intensive analysis of a single case or the study of two or three cases (Bryman, 2004). Stake (1995) distinguishes between what he calls ‘intrinsic’ case studies, which focus on studying one instance in its own right, and ‘instrumental’ case studies, where specific cases are selected in order to allow us to study more general principles. Instrumental case study is used to provide an insight into an issue or provide general understandings of a phenomenon using a single case. In this research I used the “collective case study” (Stake 1995; Yin 2003), which is done to “provide a general understanding using a number of ‘instrumental’ case studies that either occur on the same site or come from multiple sites” (Harling 2002, p. 1). Using the ‘collective case study’ approach, three different study sites were chosen for the purpose of examining and to provide insight into the effect of *bula vakavanua* in the CBMC initiatives being carried out at these sites. In analysing the data therefore, the focus was not to compare and contrast the sites, since the sites were only used for collecting as much informative data as possible. However, in this thesis, there will be comparisons made where appropriate.

An important aspect of case studies is determining the unit of analysis or defining what the case is. In this research I identified the cases based on FLMMA’s conservation

approach and portfolio of sites. These sites are based on districts (*tikina*), since *qoliqoli* ownership is *tikina* based. Eleven out of the 13 provinces in Fiji are involved in conservation and it was not possible time-wise or financially viable to study eleven sites from the eleven provinces. However, the eleven provinces of Fiji are divided into three confederacies: Kubuna, Burebasaga and Tovata. I decided to select one site from each of the three different confederacies in Fiji, belonging to three different provinces (see Table 2.2 below).

I selected the three case study sites in this research using an information-oriented approach. This is a non-random sampling technique that involves the use of pre-determined criteria to select the cases to be used (Babbie, 1998; Liamputtong & Ezzy, 2005).

For the selection of case study sites, the following selection criteria were used:

- I. The sites should be an indigenous CBMC initiative due to the two key themes in the research topic: social capital and TEK.
- II. The three cases are from the three different confederacies, and from three different provinces.

Table 2.2: Case study sites provinces and confederacy

Case study site	Province	Confederacy
Kubulau	Bua	Tovata
Verata	Tailevu	Kubuna
Navakavu	Rewa	Burebasaga

The case studies should serve a particular purpose i.e. offer something of value to the topic of research (Yin, 2003). The three sites were selected because they have characteristics which distinguished them from other sites. I will briefly outline²⁰ a few examples here of the distinctive features of the sites. Verata was the first site for FLMMA in Fiji. The focus was on conservation of the Vanua

²⁰ The details can be found in Chapter 3.

Verata traditional totem²¹. Verata is also of historical significance for indigenous Fijians since that is the place where our indigenous Fijian ancestors dispersed from²², and I felt it would be interesting to investigate social capital and culture at that site. The second site, Navakavu, is about 20 minutes drive from the city of Suva, is the only site in my province of origin, Rewa. I was interested in seeing how social capital and TEK were influencing marine conservation of a *qoliqoli* that was so close to the Suva harbor, especially since their *qoliqoli* was part of it. The third site, Kubulau is a more remote site, about a 45 minutes flight from Nausori Airport (half-an-hour drive from Suva) to Labasa on Vanua Levu. The truck drive from Labasa airport to the village is about four hours.

- III. The third criteria encompassed practical considerations; the main one was the relatively close proximity of the sites and accessibility. This would mean saving the time and expense of having to travel further to collect data and also would allow multiple visits to the sites. Even though Bua was further away, I travelled by air and road to get there. I ruled out a site where I had to travel by boat since the boat service is not as regular as air and road transportation in Fiji.

This study, therefore, may be applicable to the whole of Fiji for several reasons. The sites belong to the three different confederacies and three different provinces. They are from various distances from urban centres, though more research needs to be undertaken about the effect of distance from the urban centre on the *bula vakavanua*. With respect to the ‘age’ of the CBMC initiative, Verata was the first site in Fiji where partners and the community set up a marine conservation initiative whereas Kubulau and Navakavu are relatively newer sites.

I approached FLMMA²³ Executive Committee members to access some of their sites as my case studies. This was not a new situation for a research request since a significant amount of academic research has already been carried out at various FLMMA sites. At

²¹ See Chapter 4 for significance of traditional totems in indigenous worlds.

²² See Chapter 3 for details.

²³ FLMMA is discussed in detail in Chapter 3

this point I was also able to confirm with FLMMA, that very little, if any, research had been done on the social implications of CBMC initiatives in Fiji.

As I entered the communities, I was seen more as an employee from a tertiary institute (FIT) rather than a FLMMA representative. This was because most of the communities did not know that I was part of FLMMA, since they were only familiar with their local partner organization and the various government departments.

The three sites eventually included in the research were a result of a scoping exercise lasting nine months, which originally identified eleven possible sites. These eleven sites were within the provinces of Nadroga, Ba, Ra, Cakaudrove, Macuata, Kadavu, Lomaiviti, Yasawa Tailevu (Verata district), Rewa (Navakavu district) and Bua (Kubulau district). The next step was the identification of sites according to the criteria above. Six of these did not meet all the criteria while, with the other two, I experienced communication problems (e.g. telephone) which I knew would later complicate or compromise the research process. Because of my indigenous links it would be highly culturally inappropriate of me to divulge more specific details about why some sites did not fully meet the criteria. I then contacted the NGO involved and the community representative for the sites I had selected. The community representative is the link between FLMMA, the NGO and the community. He /She would represent the community to any FLMMA workshops and meetings and would disseminate any information from FLMMA and the NGO back to the community.

I interviewed 29 people on an individual basis. These individuals were from the range of stakeholders including the village community, NGO and government organizations. I conducted twelve *talanoa* groups involving 40 individuals. The *talanoa* groups ranged in size from two to seven in number. I elaborate on these in Section 2.2.3 and 2.4 below.

2.2.2. Indigenous Research and Methodologies

There has been a move by indigenous peoples, to ‘decolonise’ research methodologies when carrying out indigenous research (Smith, 1999) by developing indigenous research methodologies, protocols and practices. In the Pacific region, this has resulted in the birth of *Kakala* (Tongan), *Tivaevae* (Cook Islands), Kaupapa Maori theorising (New Zealand) and the recently developed *Vanua* Research Framework (Fiji). The

Vanua Research Framework²⁴ (VRF) for Fiji is “an indigenous theoretical approach embedded in indigenous Fijian worldviews, knowledge systems, lived experiences, representations, cultures and values” (Nabobo-Baba, 2007, p. 1). These indigenous research practices allow indigenous peoples in particular, to re-establish engagement with scholarly authority over their own knowledge systems, experiences, representations, imaginations and identities. The indigenous research methodologies also serve as a guideline for both indigenous and non-indigenous researchers alike, to carry out appropriate, respectful and culturally safe research practices.

As an indigenous researcher who has to abide by traditional western research methodology and guidelines, sometimes there have been “struggles to engage with disconnections that are apparent between the demands” (Smith, 1999) of the western guidelines and the realities encountered with my own indigenous community. Aboriginal Australian academic Lester Irabbina-Rigney (2003, p. 34) states that “indigenous researchers are more likely to be the only ones aware and respectful of other traditions”. For me, apart from ‘awareness’ and the imperative to be ‘respectful’ I also have a strong obligation to conform to traditional cultural protocols and practices, firstly as a native Fijian and secondly as a female. As an ‘insider’ there are various ethical, cultural and personal issues that present situations which I have to manoeuvre around using discretion so as not to offend or violate traditional indigenous protocols while still, as much as possible, abiding by the western research ethics of research methodologies. Appreciation and awareness of protocol is aptly expressed by the following statement by Canadian First Nations academic Cora Weber-Pillwax:

Protocol takes on a whole new meaning because I am immersed in a world of protocols. Like the fish in water, most of the time I don’t think about them because I have lived in that water all of my life. But, in the context of research, I am compelled to be conscious of their significance (Weber-Pillwax, 2004, p. 89).

The statement above was so meaningful to me because it was something I was experiencing for the first time. As I was growing up, I observed, unconsciously internalised and practiced protocols because it was a natural thing to do since I was an

²⁴ The Principles of the *Vanua* Research Framework is found in Appendix 1.1.

indigenous Fijian. It was an automatic reaction since I was not told at any point in time that I have to learn customs and protocols. I was living the life of a baby crab: watching and learning and walking the walk. As I prepared for the fieldwork and entered the community, suddenly protocol took on a new meaning. I became very aware that I was deliberately practicing and rehearsing in my mind all the steps that required protocols. I was doing this to ensure that nothing was overlooked at the risk of insulting or slighting individuals. I also had to prepare the *yaqona* for the *sevusevu*²⁵. I listened carefully to all the words that were being said on my behalf as my *sevusevu* was being presented. I was attentive to the reply from the host side as he received my *sevusevu*. The words were significant. Sometimes traditional links were stated, but at all times I was welcomed into the communities.

There are clan and tribal relationships that have to be observed, aside from the fact that as a female researcher there are protocols of behaviour to follow. An example of this was in the process of approaching my first interviewee, an elderly gentleman²⁶ well-versed in the Fijian culture. This gentleman is the chief for one of the villages in one of the sites I had selected (the site had eight villages) and his urban home was a few doors away from my home in Suva. He also had a home in the village and would periodically come to Suva to visit his children who were working and living in Suva. I have known him for twenty-five years. I had misunderstood the Massey University's Human and Ethics Committee (MUHEC) concept of 'cultural advisor' so I sent a third party, my older brother, to present a *sevusevu* and a request to interview him. Even if I could approach a potential respondent directly, as a female, I cannot present a *sevusevu*. During the first ten minutes of our first interview I was informed that I had violated several traditional protocols. Firstly, because of the two parties (ours and his) ancestral origins, we were 'brothers'²⁷ and he insisted that my brother should have entered through the front door. My brother had used the back door entrance since it is considered rude to enter through the front door when entering any Fijian residence. Secondly, he asked if I had a problem with him since I had used a third party to request

²⁵ a *yaqona* presentation made when something is requested, in this case, permission to enter the village and to carry out research.

²⁶ This gentleman was the Chairperson of the committee for the Fijian Dictionary project.

²⁷ We would address each other as *mata* (short for *mataqali*) because of our ancestral links, though we were from two different provinces and two different confederacies, members of which address each other as *naita*.

an interview, so I had to explain why a third party is used (based on my misunderstanding the MUHEC guideline). He then commented that I could have saved time by accompanying my brother in the first place. At this point, I chose to respond with respectful silence. In this case, the respectful silence was also a response that enabled the way forward - we commenced with the interview. At the end of the interview, I asked the gentleman how I could carry out a culturally appropriate methodology during the process of approaching a potential interviewee. He explained that he now understood my western methodology approach but could not vouch for other potential interviewees' understanding. He advised me to think carefully and use cultural discretion and wisdom in the future. I resolved that, in the future, should I wish to interview an individual from the communities in the study sites residing in Suva, I would accompany my brother to present the *sevusevu*. It would be the most culturally appropriate action in that situation. Fortunately, I did not have to approach any other potential interviewee in the same way since the community members I had to interview later were all residing in the various villages, and were approached through the *sevusevu* as I entered the community at the case study sites (see Section 2.3.1, part 2) *Na izevusevu*).

While carrying out research at the case study sites in Fiji I drew upon the experiences of other Pacific Islanders and Fijian researchers to use *talanoa* research methodology in gathering data in the field. This I will elaborate upon in the next section.

2.2.3 *Talanoa*

“*Talanoa* is a derivative of oral tradition.... and can be referred to as a conversation, a talk, an exchange of ideas or thinking, whether formal or informal” (Vaiolleti, 2006, p. 23). According to the Fijian dictionary (Cappell, 1991, p. 215), *talanoa* means “to chat, to tell stories”. *Talanoa* in the Fijian²⁸ context is made up of two Fijian words, *tala* and *noa*. *Tala* in Fijian (Cappell, 1991, p. 214) means “to clear rubbish away, to replant or transplant, to load or unload” while *noa* means “yesterday” (Cappell, 1991, p. 155) though not used separately with the word *na*, the Fijian equivalent of the English “the” and “a” (Cappell, 1991, p. 152). *Talanoa* therefore in the Fijian language, literally

²⁸ In the Tongan context *tala* means to tell and *noa* means zero so *talanoa* means talking about nothing. (Vaiolleti, 2006).

stands for; clearing the rubbish away from yesterday, to replant or transplant yesterday, to load or unload yesterday.

I use *talanoa* in two ways in this thesis: *talanoa* as a research methodology as explained below and *talanoa* as in a dialogue to negotiate for new understandings and reach new outcomes for a way forward (see Figure 1.3 in Section 1.4).

‘*Talanoa* sessions’ is a term used by NGO partners in the CBMC initiatives in Fiji, usually conducted in the evenings and usually happening around a bowl of *yaqona*. This is simply borrowing from *talanoa* as part of the Fijian culture. I would attend these *talanoa* sessions but would not record any conversations since this, for me was a place where I could listen to issues being discussed, stances stated and ideas (old and new) talked about. On the other hand, Otsuka (2006) explains that during an interview, the Fijian respondent would not answer with a simple “yes” or “no” to a question. The response would come in a form of a ‘*talanoa*’, a story. In the Fijian context, it’s harder to get a respondent to give in depth answer to a list of questions. I used the *talanoa* as a tool by asking with a “long question probe” such as “*talanoataka mada vei au na....*” translated as “tell me the story about....”. A *talanoa* response to a question makes more sense since everything is linked. The concept of *talanoa* in a focus group “provides a challenge or legitimating to one another’s stories and shared information. Because *talanoa* is flexible, it provides opportunities to probe, challenge, clarify and re-align” (Vaiolleti, 2006, p. 25).

2.3. Indigenous Research Process and Ethics

Western and indigenous Fijian research process and ethics are not always the same. The indigenous Fijian research processes and ethics I used were based on Nabobo-Baba’s VRF, and are outlined below.

2.4.1. *The indigenous Fijian research process*

The indigenous research process I used in this research is comprised of five steps:

- 1) *Vakavakarau* (Preparation): This is the preparation stage which included a Vanua fact-finding exercise to facilitate my entry into the community. The case study sites have an NGO partner-organisation that had applied for and received funding to carry out conservation work at that particular site. I was advised by the NGO partner of

my Kubulau case study site to liaise with the community representative for Kubulau. The community representative would be able to advise me of the most convenient time to visit the site. This is because the villages have certain weeks in a month put aside for tasks such as village clean up and building a house in the village. I liaised with the Kubulau community representative, Jone, while I was a rapporteur at the 2008 LMMA²⁹ Network-wide meeting held in Nadroga on Viti Levu. All the community representatives from the LMMA Network in Fiji and the Asia-Pacific Islands³⁰ were meeting for two weeks. The Kubulau community representative also happened to be the Chairperson of the Kubulau *Qoliqoli* Committee. In Kubulau the permission to do research at the site lay with the *qoliqoli* committee. The community representative invited me to visit the site whenever I was ready to do field work. The Kubulau site is on the other main island in Fiji: Vanua Levu. In the Verata case study site, the identification of my '*matanikatuba*' was an important step. *Matanikatuba* literally means doorway, and in the Fijian context this was the symbolic 'door' through which I would enter a village. This was the family that I need to go to first and the members of this family, my *matanikatuba* family, would take me into the village. The family and I would address each other as '*mataki*'. The home of the *mataki* would be my home during the period of research where I could have my meals, rest and sleep. At one of the sites, the *mataki* sat beside me and advised me about which were 'sensitive' questions and statements³¹:

I have to tell you in advance- when you ask about some marine animals present in our waters, it's the totem for some of the people in this village. I am telling you in case you might ask such a question.... about the *dairo*³², *kaikoso*³³. We are like that here. When you ask that type of question, some will be embarrassed to respond. If you joke about it, you will have to be punished³⁴. I am saying it in advance so that you know.

I appreciated this advice from my '*mataki*' since the reaction to the mention of ones' totem differs from one place to another in Fiji.

²⁹ LMMA is Locally Managed Marine Area network – see more in Chapter 3: Context.

³⁰ See Chapter 3: Context for a list of member countries.

³¹ Refer to Response 2.1.1 in the appendix for the original Fijian version.

³² *Dairo* (*tero*) – an echinoderm, the sandfish; *Metriatyla scabra*.

³³ *Kaikoso* (*qeqe*) – a clam, the arkshell; *Anadara antiquate*

³⁴ Punishment in this situation means I have to drink a big bowl of grog, which incidentally my *mataki* has to drink if I asked him to.

2) *Na isevusevu* (Gaining Field Entrance): This is the presentation of *yaqona* by the visitor upon arrival at the home, village or meeting one is seeking permission to enter. The *sevusevu* is appropriate protocol and shows respect for the host (Nabobo-Baba, 2006). As a Fijian female researcher, a male member of my *mataki* family can present the *sevusevu* on my behalf if I am not bringing a male member of my own family. This is especially relevant if I am not carrying out research in my own Vanua with my own people. I used my *mataki* to present my *sevusevu* at one of the three case study sites. The *sevusevu* also serves an important function for the researcher. As Farrelly (2009, p. 45) points out, compared to a consent form, “a more culturally appropriate method of obtaining consent is in the initial *sevusevu*”. In preparation for her field work, Farrelly had prepared consent forms but she found out that the *sevusevu* asks for permission and gives consent to carry out all aspects of research in the village and she was informed with respect to the consent form that “most people will not want to sign, anyway....”. In the Fijian custom, once the *sevusevu* is presented and accepted, all the doors to the village have been opened.

3) *Vakasokomuni i tukutuku* (Data gathering in the field): In the village there is an unspoken code of dressing and behaviour. For dressing, women are not supposed to wear pants or shorts. Skirts and dress lengths must be below the knee. Neither caps nor flowers in the hair are permitted. Fijian values influence the behavior expected of researchers and researched alike. These values are loving one another (*veilomani*) (Seruvakula, 2000; Ravuvu, 1983), respecting one another (*veidokai*) (Seruvakula, 2000; Ravuvu, 1983; Qalo 2006; Tuwere, 2002), and caring for one another (*veikauwaitaki*) (Seruvakula, 2000; Ravuvu, 1983). Nabobo-Baba (2007, p. 2) states that “Vanua values of *veidokai* and *veivakarokorokotaki* are also important guides as behaviours expected of the researcher (knowledge seeker) towards that of the giver”. Ravuvu (1983, p. 104) explains that *veidokai* is how an “individual responds or reacts considerately in the presence of others” whereas *veivakarokorokotaki* is deference.

When I first liaised with the Kubulau representative during the meeting in Nadroga, Jone³⁵, he was pleased that I had picked the site for my case study and proceeded to tell me about the marine conservation work they were carrying out. During the rest of our

³⁵ Pseudonym used to protect identity.

stay at Nadroga, Jone and I discussed the Kubulau case study site and our acquaintance was quite amicable. I respected him as an indigenous Fijian male and as a community representative for Kubulau. I also met the other Kubulau community representative, Mika³⁶ who is Jone's *tavale* (cross-cousin). Cross-cousins are one's father's sister's children or mother's brother's children (See figure 2.2).

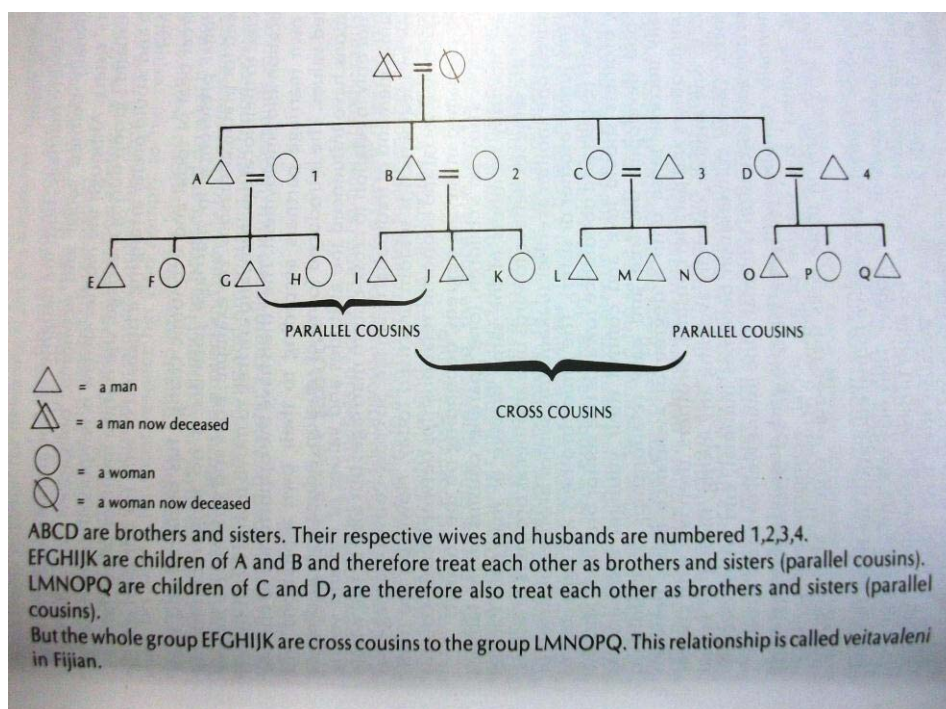


Figure 2.1: Diagram to illustrate different cousins

(Source: Ravuvu, 1983, p.5)

Inter-marriage can take place between cross-cousins and these cousins “normally joke and tease each other in a jovial way” (Ravuvu, 1983, p. 4). Parallel cousins are one's father's brother's children or mother's sister's children and these cousins respect each other as brothers and sisters do

When I arrived in Kubulau with the Wildlife Conservation Society (WCS) workshop participants, Jone came and warmly welcomed us all, shaking everybody's hand. Upon reaching me, he commented that he was happy that I was now at the site. I was greatly encouraged since it was my first case study site visit. It was in the late afternoon that I met Mika. After the preliminary greetings he explained that Jone's mother and his mother were away attending *Tui Levuka's* funeral. *Tui Levuka* is the chief of Levuka in

³⁶ Pseudonym used to protect identity

Ovalau Island in the province of Lomaiviti. I was surprised and greatly curious because my mother is from Levuka and my mother's people were busy with the funeral. I then asked him if he knew where their mothers were staying. This is a significant question because if they were staying in Levuka village, it implies a direct link to the village and to the house they were staying in. The other mourners would be staying at other villages close to Levuka. I smiled when he said my mother's family "yavu" called *Buca* (*yavu* being the name of the piece of land and place where ones' family house is built). Seeing his questioning look, I explained my mother's connection. It is always a rewarding experience when two Fijians meet and 'accidentally' discover that they are related by blood. We both laughed and started to *tuva kawa*. *Tuva kawa* literally means 'to arrange the family tree'; a Fijian expression which is used when individuals trace blood relationships to ascertain their relationships in order to engage in the appropriate cultural manner and protocols. Interestingly, Jone and Mika are descendents of one of my great-grandaunts who had married a gentleman from Kubulau. We were able to work out that Mika is my *tavale* (cross-cousin) while Jone was my parallel-cousin so we would respect each other as brother and sister.

During the workshop I met another cousin but the significant turn of events was my relationship with Jone. After the new blood-link discovery, when I next met Jone later that evening he had become quieter. Whether it was because he had a lot on his mind as the chairperson of the *Qoliqoli* committee or because I was his parallel-cousin, protocol restrained me and I was in no position to casually and freely ask him now, for we now embarked on a more respectful relationship. This shift in relationship is part of the experiences in my research as an insider, having kinship links by blood, marriage or *Vanua* with individuals or families I came across during my field work. When the shift in relationships happened in this case, I found myself spending more time with Jone's wife and the ladies, which fortunately resulted in some very constructive *talanoa*. Jone, Mika and I sat together for dinner that night but the conversation, jokes and exchange was mainly between my cross cousin Mika and I. At the same time, I was more settled and felt more at home since these people were no longer strangers to me - it was a feeling of exhilaration, I was ready for field work the next day.

In the field it is interesting to note that when I asked for permission to record interviews, the usual response is along the lines of "Are you sure you want to record? Our pen nib

(*mata ni peni*³⁷) broke a long time ago. Will you find anything useful in what I say to you?” This probably stems from the concept of humility (*yalomalumalumu, yalomalua*). Humility in the Fijian context is not thinking less of oneself but thinking of oneself less and thinking more of others: their needs and convenience. This also involves the need to gain rapport with the community. The first time I was asked this question was by a lady in *Kubulau* at the commencement of a focus group. The rest of the ladies were looking at me – I was a Fijian, I would be familiar with the Fijian way of life and the Fiji marine and terrestrial environment. It did not help that I had taught a child of one of the ladies present. I explained to the ladies that they have knowledge about their environment and how to survive in it. I continued that if I was to live in the village, and went fishing with them, I would probably end up begging fish from their basket at the end of the day to feed my family. This getting fish from other fish baskets story actually happened. My youngest sister who works in a bank in Suva decided to go and spend her few weeks of annual leave with her mother-in-law who lives in a village about 40 kilometers from the nearest town. The ladies in the village (related to her husband) would go down daily to the nearest river to catch fish for the evening meals for their different families. My sister volunteered to accompany the ladies to catch fish for the evening meal. For the first few days she caught nothing, and the ladies accompanying her would contribute a fish each for her basket, so she would not go back empty handed to her mother in law. She actually did not ‘beg’ for fish since the other ladies simply shared their catch in the spirit of loving and caring for one another. My sister said that her mother in law was impressed with her: she lived and worked in the city and could also catch fish from the river for dinner! Anyway, I knew my begging from other fish baskets response worked well because of one of the ladies’ response’ about half an hour into the discussion was to inform me of my own ignorance about local ecology³⁸:

.... that’s the *loliloli*³⁹. [Do you] know the *loliloli*? [indication of a ‘no’ from me].... yes, you would not know what the *loliloli* is....

³⁷ The Fijian expression is “*Sa kamusu na mata ni peni*” which implies a severance of connection from school/education system.

³⁸ Refer to Response 2.1.2 in the appendix for the original Fijian version.

³⁹ I found out later that this is the local name for a common Fiji echinoderm species.

The last sentence “yes, you would not know what the *loliloli* is” showed me that the lady was comfortable enough to verbalise that I did not know something, in this case a marine species found in their environment. On the other hand, it made the other ladies feel encouraged to share their knowledge and thoughts with me. In my later interviews and focus groups I would sometimes use this scenario of my begging for fish from their fish baskets to gain rapport and help set the scene for the interview.

Nabobo-Baba (2006, p. 120) also talks about “humour and banter as vehicles for transmitting custom knowledge” and how “much is taught through such banter” especially between cross-cousins. I delightfully experienced this when my *mataki* in one of the sites was explaining to me about *tabu* relationships between their chiefly clan and the warrior clans (*bati*)⁴⁰:

At one time they [*bati* clan and chiefly clan] are not even allowed to talk to each other. This time it’s a free for all... in the olden days the members of the two clans rarely talked to each other, but this time, no. Even some of our chiefs are marrying members from the *bati* clan, the individuals who are supposed to be “taboo” to each other are now marrying each other, times have changed, aye?

Without pausing, he suddenly turned his head towards the chief and continued:

“Only the *bati* clan member fell in love with you, aye *Ratu Tavale*?”

There was a lot of laughter in the room since the joke was on the chief. This was possible because the speaker also happened to be a cross-cousin (*tavale*) of the chief. Such jokes and banter, if applicable would relieve tensions or in this case made the focus group session more relaxed and enjoyable during my field work.

Sometimes though, the joke was on me. It was at the commencement of a focus group and after the preliminaries and my first question was on “totems”. After a participant carefully explained about totems at the site, I asked him about his fish totem and without a pause he said “*busa*”⁴¹ (this fish is traditionally significant for my people, since its found in abundance where our village is) to which the whole group laughed

⁴⁰ Refer to Response 2.1.3 in the appendix for the original Fijian version.

⁴¹ Also called *gaka*, *Hyporhamphus dussumieri*.

delightedly. In most parts of Fiji, a way of getting back at the other party during bantering and joking is to mention the other party's totem, especially when you catch them unaware. Arno (1993) describes how jokes are part of the Fijian culture, used to show familiarity and build dynamics between kin during conversations. In the same way, these jokes and bantering contributed to building dynamics within the *talanoa* groups. I felt comfortable and relieved that they saw fit to make me the centre of the joke: I believe they were showing my acceptance into their midst. Meanwhile, I continued to gather valuable data from within these exchanges and relationships.

4) *Na vakavinavinaka*⁴² (Thanking the participants) This is Fijian gifting “to show appreciation to people so that people's love, support, time, resources and knowledge freely given are duly reciprocated” (Nabobo-Baba, 2007, p. 3). As explained by Nabobo-Baba (*ibid*) “knowledge is seen as a gift by Fijians hence within the frame of *Vanua* research, the gift is sought for and derived accordingly”. Louis and Grossman (2009, p. 5) comments on traditional protocol showed another perspective on gifting: “Traditional protocols, specific to local circumstances, may include reciprocity or diplomatic gifting, mutual assistance outside of the boundaries of academic studies....”. I thought about what I could give back to the local communities during my fieldwork as a token of gratitude for the people's love, time and knowledge that would be given to me. I thought about this for a few days and was more comfortable when I read the following about community-based research with First Nations and Métis women in North America which described the concepts of offerings in exchange for information given by respondents. I was not going to give the gifts that were given to the First Nations and Métis women in North America, since our cultures are different. However the idea of giving something that was important to me, and that no one should make me feel guilty about what I give as a gift, made so much sense to me:

What do we mean by offerings? It is giving something that is important to you. What is that worth to you? Are you prepared to give something equally valuable in exchange for life stories? Don't let anyone make you guilty for giving someone an offering to share their stories (Anderson & Campbell, 2009, p. 12).

⁴² The act of showing appreciation or thanking.

I wanted to give back to the community something that was important to me; time and knowledge, apart from the usual gift of clothing material and *yaqona*. This idea was re-confirmed in my mind when I was in one of the homes in the village at the end of a ‘*talanoa*’ session (see *talanoa* as a research methodology in Section 2.2.3). The female members of that particular village household were excited about attending women’s training workshops in the village. I looked around and saw a beautiful piece of crochet on one of the chairs. Upon asking I learnt that it was a gift and that the women of that household would like to learn how to crochet. I then carried out this *vakavinavinaka* deliberately in two ways by firstly, presenting individuals with clothing materials which is the usual form of gift for saying thank you in Fiji. Some also give *yaqona* and cigarettes which I did not do because of health implications. Secondly, I showed my appreciation by teaching women some handicraft skills of crocheting and jewellery making, which I saw as an appropriate method of reciprocal exchange of knowledge to the womenfolk. I also supplied all the raw materials for the crocheting and jewellery making classes. The women appreciated this imparting of handicraft skills since they could beautify their houses (crocheting) and also make their own jewellery of matching necklaces, bracelets and earrings.

I knew that the men were also pleased with what we were doing. In one of the crocheting sessions, the head of the household in which the crochet class was held, sat with us for the three hours class duration and would pass positive comments and join in the laughter about crocheting mistakes as the class progressed. At another village site, the jewellery-making class took place in the village hall and the men sat at a distance in the hall for the whole four hours duration, watching the class and their wives’ and daughters’ reactions with amusement. I conducted five different sessions for a minimum of three hours per session, involving a total of fifty ladies. In the many village functions it is common to get new *bula* outfits⁴³ sewn for the occasion. In her “impromptu” vote of thanks speech at the end of one of the training sessions the lady said that one big task the women had to do was to travel to the urban centre to buy matching jewellery for the outfit. Now they are “happy and relieved” that they can make their own, apart from the fact that they could also sell some. I described the lady’s speech as impromptu because

⁴³ These are shirts for men and *jaba* (dress and *sulu*) for women sewn from bright colourful materials with island prints.

as is usual in the Fijian custom, the traditional speech of thank you had already been done by the *turaga-ni -koro* in the traditional way. The *turaga-ni-koro* is the village headman. This lady took it upon herself to also say another thank you speech specifically expressing how the ladies have benefitted. She risked being chided (right there and then, or later) because I had already been thanked traditionally. I was touched.

2.4.2. Ethical considerations

Ethics is about protecting the research participants. In this research, pseudonyms/name codes are used to protect the identity of the interviewees. For the discussion of some of the aspects of the findings, the identification of case study sites will be withheld for some aspects of social capital and traditional indigenous knowledge information.

Mohawk sociologist Brant-Castellano⁴⁴ (2004, p. 107) has outlined ethical guidelines for aboriginal research by various agencies⁴⁵ over the past 15 years. I used these guidelines to provide substantive guidance for principles and practices when developing a Fijian ethics approach in my research. Weber-Pillwax (2004, p. 80) emphasises that “.... natural laws or principles of ethics are simply stated: kindness, caring, sharing, and respect. They are meant to govern our relationships with all other living beings and forms of life” (2004, p. 80). Kindness, caring, sharing and respect are also important values in Fijian society. The National Aboriginal Health Organisation of Canada has identified nine primary philosophical principles (See Appendix 1.3) of indigenous knowledge in the Methodology for Ethical research (Kashungao, 2006) based on the Ethical Guidelines for Aboriginal Research Elders and Healers Roundtable “*Ganono ’se’n e yo ’gwilode*”: One Who is Full of Our Traditional Knowledge”. Apart from respect, language and reciprocity, which are also important in the Fijian context, this particular guideline also pointed out the importance of acknowledging traditional protocols. Six values have been identified by the Australian Aboriginal and Torres Strait Islander communities: (1) spirit and integrity, (2) reciprocity, (3) respect, (4) equality,

⁴⁴ Marie Brant-Castellano is a Mohawk of the Bay of Quinte Band and Professor Emeritus of Trent University.

⁴⁵ According to Brant-Castellano, the most comprehensive set of Aboriginal-specific guidelines is found in the “The Report of the Seminar on the Draft Principles and Guidelines for the Protection of the Heritage of Indigenous People” which treats research ethics as one aspect of protecting Indigenous heritage. [United Nations Economic and Social Council, *Report of the Seminar on Draft Principles and Guidelines for the Protection of the Heritage of Indigenous People* (June 19, 2000) E/CN.4/Sub.2/2000/26].

(5) survival and protection and (6) responsibility (Cochran et al., 2008) In New Zealand, a culturally appropriate research approach for Māori is reflected in the “Kaupapa Māori: Māori research by, with and for Māori” (Cram, 2001).

Drawing on the work of Fijian academics and writers (Ravuvu, 1983; Seruvakula, 2000; Tuwere, 2002; Qalo, 2006; Nabobo-Baba, 2006) and the guidelines outlined above, the following are five ethical values that I believe are commendable in a researcher in an Indigenous Fijian community:

- (1) *Veidokai* (Respect): This is a value that is required in most communities and the Fijian community is no exception since showing respect is highly valued.
- (2) *Veidolei* (Reciprocity): Time, energy and especially knowledge have been given by the community and appropriate reciprocity must be carried out. In most cases, it is not expected that Fijian hospitality be reciprocated.
- (3) *Vosota* (Patience): Life in the village community has its own pace and one must exercise patience at all times for impatience is considered bad manners. There could be delays in meeting the *turaga-ni-koro*, commencement of a *talanoa* session or interviewing a principal informant. Sometimes the week's visit could even be cancelled at short notice due to a death in any of the villages within the district (*tikina*). Instead of feeling impatient, I used the time to work on other aspects of my research such as transcribing or going over some earlier drafts of my writing.
- (4) *Veimaroroi* (Protection): The research participants must not feel distressed at any time during the process from the inception to the dissemination of information stage. I tried to be alert at all times to the reaction of my participants during the *talanoa*. If they showed any discomfort, which may be expressed verbally, or by body language (e.g. bowing the head in silence), I changed the subject of the conversation.
- (5) *Veivakatorocaketaki* (Enhancement): The research must benefit the community with the ultimate goal being empowerment for self sufficiency especially in terms of livelihood. The results should be communicated back to participants in their own language.

2.5 Field Work

The belief that research will benefit mankind conveys a strong sense of social responsibility to the researcher. The specific question that I wanted to ask is how this research will actually benefit the community and individuals at the case study sites so that both the researcher and the researched get some benefit out of the exercise – a win-win situation. In the western methodology books that I read, one of the benefits this community will receive is in the form of receiving the results at the end of the research. Using the “indigenous research agenda [which] is broad in its scope.... [and] connecting research to the good of society” (Smith, 1999, p. 117), I utilized other ways to ensure that the community received some benefit from my research. I would already be benefitting by having knowledge and ways of knowledge imparted to me by the community. This idea of individuals benefitting was premised on the notion of how I could give something back to the community, how individuals could be enlightened, made feel to be part of the research, empowered and have value added to their lives. I resolved that when I presented my findings I would be a voice of the three characteristics that described me: indigenous Fijian; a woman; belonging to the fisher tribe. Apart from this ‘giving a voice’ aspect, when given the opportunity, enlightenment I believe would involve encouraging parents with bright young daughters to support their education. Incidentally, I was given this opportunity in the case study site at my own province of Rewa. It was at the community hall where representatives from all the villages of the Navakavu case study site were gathered for the meeting. I was going to present my ‘research brief’ (See Appendix 2.2) to explain my research. As I was making my way up to present I overheard the question being asked as to where I was from. I took the opportunity to explain that I was a ‘fellow Rewan’ and reminded them respectfully that wherever I go in Fiji I would always be a ‘Rewan’ even though I was now married into another province. I then respectfully asked them to support the education of their daughters.

I would like to believe that in the field during meetings, interview and *talanoa* sessions, the fact that I was a woman doing PhD research would help encourage women to pursue further education, apart from the crocheting and jewellery making sessions. There were two events of adding ‘value’ that are worth mentioning. Firstly, at one of the sites during a focus group I had asked about traditional dances (*meke*). The three focus groups I met with at that site confirmed that all the words of the *meke* can be re-called if

a group of old people came together. Fortunately, it was the weekend of the Hong Kong sevens tournament and all the villagers gathered in the hall to watch Fiji play since there was only one television set in the village. A group of older men and women were put together with the help of the *turaga-ni-koro* and a few of the women. We spent almost an hour putting together the words of the *meke*, at the end of which I recorded their rendition of the *meke*. I had taken along some newsprint and pentel-pens and I acted as a facilitator, drawing on my background as a teacher. At the end of the session I thanked each ‘participant’ with a gift of a *sulu* for each person. However the oldest lady in the village responded to my vote of thanks saying that they were also thankful to me, coming in as an ‘outsider’ and had helped them put the words of the *meke* (refer to Appendix in Chapter 5) together. The second event concerned the putting together of the monthly calendar for the Verata case study site (refer to Appendix in Chapter 5). During a *talanoa* in one of the focus groups at the site, a calendar was put together specifically for Verata where the ecological behavior of animals (especially fish), harvesting and sowing seasons of crops and general weather patterns specifically for Verata are recorded. According to the group, this was the first time that a calendar specifically for Verata had been drawn up. With these thoughts of giving a voice, enlightenment and empowerment in mind, I continued to gather information from the field.

Enabling interaction, rapport and obtaining the trust of the community members are usually the initial requirements of participatory research. As an indigenous Fijian researcher, I was able to easily ‘blend in’. As is common in Pacific cultures, during introduction amongst Fijians, one states one’s name and place of origin (village, district or province). This facilitates the identification of links, blood or *vanua*⁴⁶ links and sets the stage for interaction. Understanding the language and behavior are major parts of the interaction and both posed minimum problems for me as an ‘insider’ for as Otsuka (2006, p. 5) stated, “ a researcher’s knowledge of their (Fijian) communicative styles, especially their non-verbal communication cues, is of great importance for valid *talanoa* research”. The implications and significance of using some words over others during the course of interviews or discussion is usually appreciated and captured by an ‘insider’ who knows the language. Apart from this, Fijian sayings, idioms, expressions and even

⁴⁶ There are special relationships between different *vanuas*, for instance a common ancestral god or common origin.

slang to convey an idea or attitude are fully appreciated and the connotation behind the use understood. However, there are some very local jokes that I may not be privy too. An example of this was when I was in one of the villages asking about some species of fish. One of the participants told me that I was to ask about a particular fish when I arrived at the next village up the road. This I did, and the question was greeted with laughter. I found out later that the name of the fish had a special funny connotation to the village. I did not pursue the subject.

However, there are also disadvantages in being an ‘insider’ researcher. Kanuha was a gay individual researching within a gay community. Kanuha (2000, p. 442) relates the following experience;

At times in the initial interviews, I found myself having difficulty focusing on the interview process, and more important on the responses and narratives of study respondents because of the distraction of my own self-reflections on similar events. The need to separate my own experiences and subsequent analysis from those of study participants, with our natural connections, yet distinctive roles as researcher-researched, was the most profound methodological process I had to learn as an insider researcher (Kanuha, 2000, p. 442).

This ‘self-reflection on similar events’ resonated with me for instance when one of the women commented that sometimes when a woman speaks at meetings it may bring embarrassment to her immediate family. I remember one village meeting, where I spoke ‘quite a lot’ and one of my brothers later informed me that he was slightly embarrassed. On another occasion, a gentleman was describing the plight of the fisherman at their site: that the *qoliqoli* was their only source of income. I was so touched because this would be similar to my fisher tribe’s situation, that I could feel the tears welling up in my eyes. Upon being asked, I had to pretend that the smoke from the open fire was getting into my eyes.

The trip to Kubulau case study site was planned to coincide with a one-week workshop held at the site by the Wildlife Conservation Society (WCS), the NGO partner for the site. The WCS had also invited some other NGOs (World-Wide Fund for Nature, WWF,

Wetlands International and Birdlife International), Government departments and ministries (Environment, Fijian Affairs, Forestry, and Fisheries), statutory bodies (Native Land Trust Board) and about five representatives from each of the eight villages in the Kubulau district. It was a fifty minutes plane ride from Nausori (forty minutes by road from Suva) to Labasa on Vanua Levu. I was taking a carton of materials and *sulus/lavalavas*, for gifting to my respondents. Inside the cartons were ‘chasers’⁴⁷ such as lollies, packaged fried peas, and chewing gum and Chinese lollies to use during *yaqona* sessions. At Labasa, we picked up some other food supplies and then it was a three-hour ride to Namalata village in Kubulau. The Kubulau community representatives allocated five of us women in house where a widower was living, who happily greeted us at the door of his house. He had sent for his married daughter who lived about ten kilometers away, and a niece to come and help him during our stay. Indigenous Fijian hospitality, is mentioned by American anthropologist, Anne Becker (1995, p. 17): “etiquette guides a subordination of personal needs to those of the community, manifest in lavish hospitality extended to guests of the household”. As expressed by a respondent to Becker:

Yes, we always demonstrate our (caring)... If a guest comes to us, we endeavour to provide what he likes. It is essential that we cook well, that we please him. This is because, when he returns to his home, we don’t want him to sit there and say that we didn’t *kauwaitakinia*⁴⁸ (Becker, 1995, p. 76).

For instance, we had a comfortable living room and two bedrooms to ourselves. I noticed that a door leading away from the sitting room was closed. It was while we were preparing to retire for the night that I heard hushed whispers from behind the closed door. Curious, I opened the door and was immediately embarrassed, for the door opened into a kitchen and preparing to sleep on the kitchen floor were the members of the household. They had given up their comfortable beds and living room for us. I was so touched, even though it happens in Fijian hospitality: it never fails to affect me every time it happens.

⁴⁷ These ‘chasers’ are what *yaqona* drinkers suck on during drinking sessions to ease or ‘chase’ away the numbness of the tongue brought about by *yaqona* consumption.

⁴⁸ To be concerned about, to care about. *Kauwaitakinia* is in the dialect from the Nadroga province where Anne Becker did her anthropological research.

2.5.1. Forms of Data Collection

The research methods used included qualitative interviewing, focus groups, participant observation and analysis of texts and documents especially site reports. *Talanoa* was also used both as a methodology to gather data from the field. For the research I conducted a total of 25 individual interviews, and 13 focus and *talanoa* groups involving 55 individuals. The research methods used are elaborated upon in the discussion below.

2.5.1.1 Qualitative Interviewing

In qualitative interviewing, semi-structured interviews were carried out with the use of an interview guide (see Appendix 1.2). According to Bernard (2006, p. 212), the interview guide is “a written list of questions and topics that need to be covered in a particular order”. This was mainly carried out during interviews with non-government organisations and government ministries and departments involved in CBMC in Fiji. Bernard (2006, p. 212) suggests seven methods of “probing” during an interview. In my field work I found that I used the following three types more frequently:

- 1) The “silent probe” where I would remain quiet, waiting for an informant to continue. I had to exercise this a lot since it is considered rude to be impatient in Fijian society. Otsuka (2006, p. 5) states that “in particular, the typical ethnic Fijian attitude towards the use of time (commonly called “Fiji time”) often causes matters to be attended to at a leisurely pace”. Nabobo-Baba (2006) states that it is not uncommon that a village meeting that is supposed to begin “after lunch” would actually start at 4:00 p.m. or even later. The leisurely pace also comes through in language where a story would be told in an unhurried manner with all its pauses.
- 2) The “long question probe” or “tell me more probe” is used to generate a longer and more continuous response and was especially appropriate when I would use statements such as “tell me more about....” or “what are all the factors....” or “why did you say that...”. A long narrative usually follows and I would jot down some points, without taking my eyes off the respondent, to ask about later. In the Fijian culture, it is also considered rude to look away when someone is talking to you.

- 3) The “uh-huh probe” which involves making affirmative comments such as “uh-huh”, “yes”, “I see” and “right”. I definitely used this probe a lot.

2.5.1.2. *Talanoa and Focus groups*

Focus groups “at the broadest possible level, are collective conversations or group interviews” (Kamberelis & Dimitriatis, 2005, p. 887). In this thesis I will refer to these groups as *talanoa* groups. For the three different sites, I conducted eleven *talanoa* groups in total involving fifty-six individuals. The *talanoa* group session ranged from informal to semi-formal ones.

The informal *talanoa* was not usually planned and may happen when resting after a meal, or while sitting around at the village shop. Informal *talanoa* happened a lot around the yaqona bowls in the evenings. Personally I found that a lot more personal views and opinions were expressed during informal *talanoa* sessions, especially on a one-to-one basis or when there were only two to three people in the group who could trust each other. For semi-formal *talanoa* groups, the length of time was about two to three hours, since other activities such as childcare, cooking, fishing and other village tasks also had to be attended to. At the commencement of the semi-formal *talanoa* groups, after the preliminaries of welcome and expression of gratitude for making themselves available and giving up their precious time, I would distribute and clarify a handout explaining my research (See Appendix 2.1). Participants in the *talanoa* groups were selected according to age and gender, with groups comprised of men only, women only, and mixed groups of men and women, which had been put together by the community representative. For the mixed group the women did not say much, and I was not surprised. However I would ask questions specifically directed at them and they would not hesitate to answer. I also had young women and older women together in a group and younger and older men together in another group. Bernard (2006) suggests that “the real power of focus groups is that they produce ethnographically rich data” (p. 239). This is a form of validation since the members of the group would be correcting, adding to and giving personal perceptions as one of the members related an event or concept. In *talanoa* groups I would try to refrain from asking sensitive questions. For example, it would be very unwise to ask about how the fishermen felt about the placing of *tabu* on the *goliqoli*.

The identification of the key informants was done by the FLMMA community representative at the site since they knew who was actively involved in the CBMC initiative and who could provide much more information than others. However, there are limitations to this approach if the FLMMA representative acts as a gatekeeper.

2.5.1.3. *Analysis of texts and documents*

For analysis of texts and documents, I used case study site reports and reports from FLMMA workshops where community representatives gave updates for their sites, and lessons learnt were shared. Fortunately, since I worked at an organization that was also a FLMMA member in Fiji I was able to attend some of these workshops. Some other texts and documents used included progress reports, written reports of events, formal studies or evaluations of the same site under study, newspaper clippings and other articles in mass media or community newsletters.

2.5.2. *Triangulation*

Triangulation means using more than one method or source of data in the study of social phenomena, and can be done within and across research strategies. For instance, observations can be checked out using interview questions to determine whether there might be some misunderstanding about what had been observed. Triangulation was accomplished in this research through two types (Liamputtong & Ezzy, 2005): data source triangulation; and methods triangulation. Data source triangulation is carried out by the use of multiple information sources. This involved the obtaining of information from the villages, NGO⁴⁹ workers, government officials⁵⁰, relevant statutory bodies and tertiary training institutes, especially the Institute of Applied Science (IAS) of the University of the South Pacific (USP). The methods triangulation involved the use of multiple research methodologies such as interviews, participant observation, and focus groups.

This section has discussed the methods used to obtain data from the field. The next step in dealing with the data was analysis, which I will discuss in the next section.

⁴⁹ The NGOs involved in CBMC in Fiji – a full list of these involved in FLMMA is in Chapter 3

⁵⁰ The Ministries and departments involved in CBMC in Fiji – a full list is in Chapter 3

2.6. Analysis

There are several ways which can be used to analyse data. The method I chose to use was Content Analysis.

2.6.1. Content Analysis

Content Analysis should begin with identifying the units of analysis. In this research, the units of research had already been assigned in the two lenses of enquiry: social capital and TEK. For instance, in social capital, the units of analysis were trust, connectedness and network, reciprocity and rules and sanctions (Pretty, 2003). These were assigned codes before searching for them in the data (Silverman, 2001). The following is a list of these pre-determined codes I used:

- 1) Social capital: SCT for trust, SCR for reciprocity, SCN for norms, rules and sanction, and SCC for connectedness and networks.
- 2) Traditional Ecological Knowledge: TEKV for values and beliefs, TEKS for skills, TEKK for knowledge and TEKP for practice.

Content Analysis is “often an initial step that leads to another type of qualitative analysis” (Liamputtong & Ezzy, 2005, p. 260). In this case, after coding the transcripts of interview collected from the field, new perspectives and linkages emerged. For instance, the new perspectives and linkages emerging from the focus groups and interviews were what Halpern (2005) had termed as ‘cultural social capital’. These were attributes of the Fijian culture that enhanced social action. I coded these as CSC for cultural social capital. Other new linkages and perspectives emerged from the transcripts that I could not ignore since they were also important to the *bula vakavanua*. These included *lotu* which I assigned the code LOT, and governance issues were assigned GOV.

‘Insider’ knowledge also helped me to interpret the data because of my understanding of the Fijian worldview, and an appreciation of the ways of knowing and the knowledge of the language. An example here would be the comment by the *mataki* (see Section 2.4.1 part 2); “*Keitou va tiko ya*”. This may be translated to read, “We are like that here” when the *mataki* was explaining to me that in that particular community, when the name of their totemic species is mentioned, they would feel embarrassed. I know this is not

the case in other Fijian communities. For instance, at the mention of fish that is traditionally significant for my people, '*gaka*'⁵¹, my people would automatically 'defend' the fish or say positive comments about its taste, or extol its other characteristics. The wider implication of the comment made by *mataki* is that during conservation work by the NGOs and other partner organization, sensitivities arise when the name of their totemic species is mentioned.

2.7. Concluding Remarks

This chapter has looked at the combination of indigenous and western research methodologies used in this research. I used an overall qualitative approach involving three case studies. Strategies for data collection included the use of *talanoa* (with individuals or in groups), observation, and analyzing texts and documents. Content analysis was used to analyse the data.

From a personal perspective, I learnt a lot in conducting a qualitative research on a sociological topic among my own people. There were protocols that had to be followed when I carried out field work because of who I am: an indigenous Fijian woman. For instance, as a woman, I had to have a male present my *sevusevu*, after which I would talk to the individuals attending the *sevusevu*, who would mainly be males, elaborating on the topic of my research. At the commencement of my research, I would find it a bit uncomfortable, as a Fijian woman, to be addressing a dominantly Fijian male audience in a village hall, discussing *bula vakavanua*. Growing up, I have attended a lot of gatherings where males do most of the talking. My previous research experience had mainly been concerned with scientific survey and measurements, and I found it easier to discuss the physiology and ecology of aquatic animals, rather than *bula vakavanua*. For Vanua links, as an indigenous Fijian I had to use the correct *matanikatuba*. Kinship links dictated that I behaved in a particular way towards others, especially those that I have a *tabu* relationship with.

There are two main reflections that can be deduced from the methodology used to carry out the research. Firstly, is the contention that this research has benefited from utilizing the strengths of both western research methodologies, and indigenous methodological

⁵¹ Also called *busa*, *Hyporhamphus dussumieri*.

approaches. The second is that given the limited case studies used in this research and the diversity of cultural characteristics⁵² within a district and province, it is not possible to generalize these findings to other sites, but the main patterns and conceptual understanding that emerge can serve to help understand how the *bula vakavanua* to affect the implementation of CBMC with a particular focus on social capital and traditional ecological knowledge (TEK), in Fiji.

In the next chapter I will describe and discuss the details of the context in which this research was carried out.

⁵² Such as *vanua* tribal links, totems, etc.

Chapter 3

Context

“We have come to understand that most communities are primarily interested in resource management for fisheries income and sustainable livelihoods, and less so with biodiversity conservation per se, although of course communities have been finding that the latter can promote the former” (LMMA Network, 2009, p. 4)

3.1 Introduction

In this chapter I will outline the context and setting in which CBMC is taking place in Fiji. At the end of this chapter we may be able to answer the question as to “why this setting is of research interest: what are its properties and capacity to illuminate the phenomenon we are studying?” (Barbour, 2008, p. 60). CBMC is implemented under a co-management arrangement between the communities, NGOs, and various government ministries and departments (see Section 3.3). The FLMMA Network organization and strategies are also outlined and the legal implications on the marine conservation work discussed. Since the purpose of this research is to develop and deepen understanding about how the Fijian way of life, *bula vakavanua* (with a focus on social capital and TEK), affects the implementation of CBMC, traditional governance and structure will also be explained. Finally each of the three case study sites will be described.

3.2 Fiji Context

This section will describe the biophysical, personal and Vanua, and legal context within which marine conservation is taking place.

3.2.1. *Biophysical*

Fiji is a group of 322 islands (106 are inhabited) and 522 smaller islets in the South Pacific (see Figure 3.1) with a population of 837,271 (2007 Population Census)⁵³, of which 54% are ethnic Fijians.

⁵³ Fiji Islands Bureau of Statistics website



Figure 3.1: Fiji in the Pacific

(Source: <http://www.worldatlas.com/webimage/countrys/oceania/fj.htm>)

In Fiji, 87% of the land is owned by indigenous Fijians (Native Land), while the other 13% are either freehold or belong to the government (Crown land). Because of Fiji's Native Land Act, the management and use of the land and its resources is the responsibility of the members of the land owning unit: *mataqali* or *yavusa* which are indigenous Fijians sub-clans. The ownership of the *qoliqoli* on the other hand, varies considerably from one site to another. It may be owned by a province, by several districts (*tikina*) in a province, by several *yavusa* or even a single *yavusa*. As had been discussed earlier (see Section 1.2), within the *qoliqoli* there are sections or divisions within which specific *mataqali* can feed from, called *kanakana* (literally translated as eating place). This concept of *kanakana* is also applicable to land within the *mataqali*.

There are 410 traditional fishing areas or *qoliqoli* areas, 385 marine and 25 freshwater, that provide livelihoods for approximately 300,000 people living in coastal villages (Aalbersberg, Tawake, & Paras, 2005). The records of the ownership and boundaries of the *qoliqoli* are kept with the Native Lands Development Commission (NLDC).

3.2.3. Personal and Vanua Context

There are three Confederacies (*Matanitu*): *Kubuna*⁵⁴, *Burebasaga*⁵⁵ and *Tovata*⁵⁶ which are divided into fourteen provinces in Fiji. Rotuma is usually counted as the 15th province. Each province is subdivided into *tikina* while the latter is made up of several villages. One or more *yavusa* may reside in a village while one or more *mataqali* makes up a *yavusa*. Several *tokatoka* (extended family) makes up a *mataqali* (see Figure 3.2), whereas a *vuvala* is the nuclear family

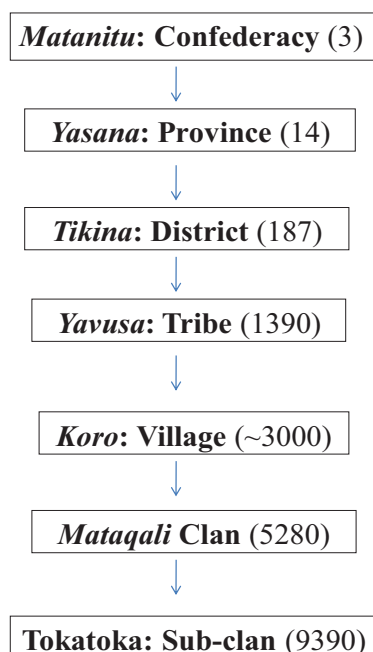


Figure: 3.2: Traditional Indigenous Fijian Organisation Structure

As a descendant of Fiji’s original settlers, I, as an indigenous Fijian, am registered at birth under my father’s⁵⁷ name in the native people’s registry known as the *Vola ni Kawa Bula* (VKB)⁵⁸ which is kept at the Native Lands Commission, an arm of the Ministry of Indigenous Affairs. For instance, my *tokatoka* is *Naibenuya* from the *mataqali Waua* and *yavusa, Matanikoro* (II). My *yavusa* resides in the village of Naivilaca within the district of Noco in the province of Rewa, a part of the Burebasaga Confederacy. My family tree (see Figure 3.3) clearly indicates that five out of my eight

⁵⁴ Tailevu, Lomaiviti, Naitasiri, Ra, part of Ba.

⁵⁵ Rewa, Namosi, Serua, Nadroga/Navosa, part of Ba.

⁵⁶ Cakaudrove, Bua, Macuata, Lau.

⁵⁷ Fiji is a patrilineal society.

⁵⁸ The VKB has all the indigenous natives registered under a particular *tokatoka*, *mataqali* and *yavusa* which is clearly shown under a ‘full extraction’ birth certificates.

ancestors are members of the fisher tribe, while two ancestors were from Levuka, who, according to D’Arcy (2006, p. 115) was also the name of some fisher tribes.

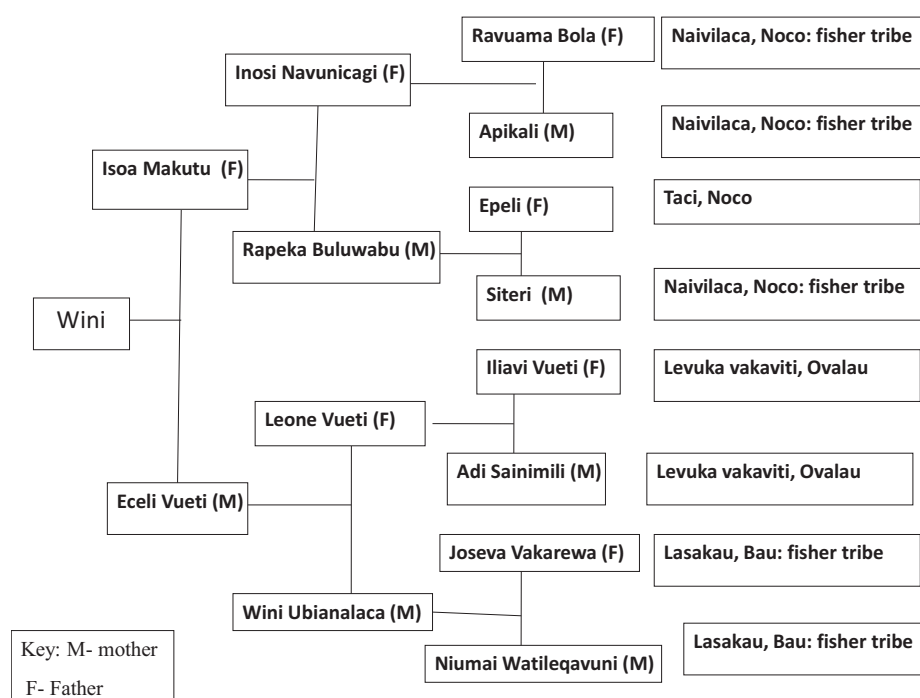


Figure 3.3: Wini's family tree indicating fisher tribe ancestry

As an indigenous Fijian I am subject to the laws of both the government and the laws and regulations of the separate Fijian administration under which I pay a provincial rate⁵⁹ to the province I belong to. As I live and work in the city, I pay my taxes to the government and at the same time pay provincial dues to my province of origin. In the same way, I live both lifestyles in the city: as a working professional and as an indigenous Fijian carrying out my traditional obligations for mine and my spouse's kinsmen and villages. So, in a way the urban Fijian lives in two worlds. I remember an incident a few years ago which revealed to me that I was such an 'urbanite'. My father's eldest brother resided in the village and when he passed away, I approached my Indo-Fijian boss to ask for a few days bereavement leave to attend my uncle's funeral in the village. My boss did not answer straight away but kept on staring at me. I quickly explained that all my work was up to date and started to give the details when he

⁵⁹ *Soli ni yasana* (Financial contribution to the province).

laughed and held up his hand, motioning for me to stop. He then said that he just never looked at me as a person who was associated with a village. At first I was amused then confused: am I living the urban life so well that my being indigenous is concealed? When I politely asked him why, he was not able to give a specific answer. I got my two days bereavement leave.

In the village, various *mataqali* have different roles according to various tasks in the village (see Table 3.1). Villages can also have a particular role in the *tikina*, and in some provinces, a *tikina* may be the warrior clan or fisher tribe for another *tikina*. According to my uncle, in our village our *mataqali* was the *bete* (my husband says that it explains my fascination with a full moon's reflection over a calm sea) for our fisher tribe. However, when Christianity was adopted, our *mataqali* became part of the *mata-ni-vanua* clan. Our village is the fishing village for Tui Noco. The *bati* for the Noco people are from the *tikina* of Tokatoka in Tailevu. Some taboo (*tabu*) relationships arise out of these roles.

Kana cala is eating something one is traditionally forbidden to eat. There is a belief that there would be negative consequences if *kana cala* happens. For instance, as a fisher tribe member I am not allowed to eat fish in the presence of warrior clan (*bati*) members, who in turn are not allowed to eat pork in the presence of fisher tribe members. Sometimes it is said that the *mana* is only effective if people are aware of it.

Table 3.1: Traditional roles and responsibilities in a village

Title	Role
<i>Turaga</i>	Chief
<i>Mata-ni-vanua</i>	Chief's spokesman
<i>Sauturaga</i>	Talking chief
<i>Bati</i>	Warrior
<i>Bete</i>	Priest
<i>Mataisau</i>	Carpenter
<i>Gonedau</i>	Fisherman

My sister told me a story of her practicing *kana cala*. At a Fijian community Sunday lunch, the table cloth was spread out on the floor, with all types of delicious looking

Fijian dishes laid out. As is usual in Fijian cultural practice, the men had eaten first, and after eating, had moved back, sitting with their backs against the wall. It was the women's turn to come and eat. My sister spied a delicious looking fish head on a plate, still sitting at the top end of the table, after the men had retired. It seemed to her that the men stopped talking, and watched her as she moved up towards the plate of fish. Following her was the lady of the house that was hosting the Sunday lunch. The room really came to a hushed silence after she announced that it seems the men were not interested in the fish, so she is happy to eat it. My sister says that somehow the atmosphere was not really 'right', but the fish looked so deliciously inviting that she just started eating. She told me that she felt that those around the table were watching her as she ate the fish, and would quickly look away whenever she turned to look at them. During her consumption of the fish, sometimes she wondered if the fish had been kept for a special guest, but she reasoned that if that was the case, the 'hostess' (sitting next to her) would have told her. She enjoyed every morsel, under the watchful eyes, and she felt a relief in the atmosphere when she excused herself to leave the table. She walked away from that Fijian community Sunday lunch thinking that something had transpired but she could not put her finger on it.

It was one week later while walking in town, when one of the ladies at that Sunday lunch excitedly called out to her from across the street. The lady could not stop laughing when they hugged and greeted each other. The lady then reminded my sister that she had eaten fish in the hostess's presence, to which my sister responded with a puzzled look. However, her "So?" look turned into a verbal "Ohhh!" when she realized that the hostess was a member of the warrior tribe, and the last thing my sister was supposed to be eating at that Sunday table was fish. My sister realized then that people at the Sunday lunch were looking at her expecting her to choke on a fish bone at any moment. She reasoned that either the *kana cala mana* was ineffective because she was unaware of it, or that God was protecting her from a fish bone choke, because she just came back from church. Either way, she was grateful for the freedom to have enjoyed that delicious fish dish at that Sunday lunch.

3.2.4 The Fijian Administration structure

The Province is administered by a Provincial Council, headed by the *Roko Tui* and assisted by the Assistant *Roko Tui*. Each village sends a representative to the *Tikina*

Council, two members of which represent the *tikina* to the Provincial Council (see Figure 3.4). The heads of the various village committees are selected by the village council members and may comprise those respected members of society including retired academics, civil servants, and businessmen and so on. The structure provides the basis for the villages to devise and implement their own corporate development plans and projects towards the achievement of self-reliance.

The Provincial Council comes under the Ministry of Fijian Affairs (currently known as the Indigenous Affairs).

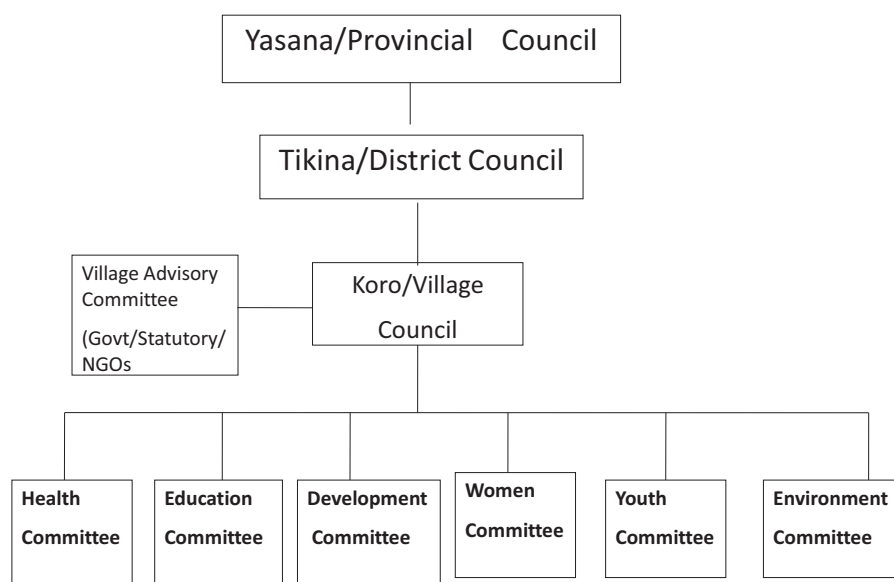


Figure 3.4: Fijian Administration Structure

(Adapted from Nainoca, 1998)

The Fiji parliamentary system and constitution is based on the British model. However the Constitution has been changed a few times since Fiji became independent in 1970, largely due to a series of coups. The initial constitution was replaced by a new one in 1990 following the first coup of 1987. The 1990 constitution was amended in 1997 and remains the governing constitution in spite of the coups of 2000 and 2006. The 1997 constitution stipulates that elections should be held every five years, with a Prime

Minister to run the country and a President as the country's executive authority and commander in chief of the military. Parliament is made up of the House of Representatives elected by the people, and the Senate appointed by the President. The President is advised by the Prime Minister, Leader of the Opposition and the Great Council of Chiefs (GCC of *Bose Levu Vakaturaga*, BLV, in Fijian). The GCC has 55 members, chiefs from various provinces, and plays an advisory role in matters affecting the Fijian people. A big blow to the authority of the chiefs has been the dissolving of the GCC by the current interim Prime Minister of the military government following the 2006 coup.

This has probably resulted in some loss of respect for the chiefs and may even account for the breaking of a *tabu* by members of the village community even after the chief has declared a *tabu*.

3.2.5. Legal Context

This section looks at custom and law within the *qoliqoli*. In Fiji, community-level governance systems, also referred to as 'custom' or 'customary laws' (Clarke & Jupiter, 2010) are made by the community and enforced by a customary system (see 3.2.3). National laws such as the Native Lands Act (1940) and Fisheries Act (1942) also recognise some of the customary rules, customary land ownership and some control over fishing area access. There is no blanket recognition of customary law by the constitution, but Article 6 of the Constitution Amendment Act (1997) recognises customary law and traditional rights to traditional lands and marine areas.

Currently, when indigenous Fijians talk of their *qoliqoli* it means the fishery in a *designated* area. It does not mean foreshore or seabed which is still owned by the government. The Fisheries Act resulted in the legal recognition of customary fishing rights for Fijian kinship groups (*vanua* or *yavusa* level). However the State Lands Act still states that the Crown owns the fishing ground. This means therefore that a person who is not a *qoliqoli* or resource owner wishing to fish for 'trade' or 'business' inside a *qoliqoli*, requires a fishing license issued by the Fisheries Department. There are provisions within the Fisheries Act (Section 13) for the community to give its consent (in a letter) in order for the commercial or non-commercial harvester to obtain a permit from the Fisheries Department to fish within the *qoliqoli*. The *qoliqoli* owners' consent

letter to the Fisheries Department outlines conditions for fishing within the *qoliqoli*. These conditions include no fishing at a ‘no-take area’ or harvesting particular species from particular areas within the *qoliqoli*: the ‘species specific harvest refugia’ (see Figure 3.6). There have been some difficulties in that sometimes the consent letter does not arrive in time and the permit is issued. I will discuss this further in Section 6.2.10.

The *qoliqoli* is owned by the *tikina* which is comprised of several villages. Difficulties regarding decisions concerning the *qoliqoli*, and participation challenges exist in some CBMC sites. For instance, some villages are found on the coast while others are located inland within a *tikina*. Usually the villagers along the coast concentrate on fishing for its livelihood. When sections of the *qoliqoli* are placed under the tabu, the coastal village members maybe placed under pressure especially if they, from their point of view, are not offered an alternative source of sustainable livelihood that can adequately meet their needs. In Chapter 5 I elaborate on such a case.

3.3. Environmental Management in Fiji

Prior to 2007, the Fiji government’s capacity for effective environmental management was limited due to several factors including an inadequate and highly sectoralised legislative and administrative framework, and a lack of integration in development and environmental policies. There were 54 Acts that had some role in environmental/resource management and they were administered by at least 14 different ministries, statutory bodies and other agencies. Most of the laws were out of date and ineffective in a modern environmental management situation or could not be enforced due to inadequate staffing, insufficient technical resources and funding (Watling & Chape, 1992). For instance, the *Rivers and Streams Act* (1882) stated that rivers belong to the Crown and are for the enjoyment of the public: a relic of the colonial period when environmental problems were limited. On the other hand, the *Water Supply Act* (1955) states that it is an offence to pollute water if it is used for water supply or in a declared catchment area. The maximum fine is only \$100 though it would cost the government thousands of dollars to clean it up (Nainoca, 1998).

The Fiji Cabinet approved the drafting of new comprehensive and integrated environmental legislation on Tuesday, 31st January 1995. This followed the completion of Fiji’s National Environmental Strategy (Watling & Chape, 1993) which identified

goals that would contribute to the achievement of sustainable economic development and resource use, and the conservation of Fiji's natural and cultural heritage. The priority was the development of an environmental management strategy to enable the Department of Environment, enforced by an appropriate legal framework, to address current environmental and resource management problems. Fiji's Environmental Management Act (EMA) was passed in 2007 and its associated policies and regulations coming into effect in 2008 after a grace period of one year. The problem with the EMA implementation is the severely understaffed Department of Environment resulting in an ineffective monitoring effort and lack of compliance by the relevant stakeholders.

As discussed above, Lane (2005) states that four categories of actors are involved in environmental use, management and policy in Fiji. First, customary landowners utilize the natural resources for subsistence livelihoods or to earn some cash. Second, the national government of Fiji provides a legislative and policy regime across all major natural resource sectors. Third, civil society is active in the domain of environmental policy, and management, and this comprises a range of local and international NGOs. These NGOs participate actively in policy development at national level and are also directly involved in a range of projects in CBEM. Fourth, donor agencies are active in the country and network with government, civil society and customary landowners but are also influenced by their national imperatives.

CBMC initiatives commenced in Fiji in the early 1990s and continue to gain momentum with new conservation sites added annually. The indigenous resource owners are increasingly becoming involved with the environmental management of terrestrial and aquatic natural resources. Consequently, there should be some understanding of how two important aspects of the *bula vakavanua*: social capital and TEK, influence CBMC.

At the community level, a range of NGOs are carrying out CBMC initiatives at different sites in Fiji. These NGOs include World-Wide Fund for Nature (WWF), Wildlife Conservation Society (WCS), Conservation International (CI), Institute of Applied Science of the University of the South Pacific (IAS -USP), Marine Studies Programme of USP, Resort Support, Coral Reef Alliance (CORAL), Partners in Community Development of Fiji (PCDF), Wetlands International-Oceania (WI-O), Peace Corps, Greenforce and *Mamanuca* Environmental Society (MES). The relevant government

ministries and departments such as Environment, Fisheries, Indigenous Affairs (formerly Fijian Affairs Board) and Tourism provide policy and legislative support.

Some of these organizations collaborate on a few approaches such as the Ecosystem-Based Management (EBM) and the Fiji Locally Managed Marine Area Network (FLMMA). The EBM initiative is a partnership between Wildlife Conservation Society (WCS) as the lead, WWF Fiji Country Programme, Wetlands International-Oceania (WI-O), the University of the South Pacific (USP) and FLMMA. EBM works across the FLMMA sites in Macuata province and Kubulau district in the Bua Province integrating natural resource management and conservation across the three ecosystems: terrestrial, freshwater and marine. The EBM also provides support to CBMC initiatives “by providing results of intensive biological and socioeconomic surveys and assistance with development of holistic management and action plans” (LMMA Annual report, 2008, p. 14).

FLMMA is the most successful collaboration with regards to marine conservation in Fiji. It originated when the Packard and MacArthur Foundation funded a ‘Fish for the Future’ meeting in 2000 for about 30 United States and Pacific Marine conservationists. This meeting resulted in the inception of the LMMA network: Locally Managed Marine Area network. At that time, some of the leading conservationist organisations in Fiji were already engaged in CBMC initiatives: USP-IAS at Verata⁶⁰; WWF in Kadavu⁶¹; PCDF in Cuvu⁶²; and WCS in Bua. The team members from these projects joined in 2001 to form the Fiji LMMA (FLMMA). This is a forum where lessons learnt, methods and results from CBMC initiatives would be shared.

Currently the FLMMA Network is a non-profit association and a collaborative partnership between communities, government ministries and departments, and NGOs and tertiary institutes. Communities are mainly comprised of *qoliqoli* owners, while the NGOs are made up of various organisations with environmental conservation focus:

- 1) Communities developing LMMAs within their traditional fishing ground (249 sites with 387 villages)

⁶⁰ Conservation of Verata’s totemic species *kaikoso* clams – *Andarra spp* by setting up restricted fishing areas.

⁶¹ Protection and management of blue holes (large deep holes in the middle of a reef).

⁶² Setting aside and restoring coral reefs.

- 2) Government Ministries (Fisheries, Tourism, Environment, Health, Fijian Affairs Board and Provincial office)
- 3) NGOs and institutions assisting local communities in locally managed marine areas (WWF – Fiji Country Programme, WCS, IAS – USP, SMS-USP, CI, CORAL, PCDF, WI-O Resort Support, MES, IMA, National Trust, Tourism operators, Fiji National University).

The FLMMA Network’s Mission is “*Kedra Sasalu Tawamudu na Noda Kawa*” or “Everlasting Fish for our Future Generation” while the Network’s Goal is “To create a network of LMMAs (Managed *Qoliqolis*) across Fiji’s 406 *qoliqolis* (31,000 sq. km.)”. This is in line with Fiji Government’s Commitment (2005 in Mauritius): “To set up 30% of marine areas as a network of ecologically representative and “effectively managed marine areas by 2020” (Govan et al., 2009).

Meanwhile, the LMMA concept has now spread to eight⁶³ other Pacific Island Countries with interest being shown from a few others such as Tuvalu and Kiribati.

According to the 2008 Annual Report (July 2009), LMMA uses a strategy that advocates active participation of communities and other local stakeholders in developing, implementing and evaluating their marine area management plans through adaptive management approaches. Adaptive management is defined by Olsson et al. (2004, p. 75) as “flexible, community-based systems of resource management tailored to specific places and situations, and supported by and working with, various organisations at different scales.”

LMMA, and thus FLMMA, use three types of “tools” (LMMA, 2009) the first of which is the use of: No-take areas, Marine Protected Areas (MPA), marine reserves and sanctuaries, which may be temporary or permanent (see Figure 3.5 below).

⁶³ Phillipines, Palau, Indonesia, PNG, Solomon Islands, Vanuatu, Federated State of Micronesia (Pohnpei and Yap).

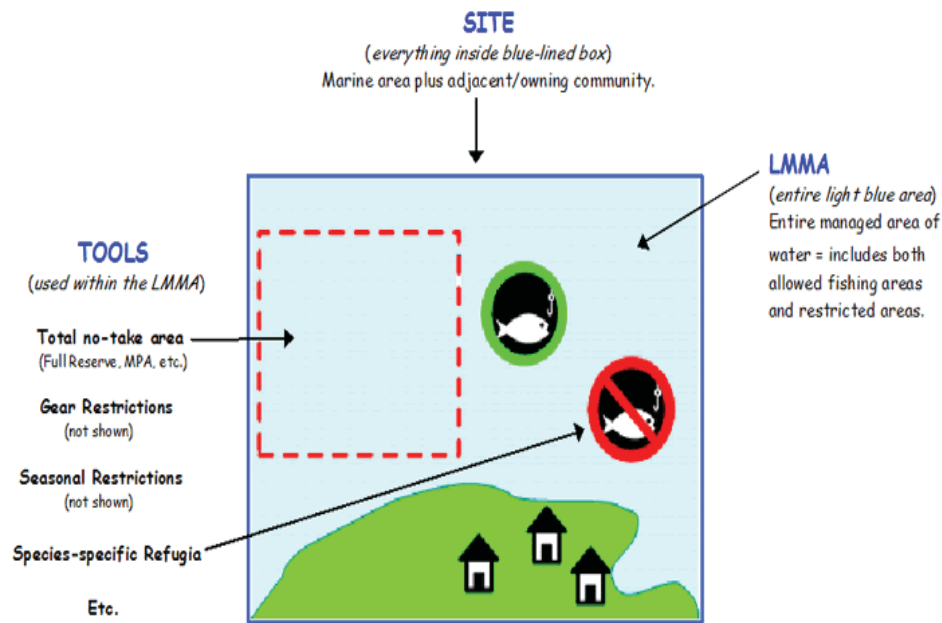


Figure 3.5: A Locally Managed Marine Area and tools used

(Source: LMMA, 2009)

The second tool involves ‘Species specific harvest refugia’ where it is prohibited to harvest particular species from particular areas within the *qoliqoli*. The third tool is the restriction of fishing or harvesting effort which involves effort and/or gear restrictions, reducing the number of fishing licences issued and re-enforcing the fisheries regulations on the ban of the use destructive fishing measures (e.g. dynamite, use of scuba for spear fishing, coral harvesting, and fish poisoning).

In my experience with FLMMA implementing their approach (see Figure 3.6 below), the first step is an initial assessment which is carried out to gauge community interest and at the same time to raise environmental awareness.

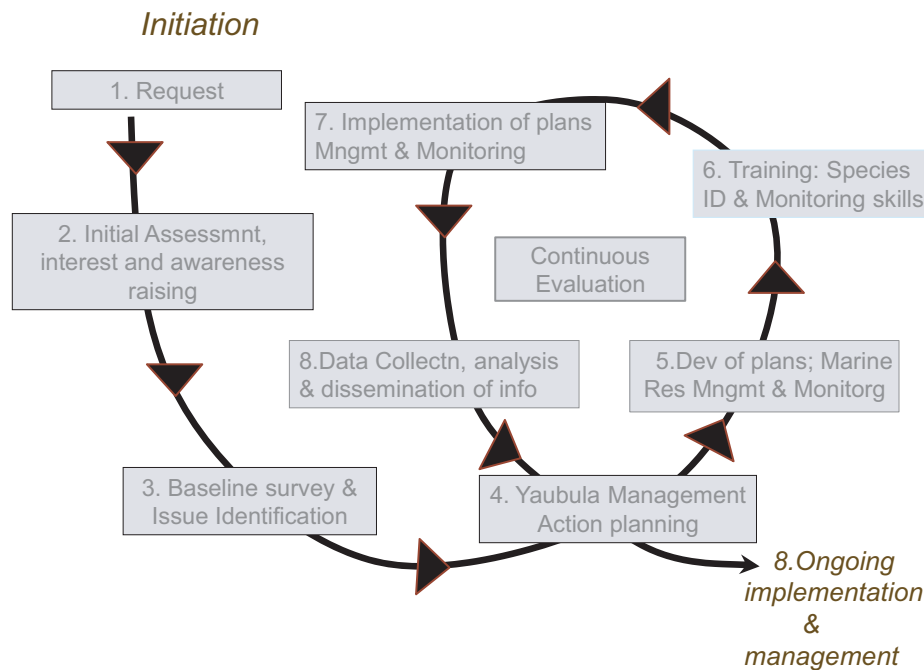


Figure 3.6: The general FLMMA approach

(Adapted from LMMA, 2009)

The baseline survey is the next step which is usually facilitated by the Department of Fisheries and other partners such as the IAS of USP. FLMMA’s main activities at village or site level will then include development of “Fishing Ground Management Plans and Monitoring Plans” of both biological and socio-economic factors with communities, *qoliqoli* owners and users. Such management plans might include the use of the three “tools”, waste management strategies and initiating alternative livelihood options. A *Yaubula*⁶⁴ Management Committee is appointed to oversee the initiative at the site. A lot of workshops and training are carried out for the purposes of environmental awareness and community empowerment, and the latter usually involves training in adaptive management skills.

Fish wardens are nominated by the local community and appointed by the Ministry of Fisheries. The warden’s roles are to enforce the Fisheries Act within the *qoliqoli*, having the power to order a person to show their fishing licence, gear or catch, and also board

⁶⁴ Literally means ‘live wealth’.

and search vessels. If the wardens suspect that an offense has been committed, they may take the offender, the vessel, gear and catch to the nearest police station or port. Sometimes, due to misunderstanding, wardens have illegally detained and fined the offenders and confiscated gear and catch. These wardens then become offenders and have been prosecuted.

Becoming a FLMMA site is usually initiated by the community themselves by contacting the FLMMA Executive Committee or a partner organisation. In my case study sites, becoming a FLMMA site happened in slightly different ways. At the first FLMMA site in Fiji (which is also a case study site in this research), a young chief who was studying at the university discussed with his lecturers his concerns about how his fellow villagers were noticing a decline in catch and biodiversity within their *qoliqoli*. At the second site, which is close to Suva city, a university Geography professor who takes his class to the site for field visits was informed by the villagers about diminished catches. Discussions then took place for the University to work together with the villages for CBMC. For the third site, the community within the *Vanua* also noticed biodiversity decreasing and decided to place their *qoliqoli* under a *tabu*. I will discuss this in detail in Section 6.3.

Currently Fiji is paving the way for the LMMA initiative in the Pacific (see Table 3.2 below) such as having a total of 249 sites out of the total of 467 in the LMMA Network.

Table 3.2: LMMA & FLMMA Site Statistics

	Fiji (FLMMA)	Total (LMMA – Pacific)
No. of LMMAs	249	417
No. of villages	387	612
No. of tools/MPAs	234	455
No. of Management Plans	207	347
LMMA area (sq km)	10,745	13,762
Total MPA Area (sq km)	467	1,613

(Source: 2008 LMMA Annual Report, 2009, p.5)

Fiji paving the way for LMMA associated with development and management of MPA sites (see Figure 3.7), is due to commendable efforts put in by the partner NGOs in Fiji.

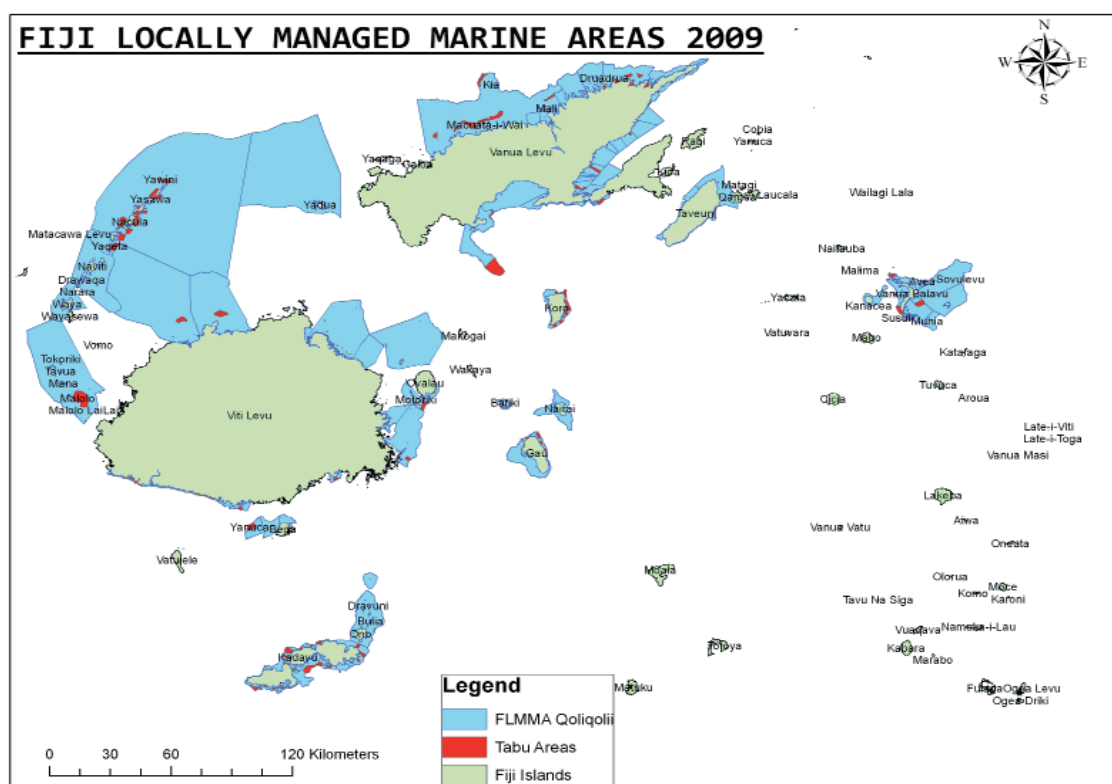


Figure 3.7: FLMMA sites

(Source: Govan 2009, p. 22)

3.4. Case Studies Sites

The case study sites were all selected from FLMMA sites as indicated in Figure 3.8 below:

- 3.4.1 Kubulau, Bua
- 3.4.2 Navakavu, Rewa
- 3.4.3 Verata, Tailevu



Figure 3.8: Locations of the three case study sites.

3.4.1. Kubulau, Bua

Kubulau is a district (*tikina*) of Bua made up of ten villages: Kilaka, Nadivakarua, Nakorovou, Kiobo, Nasasaivua, Namalata, Waisa, Raviravi, Natokalau and Navatu. The population at the Fiji Census 2007 was 752 with 156 households in the nine villages (see Table 3.3 below).

Table 3.3: Kubulau Population and Household numbers.

DISTRICT	VILLAGE	Household	Population
Kubulau	Kilaka	27	165
	Nadivakarua	12	65
	Nakorovou	10	49
	Kiobo	11	51
	Nasasaivua	10	50
	Namalata	15	78
	Waisa	9	43
	Raviravi	17	78
	Natokalau	12	30
	Navatu	23	94
		156	752

SOURCE : FIJI ISLAND BUREAU OF STATISTICS, CENSUS RESULT, 2007
www.statsfiji.gov.fj/cens&surveys/cens&surveystats_index.htm

The Namena Barrier Reef has historically been a source of livelihood for the Kubulau community. In the mid-1980s the community began to notice a marked reduction in fish stocks and the situation worsened into the 1990s. Meanwhile heavy commercial fishing continued in the area, aggravating the situation. Proactive individuals within the community started raising awareness about the impact of heavy commercial fishing in the area, as a consequence of which the community successfully banned commercial fishing in the area in 1997.

Environmental NGOs that have worked collaboratively in Kubulau include the Wildlife Conservation Society, Seacology, Coral Reef Alliance (CORAL), Greenforce and Oceans Futures Society with both FLMMA and EBM approaches also being adopted at the site. In 2004, the leaders from the 10 villages sought assistance for the development of management plans for their 260 sq. km of fishing grounds (Tui, Kolikata, Dulunaqio, & Jupiter, 2009). Tui et al. (2009) state that workshops were conducted to identify management objectives and major threats and “as a consequence of the workshop, a protected area network was established based on community consultation and scientific baseline studies” (p. 1). In 2005, the Namena Marine Protected Area was gazetted under the Fisheries Act. The MPA is managed and protected by the chiefs and village communities of Kubulau and is administered by the Kubulau Management Resource Committee made up of representatives from the villages (see Figure 3.9 below for logo). Financial support has been possible with “collaboration of the Coral Reef Alliance’s ‘Sustainable Destination Program’, whereby revenue from tags sold to dive in Kubulau’s Namena Reserve is used to support fish warden training and patrols, scholarships for Kubulau students, and costs of quarterly stakeholder meetings with the management committee” (Tui et al., 2009, p. 1).



Figure 3.9: Kubulau Management Resource Committee logo

(Source:<http://www.namena.org/park-management/>)

Currently the Kubulau network (see Figure 3.10 below), after adopting both the FLMMA and EBM approaches, includes “14 traditional closures within estuarine and reef areas, three district-wide no-take fisheries areas, one forest reserve, all with defined boundaries and management regulations (Tui et al., 2009, p.1). The Kubulau site is also significant in that lessons learnt from Kubulau about the ecosystem-based management approach are being used to produce a ‘Guide to Implementing EBM’ for distribution within Fiji and across the Pacific.

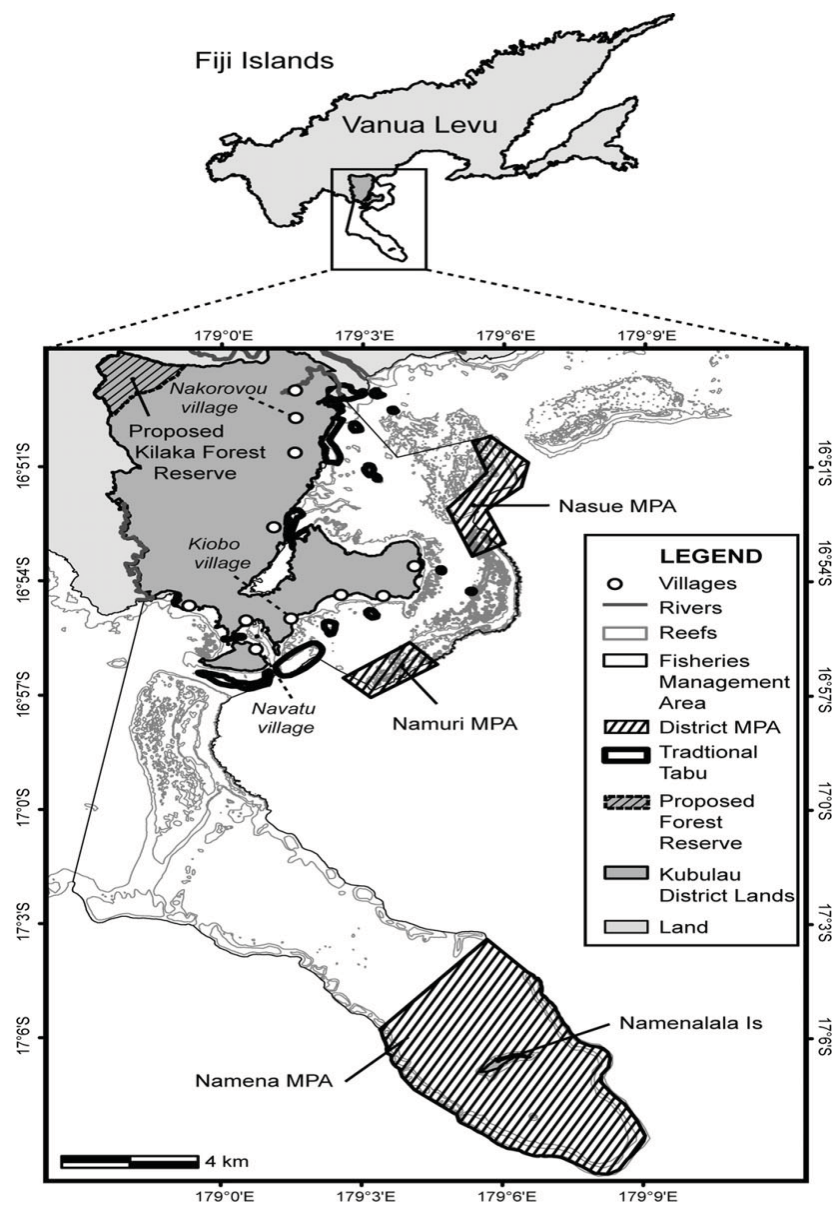


Figure 3.10: Kubulau Marine network.

(Source: Clarke and Jupiter, 2010, p. 99)

3.4.2. Navakavu, Rewa

The Navakavu community located opposite Suva city and 13 km by road is comprised of five villages Muaivusu, Nabaka, Namakala, Ucinamono and Waiqanake with a population of 710 and household number of 136 according to the Fiji census of 2007 (see Table 3.4 below). The marine resources (fish and invertebrates) are the main source of protein apart from also being a source of income due to the site's close proximity to the Suva city market. The other sources of income for the community are agriculture and employment in the city.

Table 3.4: Navakavu Population and Household numbers.

DISTRICT	VILLAGE	Household	Population
Navakavu	Muaivusu	26	124
	Nabaka	21	96
	Namakala	25	126
	Ucinamono	17	118
	Waiqanake	47	246
		136	710

SOURCE : FIJI ISLAND BUREAU OF STATISTICS, CENSUS RESULT, 2007

(www.statsfiji.gov.fj/cens&surveys/cens&surveystats_index.htm)

The background to the setting up of the Navakavu LMMA was that prior to 2002, Professor Randy Thaman of the Geography department of USP took his classes for field visits in the 1990s. The villagers showed interest in implementing a resource conservation and management plan after the villagers noticed decreasing fish yield and the decision to do this was formalized in 2001 in a *Bose Vanua*⁶⁵ meeting. The *Vueti Navakavu* LMMA (see Figure 3.11) was established in 2002 with the assistance of the Institute of Applied Science of USP and is part of the FLMMA network. The site has mangroves, mudflats, blue holes, seagrass beds, fringing and submerged coral reefs.

⁶⁵ Meeting made up of the vanua chief and chiefs and leaders from the five villages.

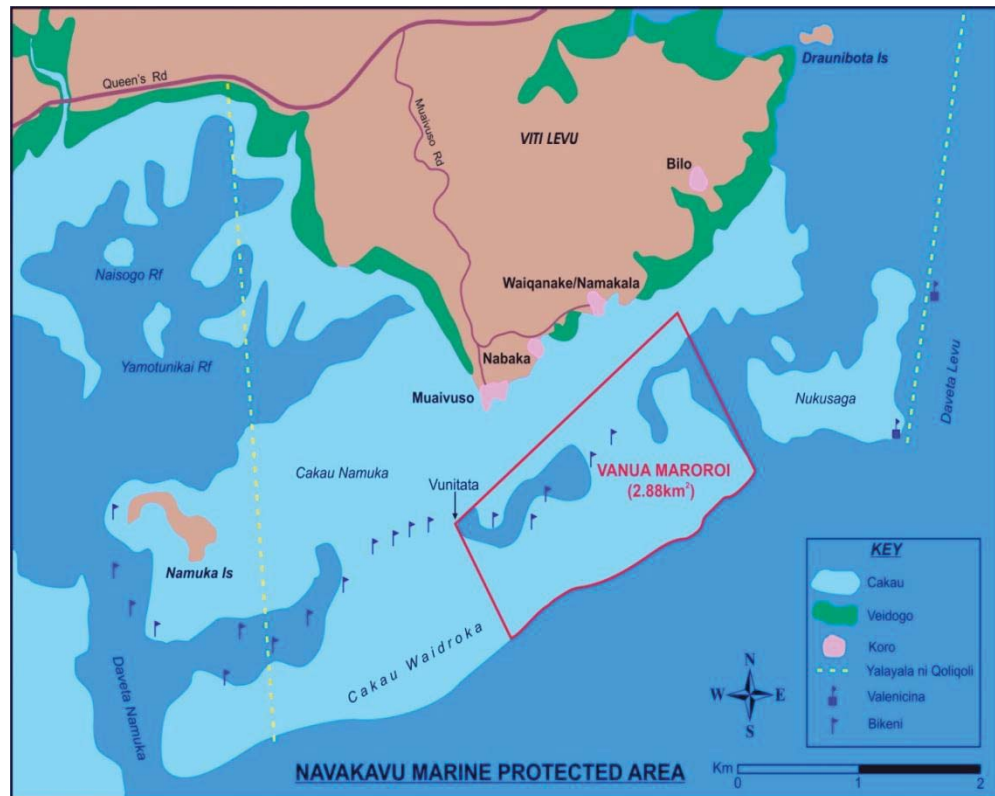


Figure 3.11: Navakavu Marine protected area

(Source: O'Garra, 2007, p. 26)

English translations of Key: *cakau* – reef; *veidogo* – mangroves; *koro* – village, *yalayala ni qoliqoli* – *qoliqoli* boundaries; *valenicina* – lighthouse; *bikeni* – beacon; *daveta* – opening in a reef; *vanua maroroi* – marine protected area.

It has had a permanent MPA (no-take zone) or *sara*⁶⁶ since 2004 and the community members state that the MPA is effective and has resulted in increase in size and the quantity of fish and invertebrates. (van Beukering et al., 2007). However, as van Beukering et al. (2007) notes, the close proximity of this site to Suva has additional problems such as the presence of plastic bags, rusting debris, and oil slicks from shipwrecks. Wave action also brings factory effluents from the city and passing ships add to pollution problems with oil spills and ballast water discharges.

3.4.3. Verata, Tailevu

There are eight villages involved in the Veratavou LMMA initiative: Verata Ucinivanua, Naivuruvuru, Navunimono, Kumi, Naloto, Sawa, Uluiloli and the island of

⁶⁶ This was the term used by this community.

Naigani. Verata district with its eight villages has a population of 1,489 with 301 households according to the 2007 Fiji census. (see Table 3.5)

Table 3.5: Verata Population and Household numbers.

DISTRICT	VILLAGE	Household	Population
Verata	Ucunivanua	64	289
	Naivuruvuru	22	174
	Navunimono	38	198
	Kumi	62	268
	Naloto	54	230
	Sawa	20	105
	Uluiloli	29	153
	Naigani island	12	72
		301	1489

SOURCE : FIJI ISLAND BUREAU OF STATISTICS, CENSUS RESULT, 2007

www.statsfiji.gov.fj/cens&surveys/cens&surveystats_index.htm

The site was the first established by IAS-USP in 1997. In 2002, the Veratavou project under the banner of FLMMA won the Equator Initiative Award at the WSSD meeting in Johannesburg, South Africa. Verata has a *qoliqoli* area of 95 sq km and in 1997 one of the initial actions taken was to declare part of this fishing grounds as *tabu* area, using the traditional authority of the chief. As mentioned earlier, it was established when a young chief from Verata, while studying land management at USP approached his lecturers for help to address the problem of declining numbers and sizes of *kaikoso* (clam) which also happened to be the Vanua's totemic species (see Figures 3.12 below).



Figure 3.12: Measuring *kaikoso* during monitoring

(Photo credit: Alifereti Tawake)

A study carried out (Meo & Radikedike, 2006) cited that some of the traditional obligations for harvesting the totems included: a district function hosted by the chiefly village of the *tikina* (Verata Ucunivanua); visitation by the *Vanua* to the Provincial rugby team; funeral for a member of the chiefly household; traditional visit to the *bati* clan living in Kasavu (a village of another province – Naitasiri); the Methodist church conference; and, traditional functions of the chiefly household. This list of uses of the totem indicates the traditional value and significance of a totem for the Fijian people.

Verata is also a significant cultural site for indigenous Fijians since it was the site on the East side of Viti Levu from where our ancestors dispersed (more in Chapter 4).

3.5. Summary

This chapter has outlined the context in which this research into the role of social capital and TEK in CBMC is placed, including a biophysical description and background to the Environmental Management scene in Fiji. Also discussed in detail is the environmental management work done by the various NGOs and partners, to move ahead with the conservation agenda of an understaffed Department of Environment, including FLMMA whose strategy is being implemented at the case study sites. The final part of the chapter described the basic details of the three case study sites in which this research was carried out. The next two chapters will discuss the findings from the investigation based on the two thematic areas of social capital and TEK, and methodology described in Chapter 2, firstly social capital in Chapter 4 followed by TEK in Chapter 5.

Chapter 4

Findings One: Social Capital and Community-Based Marine Conservation in Fiji

Constructing an effective co-management arrangement is not only a matter of building institutions; it is also a matter of building trust between the parties and social capital in general (Berkes, 2009, p. 1692).

4.1 Introduction

The purpose of this research is to develop and deepen understanding about how the Fijian way of life, *bula vakavanua*, affects the implementation of CBMC, with a particular focus on social capital and traditional ecological knowledge (TEK), in Fiji. The social capital aspect of the *bula vakavanua* is lived out within the kinship network (See 4.4.1), and is part of the indigenous Fijian worldview where all things are interconnected. The metaphorical crab (Fig 1.2) representing this interconnectedness in the *bula vakavanua* has to adapt to new situations arising out of CBMC implementation. This adaptation can be achieved by using *Talanoa* or dialogue to negotiate and agree on outcomes that will enable a way forward. In this chapter I will use two field examples to show how *talanoa* is used to negotiate between pre-existing aspects of the *bula vakavanua* and introduced concepts in the CBMC initiative. For one of the cases, the result was amicable for all, where negotiation took place between scientists from the partner NGO and village elders at the study site, concerning the harvesting of the giant clam to take as gifts to visit kin in other villages (*veisiko*). For the second case, dialogue were not so successful when it came to agreeing on an equitable compensation for livelihood given to the *gonedau* (fisher tribe), as sections of the *qoliqoli* was placed under the *tabu*. A consequence of the second case is that some of the *gonedau* continue to fish from the *tabu* area, in order to meet their needs (see Section 4.2.2). I also commend *talanoa*(dialogue) as the best approach for resolving conflicts between pre-existing and introduced concepts, especially in cases of village individuals not conforming to village customs and citing human rights or religious beliefs as the reason for non-conformance.

In spite of the prominence of social capital as an important factor in collective management, there has been little research into how it manifests and influences CBMC in Fiji, especially in indigenous Fijian communities (Farrelly, 2009; Sano, 2008). Clark (2008) states that one of the disadvantages faced by the NGOs involved in environmental management in Fiji is the lack of knowledge of the form and extent of social capital in the community. This situation has led to a lack of understanding about the role that social capital does and should play in CBMC in Fiji. The aim of this chapter is to contribute towards rectifying this situation by exploring the form and influence of social capital on CBMC in Fiji, using three case study examples.

When I first read about the concept of social capital, I discovered that there is no universally accepted definition of social capital. Among the various definitions was one I particularly liked: “the features of social organization, such as trust, norms, and networks that can improve the efficiency of society by facilitating coordinated actions” (Putnam, 1993, p. 167). In the context of my research, “coordinated actions” in Fiji has particular relevance to CBMC initiatives due to increasing concern about environmental degradation and the ineffectiveness of prevailing management efforts.

In Fiji, the community partners for working with NGOs and government departments in marine conservation are the natural resource owners (*qoliqoli* owners and landowners) residing in villages. These village communities exist within a network of social and cultural systems, drawing on the values, ways of knowing and beliefs upon which the indigenous Fijian community practices and behaviour are founded.

As a consequence of my case study analysis and review of literature, there are three key findings about the influence of social capital on marine conservation in Fiji:

- Social capital has a considerable effect on marine conservation in Fiji. This is because four components: relations of trust; reciprocity and exchange; common rules, norms and sanctions; and connectedness and networks, which are tangibly present in the Fijian way of life (see Section 4.2). Kinship (*veiwekani*) is the hub through which social capital transactions take place in an interconnected Fijian society, represented by the metaphorical crab (refer to Section 4.4).

- Social capital is manifested in various ways in different cultures (Halpern, 2005), and in the Fijian culture these manifestations also have a particular and distinctive bearing on the outcome of marine conservation efforts. (See Section 4.2).
- There are obstacles to the formation and sustenance of social capital which also influence the implementation of marine conservation in Fiji. This thesis suggests that the use of *talanoa* as dialogue can help foster understanding, resolve conflicts and help to overcome various obstacles.

In Section 4.4 and 4.5 these arguments are examined to highlight the role that social capital plays in CBMC in Fiji. Social capital is one of the two main objectives of this thesis, the other one is the influence of TEK which is covered in Chapter 5. The summary of this chapter is depicted in Figure 4.1 below.

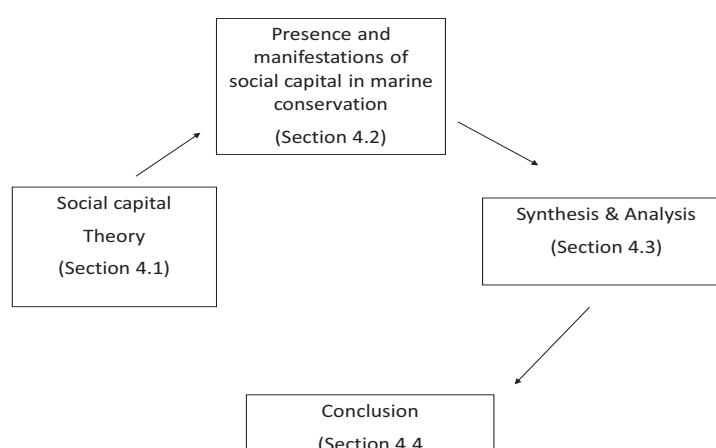


Figure 4.1: Summary of Chapter 4

4.1.1. Social capital – brief background

Social capital became a widely known concept in the 1990s with Robert Putnam’s research of community, first in Italy (1993) and the United States (2000). Although Putnam records the first use⁶⁷ of the term “social capital” in the beginning of the century

⁶⁷ Origins as a source of knowledge are questionable nowadays. Besides different researchers refer to different sources e.g. Woolcock wrote: “The actual words “social capital” were employed for a very different purpose as far back as Alfred Marshall (1890) and John Hicks (1942) to distinguish between temporary and permanent stocks of physical capital”(1998, p. 159).

(p.19), the current conceptual framework was initially formulated by Pierre Bourdieu (1986) and James S. Coleman (1988). Putnam defines social capital as “those features of social organisations, such as networks, norms and trust, that facilitate action and co-operation for mutual benefit” (1993), while Fukuyama (1995) states that the existence of social capital within a group facilitates co-operation. Both Putnam and Fukuyama therefore, see social capital being used for the public good. Coleman on the other hand sees social capital as a resource within the individual, and defines social capital by its function in that social capital “consists of some aspect of social structures” and it “facilitates certain actions of individuals who are within that structure” (1988, p. 16). Coleman and Bourdieu (1986) see social capital as a resource that primarily belongs to an individual. Bourdieu also states that an individual’s social capital is influenced by other forms of capital, such as economic and cultural capital.

As most scholars recognize, a high level of social capital per se does not guarantee positive outcomes of a desired type (J. S. Coleman, 1990, 1993; Harriss & de Renzio 1998; Portes & Landolt 2000; Putnam, 2000). Not all forms of social capital are positive – some societies may not be based on trust but fear and power. Some associations may be obstacles to achieving sustainable livelihoods and do perpetuate inequity, allowing individuals to act selfishly for their own gain (Taylor, 1982). There have been suggestions that unlike other forms of capital social capital is not depleted with use but actually increases in value and intensity with use (Conley & Moote, 2003; Ostrom, 1999). However, Halpern (2005) suggests that overuse of social capital can lead to its depletion. Halpern cites the case where communities that had quickly completed a funded project were less likely than other comparison groups to complete other local infrastructure projects. This suggests that social capital was expended in the early project.

The concept of social capital adopted by Pretty (2003) with respect to co-operation in collective action, involves four key components that I consider to be particularly relevant to this thesis:

(a) Relations of trust: This involves the willingness to take risk in a social context; based on the confidence that others will behave in a mutually supportive manner. According to Fukuyama: “Trust is the expectation that arises within a community of

regular, honest and co-operative behavior based on commonly shared norms, on the part of other members of that community” (Fukuyama, 1995: p 26).

(b) Reciprocity and exchange: This involves a combination of short term altruism and long term self interest (Taylor 1982) where the individual acts for others benefit at a personal cost, with the general expectation that this kindness will be repaid sometime in the future when they themselves need it. Pretty & Ward (2001) identify two types of reciprocity; *specific* and *diffuse*. *Specific* refers to the simultaneous exchanges of items of almost equal values while *diffuse* is a continuing relationship of exchange, which is not immediately requited but is repaid and balanced over time.

(c) Common rules, norms and sanctions: A form of informal social control instead of a more formal institutionalized legal sanctions. Social norms are usually unwritten but widely understood by the community. They establish what types of behaviour are expected, valued and approved in the various social contexts.

(d) Connectedness and networks: Relationships between individuals and groups where there is engagement with others through a variety of lateral associations, which must both be voluntary and equal.

Halpern (2005, p. 39) defines social capital as referring “to the social networks, norms and sanctions that facilitate cooperative action among individuals and communities”. With the devolution of natural resource management to natural resource owners, there is a compelling need for better understanding of social capital in indigenous communities managing the resource. Tai (2006) argues that pre-existing social capital influences collective action. Collective action is cooperation between community members to solve collective problems and social capital is a useful framework for understanding how cooperation is achieved in societies (Ahn & Ostrom, 2008). The effects on collective action depend on the types of social capital. In this research bonding social capital was significant due to the kinship relationships. Tai (2006) adds that bonding social capital, through directly mobilizing intra-community interpersonal relations, generally strengthens collective action. Indigenous social capital is significant in CBMC, as in the Fiji case, as this bonding is based on kinship extending back for generations and in some cases as far back as a common ancestral god (Ravuvu, 1983). In addition, differing characteristics of network and function give rise to the concepts of bonding and bridging social capital (Woolcock & Narayan, 2000; Halpern, 2005). Bonding social capital represents intra-group ties whereas bridging social capital is

those ties that connect different groups in a horizontal or vertical manner. In the *bula vakavanua* bonding social capital plays a major part compared to bridging social capital, indicating that “a community can mobilize through pure social relations, i.e. without direct material payoff, for conservation” (Tai, 2006, p. 6). Within this context, there is a strong cultural influence on aspects of social capital: trust, reciprocation, connectedness, rules, norms and sanctions. Trust for instance might be based on kinship rather than past experience. For instance, in workshops at one of the case study sites, using an indigenous NGO worker who originates from that *vanua* facilitated the frank discussions that happened during group work. The community members trusted the indigenous NGO worker since he was one of their own relatives, and openly discussed their views and concerns with him.

Apart from trust, reciprocation, connectedness and networks, norms, rules and sanctions there are indications that social capital may be manifested, in different ways in different cultures (Halpern, 2005). For instance, in the Japanese culture, boundaries are not easily defined between friends and business associates. Culture-specific social capital can play significant roles in influencing (positively or negatively) social relationships for that particular society. Edwards and Foley (1998) stated that some have argued that social capital can only be understood in its local context. Robinson and Williams (2001) working from a Maori perspective also pointed out the cultural specificity of social capital and that social capital in a Maori context emphasises nine things (2001, p. 5):

- The primary importance of extended family relationships, where networks and connectedness are embedded within kinship.
- Knowledge of and maintaining a specific “place” in society, where place is more than a locality, but also includes a knowledge of who you are, who you are related to and how you relate to others.
- Informal association rather than formal organisations, where relationships (consequences of *whanau*⁶⁸ and *iwi*⁶⁹ relationships) are structured around informal associations.
- The holistic, integrating nature of relationships and networks, where the importance of relationships take precedence over their use or functionality.

⁶⁸ Extended family group spanning three to four generations

⁶⁹ Tribe

- The close links between social capital and cultural capital, where the core of the latter is norms, values and networks, which are also features of social capital.
- The process of moving from *iwi*-based bonding social capital to bridging social capital that enables one *iwi* to connect with others.
- Cultural capital, a sense of identity and a sense of belonging, which are also associated with traditional leadership structures
- The defence, preservation and expansion of existing *hapus*⁷⁰/*iwi* communities, and
- The positive and negative effects of recent government reforms.

Interestingly the Fijian list would be almost identical to the list above. The first eight points in the list above emphasise the sense of identity, belonging and connectedness within the family, *iwi* and society, values which are also emphasised in the various family levels (such as *mataqali*, *yavusa*) in Fijian society. An area for further research would be to ascertain what social capital in Fijian context in general emphasises, in order to generate a Fijian list similar to what has been done for the Maori context above. This research however specifically looks at the presence and influence of social capital in CBMC in Fiji, which is discussed in the next section.

4.2. The presence of Social Capital

In this section I will discuss the findings from my field work pertaining to the presence and influence of the social capital aspect of the *bula vakavanua* in CBMC work. Social capital plays significant roles in marine conservation in Fiji throughout the different implementation stages of a marine conservation initiative such as during the meetings, workshops, training and monitoring. The relationship between land/*qoliqoli* ownership by indigenous Fijians and social and cultural system is clearly described in a statement by Ravuvu (1983) in his definition of *vanua*:

The Fijian term, *vanua*, has physical, social and cultural dimensions which are interrelated. It does not mean only the land area one is identified with, and the vegetation, animal life and other objects on it, but it also includes the social and cultural system.... which are a source of security and confidence. It provides a sense of identity and belonging ...it is the place where his ancestors preceded him

⁷⁰ Subtribe or clan of an *iwi*.

and in which their spirit or souls linger and watch over the affairs of those who come after them (p. 70).

Vanua, therefore, according to Ravuvu's definition is made up of 'physical, social and cultural dimensions' which are major influences on the Fijian way of life (*bula vakavanua*). Apart from the Vanua dimension, other major influences are the Church (*Lotu*) and Government (*matanitu*) (Tuwere, 2002). According to Tippet (1959, p. 212), any Fijian way of life is found to be a unified whole:

Any Fijian way of life.... is found to be a unity.... on the basis of land, church and the government. Its future as an entity depends on smooth inter-relationship continuing between those three elements. There must be co-operation and there must be mutual respect.

The above statement is in line with the walk of the metaphorical crab, with the *bula vakavanua* adapting to changes in the environment especially the church and the government. The co-operation and respect alluded to by Tippet (*ibid.*) can be facilitated by adaptive co-management approaches of power-sharing and negotiation amongst all the stakeholders as discussed below (see Section 4.3).

I have, therefore, grouped the influences on the Fijian way of life, into four main categories (see Figure 4.2 below);

- 1) Church (*Lotu*)
- 2) *Vanua*'s physical, social and cultural dimensions. I use these dimensions for the purpose of my research, based on Ravuvu's (1983, p. 70) definition of the term *vanua*.-
 - Social – families, relationships
 - Physical – sense of place
 - Cultural –Skills, values, practices, beliefs and philosophy of living (this will be covered in Chapter 5 under TEK)
- 3) Government (*matanitu*). Including NGOs with their laws and associated regulations and policies (see Section 6.2.9).
- 4) Westernisation, especially in the areas of urbanisation and education which are impacting on the traditional values and behaviour (see Section 6.2.9).

However the focus of this research is on how social capital and TEK affect the implementation of marine conservation in Fiji, so the influences of church (*lotu*), government and westernisation will be referred to, and discussed in Chapter 6 when looking at the metaphorical crab.

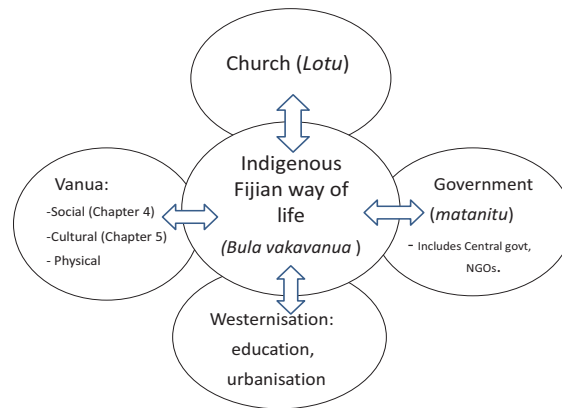


Figure 4.2: Main influences on the traditional Fijian way of life (*bula vakavanua*).

4.2.1. Trust

“Virtuous citizens are helpful, respectful, and trustful toward one another, even when they differ on matters of substance” (Putnam, 1993, p. 89).

In the indigenous Fijian context, this citizenship referred to by Putman in the above statement is similar to having an individual’s name registered (see Chapter 2) in Fiji’s Native Register (*Vola ni Kawa Bula, VKB*) if an individual is born having a Fijian father. This is because Fijian society is paternalistic and an individual becomes registered under the father. Trust based on strong kinship bonds is constructed and displayed at various levels of the traditional social structure within the Fijian community: individuals, nuclear family, (*vuvale*), extended family (*tokatoka*), sub-clan (*mataqali*), clan (*yavusa*), village (*koro*), tribal (*vanua*) (see Figure 3.3 in Chapter 3).

For instance, trust was observed in this study in villages where the members of the *Qoliqoli committee* had allocated billeting duties. Billeting households benefited when the committee would give them cash in addition to the ‘gifting’ from those being billeted. There was usually no need to expend time and energy to question billeting allocations since the trust between kin ensured that the organizers did not wish to disappoint nor deliberately cheat their kinspeople:

I trust them because they are my relatives and I've known them all my life

(Kubulau urban dweller, May 2009)

However there were also situations where billeting was done by the *turaga-ni-koro* especially when there were only a few visitors (numbering three or less). I experienced this at one of my case study site when three of us had to stay in the *turaga-ni-koro*'s house.

One of my interviewees explained that trust was shown by the members of the clan dwelling in urban centres when they let their kin in the villagers make decisions on their behalf regarding the management of the natural resource. Underpinning this was the belief that the villagers will act in everyone's best interest. This is encapsulated in the following comment⁷¹:

We (the urban dwellers) are not even burdened about this initiative (marine conservation) since everything is being done by those in the village. They agreed to start it off; they run all the aspects of managing the *qoliqoli* (Kubulau urban dweller, July 2008).

However, it might also be a case of the urban dweller being too far away from the village, to be actively involved in CBMC. His use of the words 'act in everyone's' best interest might also be influenced by the fact that his child is a recipient of the *Qoliqoli* committee scholarship fund.

A frequently used and highly esteemed term to describe a person of integrity who can be trusted is "*tamata dina*" (a truthful person) and such a person can play crucial roles in the implementation of CBMC such as becoming the chairperson of the Environment Management Committee. In one of the sites, such a person was also identified as a "community champion" and was used by the partner NGO to address and push the CBMC agendas at other prospective sites.

In one of the case study sites I sat down with three men during a *talanoa* session. When I asked the question about how trust is broken down, the three men looked at each other

⁷¹ For original Fijian version refer to Response 4.1 in Appendix 4.

and with a lowered saddened voice, one of the man answered that individuals in their village (including him) do not trust the *Qoligoli* committee anymore. There was an uncomfortable silence, then as they watched my reaction to an honest confession and from my side, not knowing what to say next. I managed a smile, and feeling encouraged, the man continued that the committee did not think of them, members of the fisher tribe, when the committee was deciding on the placement of the *tabu*, and offered them money compensation. The money compensation, according to him did not adequately meet their financial needs. He continued that the committee did not think of them as fishermen whose livelihood came from fishing, compared to other tribes who have other alternative forms of livelihood: planting *yaqona*, pine trees and other cash crops. Members of this village continue to poach from the *qoligoli* to meet their financial needs.

In my research, I found that the NGOs involved also had to win the trust of the community and could achieve this by getting involved in village ‘ogas’ (traditional obligations) such as fundraising for a new church building, as an indigenous NGO worker pointed out:

So you go for their village *solu*⁷², you go for a death in the community.... They had hosted a church divisional conference there, so we went. So after a while they almost speak to you as, as part of them. There’s a danger in there as well, because you are sometimes taken for granted and they see you as the cash cow for all these different things they come up with, so you have to draw the line somewhere (NGO worker, August 2008).

In all the three sites, the NGO had employed a qualified indigenous Fijian who had strong kinship links or was originally from the site where the CBMC was implemented. The individual’s involvement and even speaking in their dialect during presentations helped foster trust from the community, since he/she is one of their own. An example of this was when at a workshop, the Wildlife Conservation Society (WCS) facilitator who

⁷² Village fundraising.

was originally from that area, was one of the group leaders in a breakout⁷³ session. There were more significant, ‘sensitive’ issues raised in his group since the members could comfortably raise their concerns with ‘one of their own’ and thus they trusted him. However, there are also disadvantages in having one of their own in the partner organization. Promptness to a meeting, for instance may not be that important since one of their own is waiting for them, while there may be excessive *yaqona* drinking into the early hours of the morning during the workshop if kin are involved.

4.2.2. Reciprocation

Indigenous Fijian people are embedded in elaborate exchange practices, as Veitayaki (2000) points out. People in urban centres, for instance, periodically exchange money with their rural-based relations, who reciprocate with artefacts such as mats. Veitayaki (2000) explains that sharing with relatives ensures that the resources are efficiently used and that people looked after each other in times of need. Nayacakalou (1978) stated that people used goods such as whales’ tooth (*tabua*); kava (*Piper methysticum*, *yaqona*); Fijian artefacts such as mats; pottery; carvings; and food to obtain and return favours. This practice is still prevalent now although western goods such as clothing materials, drums of kerosene, cartons of washing soap and frozen meat from supermarkets have replaced some of the Fijian artefacts.

The traditional visitation between relatives (*veisiko*) involves an exchange of produce where coastal villagers take marine products to inland villagers (based on traditional links) while inland villagers reciprocate with forest products. This has implications for CBMC. In this research, for example, it was observed that coastal villages took fish and other marine products to an inland village in exchange for forest produce and even bales of material. The produce given back by the inland villagers in reciprocation for the offerings of fish is called the “*leu ni mata ni ika*” (translates as ‘gorging the eye of the fish’). One gorges the eye of the fish for eating and the title of the reciprocal goods signifies that the fish has already been received to be eaten. In another circumstance, the coastal village took the sea worms, *balolo*⁷⁴, while the inland village gave leaves from the pandanus plant (*voivoi*) which are used for platting mats.

⁷³ A session where workshop participants go into smaller groups for discussions of various marine conservation issues.

⁷⁴ Small marine worms (*L. Eunice viridis*) – a Fijian delicacy.

Reciprocity and exchange also apply to commodities such as time and energy, and is facilitated at the village level by distribution and allocation of tasks, during workshops or training for environmental monitoring purposes. For instance, at my Kubulau case study site the women had a roster of giving breakfast to the school children in the village, freeing the other ladies and households to cater for the workshop participants. Another example of conservation but at another level was when one of the NGOs with a strong conservation agenda agreed to build the village hall (*vale ni soqo*) in exchange for a prohibition of fishing in a particular area of ecological significance (see Fig 4.3). This particular village was chosen by the NGO because one of the indigenous Fijians working for that NGO comes from a neighboring village (in the same *tikina*). A village hall is a common feature of most villages along with a prominent church building and this particular village needed to build a new one.

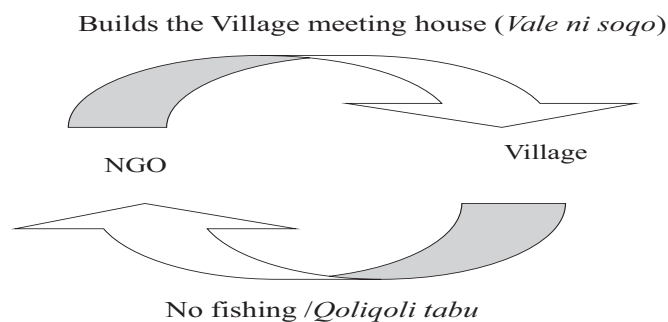


Figure 4.3: Reciprocation between NGO and village.

This act of reciprocation was also witnessed on a bigger scale at the Sovi Basin⁷⁵ (Cabaniuk, Lees, & Wright, 1994) when the environmental NGO concerned set aside a Trust Fund for the landowners in exchange for setting aside the area for conservation purposes. However, the question should be raised as to how much motivation and momentum for these reciprocal arrangements come from the community. This reciprocal arrangement can also imply an impetus largely from the NGO with an imposition of a sustainability framework based largely on non-indigenous knowledge, rather than what the community wants, as encapsulated in the following statement by a member of the community:

⁷⁵ The site of one of Fiji's biggest forest conservation initiatives.

I do not agree with the imposition of the *tabu*. ... the number of people in the village has increased. ... there is not enough food.

However because of respect, the member of the community will not speak out since it is considered disrespectful.

Another form of reciprocation exists between the Vanua and the fisher tribe (*gonedau*). At one of the case study sites, the Vanua and CBMC stakeholders have agreed to place the *tabu* at a particular place in the *qoliqoli*, which happens to be the *kanakana* for the fisher tribe. In reciprocation the Vanua compensated the fisher tribe with an annual grant, which according to fisher tribe members is enough to feed the village for only two to three weeks, as one of the respondents pointed out⁷⁶:

The financial obligations of the family of meeting the costs of education, the church, government and tertiary schooling can only be met by utilising marine resources from our *kanakana*.... If our kinsmen went fishing for one week, they can earn between \$x,000⁷⁷.... There are 25 families in the village and the annual grant can feed the families for only two to three weeks (Fisher tribe member, March 2009).

The fisher tribes do not usually have lands for farming since their traditional duty is to obtain fish from the sea. As their *kanakana* is placed under the *tabu*, their only source of livelihood has been taken away, compared to other non-fisher tribe who have plantations of taro and even pine trees which are logged, providing an alternative source of livelihood. The fisher tribe have appealed to the *Bose Vanua* to consider their plight, but continue to fish from the *tabu* when necessary since they also have to live, as explained by a fisher tribe respondent⁷⁸:

A lot of the villages here have thousands of acres of land for plantations and their trees are logged.... they have land for planting *yaqona*.... which

⁷⁶ For original Fijian version refer to Response 4.2 in Appendix 4

⁷⁷ For confidentiality purposes I have not revealed the actual amount but this is twice the amount of annual grant that is being given to the fisher tribe as compensation

⁷⁸ For original Fijian version refer to Response 4.3 in Appendix 4

is a source of money for these other tribes.... We have sent up a request to the *Bose Vanua* to respect our freedom (to fish) since our tribe's only source of livelihood is the sea.... When our children want to have sugar in their tea, we cannot wait around, the young men go down to the sea (Fisher tribe member, March 2009).

Reciprocation of respectful behaviour (*veidolei na itovo*) is highly esteemed in a Fijian community and has to be observed at all times by individuals. This is manifested in a range of behaviour and circumstances from the proper observance of traditional protocols such as presentation of *sevusevu*⁷⁹ to complying with the appropriate code of dressing in the village during the implementation of the CBMC initiative. Outsiders, therefore, must observe the code of conduct in any area where they are visiting.

Ravuvu (1983, p. 11) writes that "a high proportion of significant social contact among Fijians is accompanied by gift-giving". He adds that the gifts are an indication of the recognition and honour one individual pays another. Casual visits may involve the visitors presenting *yaqona*, tobacco and other gifts while the host reciprocates with food or showing hospitality and acceptance in other ways. In CBMC, it is commendable for the visitors, whether NGO workers or participants from other villages in the *vanua*, to express gratitude to the host family with gifts such as washing soap, kerosene or clothing materials.

Gifts can also be given without being requested with the underlying principle that "a man should not be so generous that he causes shame" in any gift-giving situation (Belshaw, 1965, p. 38). However, sometimes there is "keen competition between groups that use the exchange system and reciprocity to show one's social standing" (Veitayaki, 2002, p. 399).

4.2.3. Networks and connectedness

The importance of traditional social structure is confirmed by Halpern (2005, p. 292) stating that "any social structure short of a fully formal institution that facilitates cooperation and trust between people can be viewed as a form of social capital". In Fiji

⁷⁹ Ceremonial offering of *yaqona* between two parties (host and guest) when a guest arrives, done in respect of recognition and acceptance of one another.

“*veiwekani*... are based on kinship networks as well as customary Vanua relationships. *Veiwekani* is important knowledge and one who keeps excellent relationships with one’s people is considered wealthy in this epistemology” (Nabobo-Baba, 2005, p. 219). It is common for two individuals when meeting each other for the first time, to enquire about each other’s origins, and in doing so will establish how they are linked traditionally or through kinship ties. Connectedness and networks also exist at various levels from the *tokatoka*, *mataqali*, *yavusa*, *koro* (village), *tikina* (district), *yasana* (provincial) and confederate levels. These networks can be drawn upon to facilitate CBMC. For instance, if marine conservation work such as building a sea wall has to be carried out then help can be sought from other villages. In the Fijian society, inter-marriage, blood links and Vanua links have resulted in widespread social networks helping to ensure that Fijian people assist each other because they are related (Veitayaki, 2005). Respect for kinship and Vanua relationships to others causes one to address or call other individuals by certain titles or names instead of using first names (refer to Table 4.1 below), re-affirming links and identity, thereby enhancing one’s sense of belonging. The table below outlines titles within confederacies, provinces and Vanua, however there may even be titles existing between villages within a district. This is part of “the process of moving from *iwi*-based social capital to bridging social capital that enables one *iwi* to connect with others” which is emphasis 8 of what social capital in Maori context is about as outlined in Section 4.1.1 above.

Table 4.1: Some relationship titles

	Title/call (<i>veikacivi</i>)	Connection
1	<i>Mataqali</i>	Members of the <i>Kubuna</i> confederacy
2	<i>Tovata</i>	Members of the <i>Tovata</i> confederacy
3	<i>Kai</i>	Members of the <i>Burebasaga</i> confederacy
4	<i>Naita</i>	Between <i>Kubuna</i> & <i>Burebasaga</i> confederacy
5	<i>Tau (Tauvu)</i>	Between <i>vanuas</i> whose ancestral gods are related
6	<i>Dreu</i>	Between the province of Nadroga and Vanua Levu

As discussed earlier, traditional visitations (*veisiko*) are carried out to affirm traditional connections and relationships. This practice facilitates more interaction and consequently, empathy. This was especially important in one of the case study sites,

when the coastal villages took seafood to the inshore villages of the same *tikina* in exchange for mats. During the ensuing discussion, the effect of logging and deforestation (resulting in siltation) on the marine environment, with the coral reef in particular was discussed. The inshore village empathized with their coastal counterparts. Traditional sharing of fishing grounds and farming lands (*kana veicurumaki*) resulted in common visions and goals for conservation in formulating management plans. In this research, it was observed that in Kubulau, individuals can go and fish (*qoli*) in another fishery (*lilo*⁸⁰). The *lilo* might even be right in front of homes of the next village. The response is usually an invitation to participate in the family meal.

Tuwere (2002, p.96) comments that a “*turaga* [chief] possesses *mana* [mana] because he is *tabu* [taboo]”. Tuwere explains that this is because of our Fijian belief that here on earth, the chief is the personification of the ancestor god (*kalou vu*). In marine conservation, usually a call for a meeting to the *vanua* by chiefs is usually acknowledged and honoured, which may be evidenced by a full meeting house during workshops or meetings. However, there is also evidence from my case study sites that community members do not always conform to the chief’s voice.

Given the importance of hierarchy in kinship networks, it was not surprising that the chairperson of the Environment Management Committee (EMC) in one of the sites belonged to the “*Sauturaga*” clan made up of ‘talking chiefs’ (see Table 1.2) whose roles are to insist that a chief’s instructions are carried out (Capell, 1991). One of his traditional roles also included the final decision concerning a successor for installation as the new chief for that *vanua*. His traditional standing as a *Sauturaga* clan member in the community helped facilitate his chairmanship role since he could speak with authority.

I find Tuwere’s book *Vanua: Towards a theology of place* (2002) enlightening. However, I must disagree with his statement that the traditional fishermen (*gonedau*) have ceased to function. In my fieldwork, I found that the *gonedau* at all the three sites were still very aware of, and continue to play their roles. At the Verata case study site,

⁸⁰ *Lilo* is a deep part of the water usually abundant with fish. A village may possess several *lilos* which they can feed/fish from.

the chief still approaches the *gonedau* with *yaqona* presentations to ask for fish when the chief has an obligation to meet.

4.2.4. Norms and Rules

Halpern (2005, p. 10) defines norms as “the rules, values and expectancies that govern social interaction”. Traditional Fijian norms, rules and protocols, based on cultural values exist in communities and these govern the behaviour and actions to contribute towards an ‘ordered’ life in the village. Norms displayed in Fijian villages include working together for the benefit of the group called *solesolevaki*. By regulation, one day per week is set aside for village work (*cakacaka vakoro*), led by the *turaga-ni-koro*⁸¹. Village work includes general village or school beautification, working on a member’s plantation, building a house or working on a development project. This working together positively enforces the co-operation needed for the implementation of CBMC initiatives.

The *yavirau*, the traditional fishing occasion is a village co-operative effort that is supervised by the chief of the fishermen. The *rau*, a net made out coconut fronds, is platted then held by villages in a circle in the water. The fisherman would know where to place the *rau* and when is the best point in time; just before the tide starts going out (see Figure 4.4 below). Thomson (1968, p. 322) talks about the making of the Fijian nets, and the making of the *rau* in the *yavirau*:

The Fijian nets are so like our own that a newcomer may believe that they have been imported. They are made of hibiscus fibre and the mesh and the knot are identical with those of the European net-maker. Long seines are used occasionally, but a commoner practice is to drag the *rau* – a rope of twisted vines, bristling with coconut fronds, several hundred yards long. The ends are brought together and the fish are speared and netted in the narrow space enclosed by the *rau*.

The head of the fisher tribe takes command throughout the whole process and everyone, from the chief down to the smallest child has to obey all the commands.

⁸¹ Village headman in charge of village activities.



Figure 4.4: My ‘naita’ is part of a yavirau

(Photo credit: Senata Tinaiseru)

Traditional practices, including resource use, are enforced through traditional authority, embedded in the traditional social system, which means that there are protocols to be followed (Veitayaki, 2002). For instance, it is expected that visitors make a presentation of *yaqona* (*sevusevu*) upon their arrival at a place. The *sevusevu* is both a social and spiritual act. For the social aspect, this *sevusevu* ensures that the members of the community are aware of the visitor’s presence among them, while the spiritual belief is that it protects the visitors from the wrath of the spirits. As stated by Siwatibau (1984) the social structure and close-knit units in Fijian communities enabled decisions made by the group to be conveyed through the social channels of communication, which ensure that all those affected are made aware of the group’s decisions. The decisions are then sealed with a social presentation of *tabua* (whale’s tooth) or *yaqona*, with reference to sanctions and punishments which makes the traditional system of retribution an effective deterrent to others in the community.

Observance of rules/taboos (*tabus*) due to respect for traditional leadership systems was observed at the sites. Interestingly it was seen that there was stricter adherence to the taboos and rules at sites where a church service was held after the traditional protocol were carried out (*yaqona* presentations). This could be a reflection of the deeply rooted religious beliefs of the indigenous Fijian which is also reflected in a national saying found on Fiji’s coat of arms of “Fear God and Honour the King”. Rules include not

being allowed to dive for fish at night (*Tabu na nunu ika ena bogi*) since the fish will be sleepy and become easy prey and the placing of some sites under taboo. Some of the examples of these sites of cultural or ecological significance as taboo areas include old village sites and the customary swimming spot for the paramount chief which is fished only when the chief requests. Otherwise it is a 'no-take area' where fishing is completely banned. Some of these sites continue to be taboo areas in CBMC. Apart from these taboos the land and customary fishing grounds owners, from time to time, declare a portion of their fishing grounds out of bounds to preserve the resources for an intended purpose such as a wedding, birth, or death-related ceremony (Ravuvu, 1983).

Protocols inside a house include 'knowing where to sit' which is done according to your traditional place in society based upon the traditional social structure. Women are normally not expected to talk in meetings, encapsulated in the comment by one of the NGO workers:

Women are not part of the decision making process for the group as a whole.... even though on a more informal level they have a very light say on what gets approved or not... In some cases they are not even part of the discussion.... (In) some villages they are not even invited to the meetings (Indigenous NGO worker, August 2008).

However this trend is starting to change with some sites having women to represent them at workshops and marine conservation training, as I observed at the Kubulau case study site. Women also have other informal methods of having their voices heard or represented in the decision making process. One of these is by voicing their opinions or concern to their spouses or male relatives such as brothers, sons and fathers, who would then raise it at the relevant forum or meeting.

It was observed at the sites that most (but not all) of the non-indigenous Fijian NGO workers followed the protocols of behaviour and dressing in the village. Those who did not conform were not reprimanded but those who did received encouraging and admirable comments from the villagers. They also earned the respect and were listened to more in the workshop compared to those who did not. Codes of behaviour include no shouting, not carrying anything above the shoulders or riding a horse in the village.

Acceptable dressing means the women not wearing anything above the knee and no wearing of caps/hats, sunglasses or bags over shoulders in the village.

Effective implementation of traditional sanctions or punishment (*ore*) helps to ensure compliance with norms and rules in the *Vanua*. Veitayaki (1998, p. 52) points out that in Fijian society there is “the demand that people strictly follow tradition and respect each other, [and that] the traditional system of retribution is an effective way of ensuring compliance. Nonconformists are treated harshly, and this is an effective deterrent to others”. Sanctions include non-attendance and non-contribution by other village and family members towards one’s traditional functions (*oga*) such as an offspring’s wedding. Individuals that break taboos may be called up in village meetings and the elders will ‘talk’ to him/her using words that hurt thereby causing the offender to lose face. Depending on the gravity of the offense, the offender might even have to be dealt with at a *Vanua* meeting (*Bose Vanua*), thereby bringing shame to his family, *mataqali*, and village, for as Ravuvu (1983, p. 43) puts it “one shares the honour or the shame of one’s own kinsmen”. The degree of effectiveness of these methods of punishment varies. For instance if a fishing *tabu* has been broken because a person believes he is exercising his human rights as a member of the Fijian community then there will be less or no sense of shame at all. This is because all members of the *qoliqoli* owning *Vanua*, have the legal right to fish from the *qoliqoli* at any time.

A certain quota of fishing licenses is reserved for indigenous owners of the *qoliqoli*. At Kubulau, the Environment Management Committee refused to give a fishing license to a Kubulau man living in the nearby town of Savusavu and the reason given was that the person who was requesting the license did not participate in the carrying out of traditional obligations for the village⁸²:

We don’t even recognize you since we do not even see you come and carry the burden of the various *oga* for the *Vanua* (Member, EMC, Kubulau).

⁸² For original Fijian version refer to Response 4.4 in Appendix 4

Sanctions (*ore*) include doing community work for the village such as weeding a designated area, planting a specific number of taro plants, preparing a Fijian delicacy dish (*vakalolo*) using coconut milk with taro or cassava, and being banished from the village for some specified time depending on the seriousness of the infringement.

For rules and sanctions, the observance of the *tabu* and dealing with poachers can also be done in a traditional way as related to me by one of the interviewees⁸³ (Community member, November, 2008). The *qoliqoli* wardens confiscated the equipment and took the poachers to the village. The wardens then gave the *yaqona* for the poachers to present as *sevusevu* after which the poachers were sat down and told off by the village elders until they cried. The wardens then gave the poachers *yaqona* to present as their *matanigasau* (the traditional Fijian apology done by presenting *yaqona* or *tabua* to the wronged party). They were then sat up at the top⁸⁴, garlanded, powdered⁸⁵ and fed. Their poached fish-catch and fishing equipment were given back to them. Each poacher was given four gallons of boat fuel to enable them to return to their own village. The poachers were so ashamed and said that it would have been much better if they had been taken to the police station. The implication of this story is that the ‘softer’ *vanua* way might be more effective to deal with poachers rather than handing them over to the law. The poachers came from the same district and when their relatives (who they stole from) treated them with respect and honoured them, they were truly ashamed of what they did.

In connectedness and networks there are relationships of *veitabui* which exist. *Veitabui* is when certain individuals cannot talk to each other because of protocols. This can also adversely affect the implementation of CBEM as related to me by a community member. A committee member was helping himself to a portion of the *qoliqoli* earnings. The Chairman of the *Qoliqoli* committee and this particular committee member are *veitabui kaukauwa*⁸⁶. The Chairman was the mother’s brother, and in the Fijian society they can’t talk to each other. When the Chairman had to take action, he decided to resign instead of confronting his nephew. The implication is if there are two

⁸³ For original Fijian version refer to Response 4.5 in Appendix 4.

⁸⁴ In a gathering, seating at the top (far away from the door and past the middle portion of the room) is always given to honoured guests.

⁸⁵ This happens at merry-making when individuals have body powder spilled all over them.

⁸⁶ Have a strong *veitabui* relationship.

people who cannot talk to each other, all measures must be taken that they should not be working in the same committee.

Halpern (2005) and Robinson & Robinson (2005) suggest that social capital may be manifested in various ways in different cultures and point out the cultural specificity of social capital after working with New Zealand Maori. Edwards and Foley (1997) propose that social capital can only be understood in its local context. Some of the Fijian cultural specific behaviours of social capital and values of the Fijian way of life which also contribute directly or indirectly to the Fijian social capital are listed in Table 4.3 below and are discussed in a) to d) in the section below. These behaviours help build social capital in Fijian society and are based on kinship links.

Table 4.3: Some Fijian culture-specific behaviours and values of social capital

	Fijian term	Meaning
1.	<i>veilomani</i>	Loving one another especially kinsmen
2.	<i>veidokadokai</i>	Respect for <i>vanua</i> (social, physical, cultural) out of which arises: Putting others first (<i>veivakaliuci</i>) and listening to each others point of view (<i>veirogorogoci</i>).
3.	<i>qaravi itavi</i>	Unquestionable service and duty to one's kinsmen and the <i>vanua</i>
4.	<i>kerekere</i>	Fijian borrowing is especially practiced among relatives.

a) Loving one another (*veilomani*)

The concept of loving one another that is continually reinforced as an important value into our lives as Fijian children growing up manifests itself in 'sharing' situations. For instance, loving one another can be seen in the occasion of sharing of the 'village catch' after the *yavirau*. The catch is equally shared amongst all the villagers. This communal fishing usually happens around Christmas and this acts as a marine conservation measure since it avoids the excessive catch that would have happened should individual families go and catch their own fish.

Brison (2007) in her book "Our wealth is loving each other: Self and society in Fiji" makes the following observation:

I heard over and over again during 21 months between 1997 and 2003 during which I lived in *Rakiraki*, a village of some seven hundred people in the north-east corner of Fiji's largest island, *Viti Levu*, that indigenous Fijians were a community-minded people whose 'wealth', as a common line in ceremonial speeches asserted, lay in 'loving one another and serving the Lord'. Villagers took great pride in the idea that indigenous Fijians had a special culture, given to them by God, which gave life a kind of value that money could not provide (Brison, 2007, p. x).

Loving one another and sharing of possessions and other commodities such as time and skills also become important in facilitating tasks in marine conservation work. These sharing of possessions included villagers sharing their homes with NGO workers even to the point of sleeping on kitchen floors so the visitors can sleep comfortably in beds (see Section 2.4). An example of sharing of time is when the ladies in the host village allocated a particular household to provide breakfast and lunch for the village school children for the duration of the CBMC workshop, so that all the other ladies are free to help in the workshop catering.

b) Respect (*veidokadokai*)

Respect (*veidokadokai*) is a major factor determining people's relationships within a kin group. Several factors influence the amount of respect kin members pay to one another. These are age, gender, and physical distance. Also, in some cases the more respect one 'owes' to another kin member, the more they are avoided.

Respect is also manifested in behaviour including the careful observance of rules, protocols and etiquette to show respect during interaction between individuals in the village and *Vanua*. These include saying '*tulou*' when walking behind a seated person, doing a special type of clapping of hands with palms positioned at 90 degrees to each other (*cobo*) when joining people seated on the floor and not touching somebody else's hair⁸⁷.

⁸⁷ A missionary was cannibalized in the early 20th century for breaching this protocol.

Putting others first (*veivakaliuci*) and humbly listening to each others point of view (*veirogorogoci*) are deeply rooted in respect (*veidokadokai*) for the *Vanua* (social and cultural aspects). It was observed that in some meetings there was so much respect that not much response came from the floor. There have been circumstances where individuals do not agree with the chief's or the meeting's motion but become part of the consensus out of respect. The respect accorded to traditional chiefs is captured in a comment by Christina Torren (1990, p. 149) in which a commoner states that his duty was to simply listen:

(they) meet in council.... (and) discuss everything to do with the village – discuss it, explain it, make a decision about it. My (a commoner's) duty is just to listen.

Not all chiefs are endowed with the same level of respect. At one of the case study sites, some young men were caught poaching from the qoliqoli. They were told to report to the chief's house, where the chief and the elders in the village were waiting to admonish poachers. The young men did not turn up, and messages sent to the parents to send the young men to the chief's house were not heeded.

Respect for the *vanua* (social cultural and physical aspects) is deeply rooted in Fijian cultural values and beliefs. In the social context, respect for others also results in other behaviours such as putting others first (*veivakaliuci*), and listening to each others' point of view (*veirogorogoci*). With the respect expected and consequent respectful silence from the *Vanua*, the chiefs will have to be empowered to make informed decisions, particularly when dealing with environmental issues, which are now quite different to what they were twenty years ago. This can be accomplished by training chiefs on leadership skills, current environmental issues and the process of making informed decisions. This is an example of external changes in the life of the metaphorical crab. Some of the current environmental problems are unprecedented to the extent that TEK and traditional governance is inadequate. In order for the metaphorical crab to survive it must adapt to the changing environment, so the Fijian society must make the relevant changes too. In this case the chiefs undergoing training on topics such as current environmental issues and chiefs undergoing training for chiefly roles is not a common Fijian traditional practice. Chiefs are trained from a very young age from within their households by elders on how to be a chief, and by watching and learning from the older chiefs, so that, similar to the young metaphorical crab, they can walk like their ancestor

chief. However, there is a low probability that the elders in the household are familiar with the current concepts such as coral bleaching, and the consequences of global warming. The chiefs will have to undergo training under such circumstances.

Respect for the physical environment includes not being wasteful when it comes to natural resource use and disposal of rubbish in environmentally friendly ways. More of these issues will be covered in Chapter 5 on TEK. Underpinning this respect for the physical environment is the belief in the interconnectedness of the physical and spiritual dimensions of the environment as stated by Siwatibau:

...the thought of retribution by the ever-vigilant gods is a continuous reminder to the people of the need to treat their resources properly. The land and its adjoining fishing grounds in Fiji are associated with the spirits that protect them. In such societies, the environment is not something separate, 'but an integral part of one's self....' (1984, p. 366).

However, to a certain extent some of these beliefs are now being eroded by the church beliefs (see Section 6.2.1).

I refer to the *talanoa* session in 4.2.1 above where the individual from the fisher clan was talking about the inequitable compensation for fisherman because of the placement of the *tabu*. The man said that out of respect, they (members the fisher tribe) did not reject the financial compensation offer, which they thought was inadequate, and did not do anything irrational since it would 'look bad':

We accepted the \$xxxx⁸⁸ out of respect.... we could do 'other' things, but it would 'look bad'

'Other' things in the statement above means refusing the offer, talking back in anger or simple walking out of the meeting.

⁸⁸ Amount cannot be revealed for confidential purposes.

Silence (*vakanomodi*) is part of the Fijian way of life, to show deep respect and reverence for an occasion so it is quite common in meetings and during traditional cultural ceremonies and even meetings.

It (silence) emits dignity and summons respect which transcends all in a vanua. Silence gives the Vanua its value and its strength (Nabobo-Baba, 2006, p. 94).

Unfortunately, this culture of silence may result in misunderstanding during CBMC meetings and workshops since silence can mean a wide range of responses from disagreeing to totally agreeing with the decision made. It may also mean that there is little understanding of the issue at hand but *madua* (shyness, shame) will keep a person quiet. This leads to ignorance of issues or discontentment since one does not agree with decisions made. A person who talks a lot at meetings may be perceived as a ‘know it all wannabe’ (*vakilakila*) or even arrogant (*dokadoka*). The community’s true feelings and ideas over a sensitive topic may have to be elicited at another (not necessarily formal) meeting, such as a *talanoa* session in the evening over a bowl of *yaqona*.

As Nabobo-Baba (2006) points out, in the non-Fijian world, silence is often misinterpreted as stupidity (not understanding what is being discussed), indifference (choosing not to participate) and agreement to what is being proposed. Because of the ‘culture of silence’ in Fiji, the individual’s honest opinion about a decision being made or ideas about an issue may not be voiced in a meeting. However, during informal sessions such as *yaqona* drinking in the evenings, individuals may ‘loosen up’ and freely discuss issues or express honest opinions. It was observed at all sites that very useful discussions took place at these evening *talanoa* sessions.

c) Unquestionable duty and service (*qaravi itavi*)

Unquestionable service and duty (*qaravi itavi*) may require a lot of personal sacrifices using one’s financial and physical capital in order to facilitate and ensure the success of the carrying out of a traditional obligation. Kinship also demands a sense of responsibility to take care of others within their kin group (Rika, 1975). The financial rewards that may accrue become a secondary consideration in a system where one ‘has

obligations to one's own group; and one is involved in the obligations of one's group to other groups' (Nayacakalou 1978, p. 119). I observed at all the sites that individuals that have a strong sense of carrying out service and duty (*qaravi itavi*) were greatly relied upon to carry out the tasks within the CBMC initiative. This attribute coupled with Fijian friendliness and hospitable attitude made the households open their doors for billeting purposes. As noted earlier, in one of the villages during a workshop, the hosts slept on the kitchen floor while the bedrooms were given to the NGO workers and delegates from the other villages (see Section 2.4).

Individuals who possess a strong sense of carrying out traditional obligations and duties (*qaravi itavi*) can be relied upon to play major roles in the implementation of CBMC. On the other hand they may be abused while some others may take advantage and not do their part (*vakasavuliga*) because the task has already been taken care of. The implication for the NGO, other partners and the EMC is to ascertain and build upon the underlying motivation for these particular individuals who have the strong sense of *qaravi itavi* in order to maximize their potential and fully utilize their services in the CBMC implementation. In my experience with the UNESCO funded International Waters (IWP) project, a hardworking individual also became the 'community champion', who was used to campaign for or champion the cause of the project in other villages. The community champion had a monetary allowance and had the opportunity to travel to other parts of the country with all expenses paid, apart from a trip to America for a related workshop.

d) Fijian Borrowing (*kerekere*)

"It is difficult for him [Fijian] to value an article of commerce" (Deane, 1921, p. 125).

This statement from 1921 is still appropriate today especially between kin. Anything can be asked for including possessions and even time. During a meeting this word, *kerekere*, is often used to ask villagers to carry out a task. For instance, if there are visitors in a particular house in the village then a *kerekere* will go out to women to take a plate of food (usually for breakfast) to the home where the visitors are being housed.

I have deliberately identified *kerekere* as a component Fijian culture which builds social capital since I believe that *kerekere* is a contributing factor in building both social capital and kinships within the indigenous Fijian community. In the process of *kerekere* the borrower has to be humble enough to ask while the giver has to be generous enough to oblige. These two attitudes continue to strengthen kinships and build social capital in the indigenous Fijian society.

Kerekere, ‘a system of gaining things by begging for them from a member of one’s own group’ (Capell 1991, p. 95) is widely practised and ensures that surpluses are shared, thereby preventing the accumulation of wealth in the Fijian community (Nayacakalou 1978:40). However, I do not agree with Capell’s use of the word ‘begging’ since *kerekere* is not for gaining things but is a form of reciprocity, even though it is not always expected that the favour will be repaid. Any possession can be walked away with at any time and is especially practiced in the following relationship: *vasu* (an individual whose mother is from your village), *tavale* (one’s mother’s brother’s child or fathers’ sister’s child) and *tauvu* (refer to Table 4.1).

Individualism is not part of a traditional Fijian society and as Nabobo-Baba (2005, p. 193) describes: “Individualism for its own sake is abhorred”. Greed and selfishness (*kocokoco*) are not features of the traditional Fijian society because of the communal ownership of the resources and the communal style of living. This is where westernisation has had a huge impact in that the western materialistic lifestyle and demands requires an individualistic attitude. It was observed at some of the sites that some people access the *tabu* to sell for financial gain since “*kocokoco* makes people not respect the *tabu*” as uttered in words of the *i vakatawa*⁸⁹ in the opening prayer on the second day of the Kubulau CBMC workshop (March 2009).

I was surprised when I read writings about *kerekere* from the late 1800s and early 1900s since the same sentiments holds true for today. Cummings (1884, p. 150) stated that the Fijian “generosity is most remarkable” and ‘they give freely to others’. Deane (1921, p. 120) explains that “when a Fijian says of an article ‘It is mine’... he cannot mean by it anymore than that an article is his until someone, whose influence he dares not

⁸⁹ Methodist Church leader in the Vanua.

disregard, begs it”, as would be the case of a cross cousin (*tavale*) or *vasu* asking for an article. Deane adds that people cling to this custom (of *kerekere*), knowing that by it “they can never become absolute destitutes” (1921, p. 123) and *kerekere* brings with it no shame to the Fijians (im Thurn, 1914, p. 299). “Hoarding is neither practical nor necessary because people’s basic requirements are supplied through their kin-based networks” (Narayan, 1984, p. 13). This *kerekere* system becomes handy for some individuals who may not be able to meet their needs or traditional obligations. As Nayacakalou (1978, p. 15) points out, “public opinion is a powerful sanction for culturally acceptable practices”, so a person who refuses a *kerekere* may be scorned and looked down upon as being tight fisted (*buroburogo*) or bad spirited (*yalo ca*). In CBMC this implies that all individuals may be able to afford to carry out designated tasks even if they have to ‘*kerekere*’ time, money or other traditional artefacts.

4.3. Synthesis and Analysis

This section outlines a set of key conclusions arising from my case study analysis, and review of literature reflected in the following three key findings:

- Social capital has a considerable effect on marine conservation in Fiji. This is because its four components: relations of trust; reciprocity and exchange; common rules, norms and sanctions; and connectedness and networks, are tangibly present in the Fijian way of life (see Section 4.2). Kinship (*veiwekani*) is the hub through which social capital transactions take place in an interconnected Fijian society, represented by a metaphorical crab.
- Social capital is manifested in various ways in different cultures (Halpern, 2005), and in the Fijian culture these manifestations also have a particular and distinctive bearing on the outcome of marine conservation efforts. (See Section 4.2).
- There are obstacles to the formation and sustenance of social capital which also influence the implementation of marine conservation in Fiji. This thesis suggests that the use of *talanoa* as dialogue can help foster understanding, resolve conflict and help to overcome these obstacles.

4.3.1. Social capital in CBMC

Social capital has a considerable effect on CBMC in Fiji since its four components are significantly present in the Fijian way of life. Firstly, the social structure is based on kinship extending back for generations and in some cases as far back as a common

ancestral god. In the Fijian society, *veiwekani* (being related to) is probably the most important word for describing social relationships. *Veiwekani* can either be by bloodlines, by marriage or through the *Vanua* and requires many protocols, customary duties and reciprocations which are traditional obligations that have to be carried out. A significant amount of money, material goods, time and energy is used to sustain *veiwekani* links. According to Brison (2007, p. 9), “there is a strong obligation to share with extended family members and to contribute to communal causes and events”. There is also the *veiwekani* or relatedness to the environment such as to other animals, and this will be covered in Chapter 5.

Veitayaki (2002, p. 399) describes the social kinship system as a “safety net that enabled people to meet their needs”. Bonding social capital plays a major part compared to bridging social capital, enabling Fijians to co-operate in maintaining an institution that is vital to protecting their resources, especially the *qoliqoli* (Arno, 2008). Reciprocal relationships, for instance, happen between individuals or groups of individuals as long as they are connected by bloodline, marriage or *vanua*. In his article *Is Kinship Costly?* Rika (1975, p 29) describes kinship as “that very strong bond of relationship between persons which gives those people involved a special claim on and responsibility for one another”. Rika adds that kinship is a bond which ties people together and offers people a sense of belonging whether it is through matrilineal or patrilineal descent (consanguinity), or through marriage (affinity). In the patrilineal society of Fiji, kin relationships largely determine people's behaviour towards one another such as respect, avoidance, and joking relationships within the culture. Arno (2008, p. 104) states, that Fijians “recognize a high degree of reciprocity even between different clans or tribes” which is also an evidence of bridging social capital, and seen through the exchange of food gifts between coastal and inland villages.

In Fijian society, *veiwekani* is the centre or hub of social capital (see Figure 4.5 below) the context within which connectedness and networks, trust, reciprocation and rules and sanctions are placed and enacted, consequently influencing CBMC implementation in Fiji. Indigenous Fijian NGO worker Alifereti Tawake⁹⁰ stated that *veiwekani* is FLMMA’s greatest asset: “I am using the word asset... *veiwekani* is our biggest asset. It

⁹⁰ USP’s IAS Program Manager for marine conservation sites with experience in this field since 2000.

is also FLMMA's asset. Building on the (practice of) *veiwekani* (in the various villages)" (pers. comm, December, 2009).

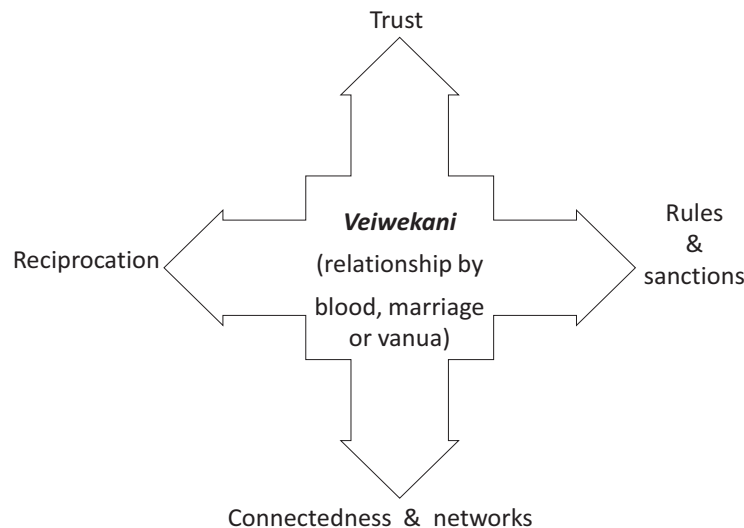


Figure 4.5: *Veiwekani* is the hub of social capital in the Fijian community

Aspects of social capital: trust, reciprocation, connectedness, rules, norms and sanctions are present in the Fijian culture and are practised within the kinship and traditional structure of the Fijian society. Trust for instance would be based on kinship rather than past experience, since Fijians believe that a kin member will not deliberately cheat you out of respect for your kinship ties. For reciprocation, studies suggest that Fijians generally have strong kinship ties which foster reciprocal relationships (Frazier, 1973; Nayacakalou, 1978; Ravuvu, 1983). The incentive to work in an indigenous Fijian community is different because the principle of reciprocity rather than the monetary reward is a strong determinant of whether one is involved in work or not (Nayacakalou, 1978, p. 119). Rules and norms include traditional roles expected of men, women, young adults and children. For rules and norms, the women's quietness during meetings means that some good ideas from this section of the Fijian society that could be raised and discussed at meetings are sometimes missed out. As Borini-Feyerabend et al. (2004, p. 46) states, "the interest (and roles of women and men) in natural resources are usually different... It may thus be inequitable and unwise to accept the voice of one gender group as representing a whole community". This can be a disadvantage when implementing various stages of the CBMC such as

missing out on women's ecological knowledge describing the habitats of marine organisms during the management planning workshop. The cultural and church obligations of the community include those for the purposes of church fundraising or passing away of a chief must be factored into the conservation agenda.

When it comes to sanctions, Siwatibau (1984) states that the association with the supernatural helps ensure that the fishing grounds are respected and protected at all times. In some cases, dead spirits were believed to inhabit sacred areas that can show offence when protocols and *tabus* are broken. At one of the sites children were told that a spirit of an old woman inhabited a specific part of the stream during a particular time of the year, and that those children should not swim there. If they did, the old woman's spirit would terrorise them at night. Only when these children grew into adults then they realize that the part of the stream was the spawning ground of their totemic fish.

4.3.2. Obstacles to forming and sustaining social capital and recommendations

Trust was broken down in various ways in CBMC. One of the common responses in the interviews was that trust is broken down when a person does not do what he/she had promised to do. Some individuals and households did not play their part in the duties allocated at the village level. One example of this was pointed out by the *turaga-ni-koro* of one of the villages in Kubulau who said that some individuals who were nominated by him did not attend workshop trainings held in another village. When these individuals were asked about not attending workshop trainings, they cited various reasons including other family obligations that came up suddenly such as death. In such situations a better approach would have been the volunteering of interested individuals for workshop participation instead of nomination by the *turaga-ni-koro*.

In another situation, the members of the fisherman clan did not trust the *qoliqoli* committee due to the feeling of insufficient compensation for fisherman since their source of livelihood (*qoliqoli*) was placed under the *tabu*. As result of this, at the Vanua level, this particular village had the reputation of not being co-operative by not sending participants for the various aspects of the CBMC such as meetings, workshops and training. Poaching was also carried out in order to meet financial needs. The first step in resolving this problem would be to get the genuine view of the traditional fisherman about the *tabu* placement. Following this there need to be negotiations and dialogue

between stakeholders to ensure equitable compensation for fisherman clans, in order to minimise poaching. Increasingly I hear the word *talanoa* used instead of *bose* (meeting) in everyday living in Fiji when families, colleagues and even stakeholders at the national level (Halapua, n.d.) need to meet. The conditions of the *talanoa* (or dialogue) are never specified beforehand, but the relevant family members, or colleagues, or in Halapua's case (Halapua, n.d.): the relevant national stakeholders during a national crisis are invited to the venue. In the same way, this thesis does not suggest any specific agenda or conditions for the negotiations between the fishermen tribe, EMC, *Bose Vanua*, or any other relevant stakeholders. The first important step is the arrival of all the relevant stakeholders (or their representatives) at the *talanoa* venue to negotiate using "careful and intelligent communication" (Foale, 2002, p.2). 'Careful' involves appropriate traditional protocols of behaviour and using gracious respectful language. 'Intelligent' has to do with the head being used at all times rather than emotion, keeping in mind the importance of preservation of kinship values and compliance with the Fijian value of stewardship of natural resources for future generations. Sound mental processes and objective decisions are needed to ensure equitable distribution of the benefits of natural resources both in an intragenerational and intergenerational manner, the latter in line with Brundtlandt's definition of sustainable development. 'Communication' principles in general involving identification and removal of communication barriers, and listening skills are also an integral part of the *talanoa* process. All participants should come with an open mind prepared to listen to and appreciate other views and perspectives before reaching an amicable solution.

Ignoring traditional connections can happen at individual, household, village level and district levels. As had been explained, an individual, when entering a village must know their traditional '*mata ni katuba*' (doorway). These protocols must be followed by the organizing committee for billeting purposes. In the same way, it is commendable for an indigenous NGO worker to find out beforehand by consulting his/her elders as to which house they must first call at upon entering a village. This is part of the protocols that are practised in the villages and when indigenous NGO workers know what to do in terms of Fijian tradition and culture they earn the respect of the village community. Abusing traditional connections happened when some individuals take relationships too far. A classical example was when a village at one of the sites descended on another village during a traditional mourning period and helped themselves to whatever they desired,

which was acceptable according to their traditional relationships. Some of the ‘goods’ taken included mats, pigs, root crops uprooted from the plantations and even a boat with an outboard motor engine. Nayacakalou (1978) states, that there is keen competition between groups and individuals that use reciprocity to outdo each other giving the indigenous Fijian society its cultural strength. In some circumstances this does not hold true because of selfishness, ignorance, eroding cultural attitudes or simply a ‘laid back’ attitude so one does not bother to reciprocate. Some individuals have become selfish and will not reciprocate on equal terms, thus in the process would have had the edge in the exchange. An example of exchange that I have found interesting to observe since it happens frequently, is during the traditional presentations of gifts of mats and food by various groups of relatives to the immediate family of a person who has just died (*reguregu*). *Waka*(*yaqona* roots) or *tabua* can be used by the individual representing the visitors, to present the traditional gifts to the grieving family. While the individual is presenting, he will outline the relationship between the visitors and the deceased and will also express the condolences of the visitors. The unspoken rule is that if a *tabua* is used during the presentation by the visitors, then the receiving party (immediate family of the deceased) should also equally reciprocate with at least one *tabua*, since some *reguregu* parties (*ilakolako*) may come with several *tabuas*. My heart sinks with disappointment everytime I see *yaqona* used by members of the deceased family in exchange for a *tabua*, since for me, it is an erosion of values of reciprocation, social capital and the Fijian culture as a whole.

Breaking the taboo (*tabu*) by poaching happens deliberately or otherwise, with some of the villages themselves being the offenders. For deliberate cases an example was at Kubulau when one lady returning from an unsuccessful day of fishing had to cross a *tabu* to get to the village. Seeing the fish abundance in the area she caught a fish and accidentally stepped on a poisonous stonefish, which resulted in her being bedridden for two weeks. Even though her fellow villagers believed that she has been rightfully punished, there was still disappointment and anger at her poaching action. While traditional sanctions and punishment (*ore*) for breaking rules are dished out, there is still

distrust and thus a restoration in relationships by way of a traditional apology (*bulubulu*⁹¹) that has to take place.

I use the term ‘healthy competition’, or competition that results in constructive actions, and cause individuals or groups of individuals to perform better or aspire to greater heights (*veiqati vinaka*). However negative competitiveness (*veiqati ca*) sometimes appears in the Fijian society when sabotage, openly or otherwise, takes place. In CBMC this causes distrust and some aspects of the initiative run into difficulties.

Even though individuals may not agree with motions or discussions in meetings, nothing is openly expressed because of the culture of silence and respect, as has been discussed earlier. Consequently some individuals may grudgingly carry out the work agreed to at the meeting or even refrain from taking part at all. Understandably, any discontentment does not help build social relationships.

4.4. Concluding Remarks

This chapter has briefly outlined some of the roles that the Fijian way of life (*bula vakavanua*) play in influencing the implementation of CBMC, in Fiji with a focus on social capital. A deeper understanding of the nature and role of social capital will help facilitate the implementation of more effective CBMC in Fiji and CBMC in general, especially in indigenous communities.

Social capital provides a useful conceptual framework for analyzing and understanding Fijian concepts of trust, reciprocation, connectedness, norms, rules and sanctions, which are carried out based on strong kinship relationships. Within their community, Fijians are comfortable to live and practice indigenous social capital in accordance with their traditions and culture. Outside that community, the CBMC partners need to recognize and respect those traditions in order to attract greater Fijian participation in the implementation of CBMC initiatives.

Connectedness in the Fijian world is not only restricted to social relationships and acquaintances, but an interconnectedness of all aspects of life from the spiritual (beliefs

⁹¹ Traditional apology by the offender by presentation of *yaqona* or *tabua* (whales tooth) or other traditional artifacts to the offended.

which influence norms, practices and behavior) to the physical (the environment and other living forms of life), represented by the metaphorical crab. Just as the metaphorical crab has to survive in the intertidal mud flats and has to adapt to the natural elements such as sunshine and wave action, the Fijian culture has to adapt in a changing global world and changing environmental climate and conditions.

There has to be continual evolution of a traditions and culture with its indigenous social capital, incorporating changes in society, especially the western influence. Indigenous social capital exists in all aspects of life in an indigenous society and has to evolve with westernization or face irrelevancy or extinction. This evolution of culture is facilitated by incorporating the relevant changes into the society's beliefs, norms and practices, which can be facilitated by negotiation or *talanoa*- as dialogue (see Section 4.4.2). *Talanoa* involves inviting the relevant stakeholders for a "careful and intelligent communication" (Foale, 2002, p. 2) and "because *talanoa* is flexible, it provides the opportunity to probe, challenge, clarify and re-align" Vaoleti (2006, p. 25). This re-alignment may require the change in norms, behaviour and practices in the Fijian culture in order to adapt to the changing environment.

The next chapter will look at the roles that the Fijian way of life (*bula vakavanua*) play in influencing the implementation of CBMC in Fiji with a focus on traditional ecological knowledge (TEK).

Chapter 5

Findings Two: TEK and Community-Based Marine Conservation (CBMC) in Fiji

Aboriginal people define TEK as much more than just a body of knowledge.... TEK also encompasses such aspects as spiritual experience and relationships with the land. It is also noted that TEK is a ‘way of life’; rather than just being the knowledge of *how* to live, it is the actual *living* of that life.... TEK is not limited, in the Aboriginal view, to a ‘body of knowledge’. It is expressed as a ‘way of life’; it is conceived as being something that you *do*” (McGregor, 2004, p. 78).

5.1 Introduction

In this chapter I will look at the role that Traditional Ecological Knowledge (TEK) plays in the Fijian way of life (*bula vakavanua*) and how it influences the implementation of CBMC in Fiji. I continue to emphasise the interconnectedness of all things in the *bula vakavanua* and that kinship is the network in which all aspects of TEK and social capital are embedded, communicated and practised. I emphasise the interconnectedness of TEK and social capital, which is also captured by Kalland’s statement that “knowledge [is] embedded within social institutions of society with its norms and rules” (2000, p. 235). Certain indigenous knowledge for instance, is held in custodianship by various families and clans in the kinship network within Fijian society. Some of this knowledge is also accompanied by associated traditional gifts. For instance, a few years ago when I had a fractured leg, I had to travel 50 kilometres daily to a particular village to get a specialised massage from any of the members of a particular family, who were known as the traditional healers for broken bones in that district. I was also given an associated herbal mixture, the herbal components of which is exclusive knowledge to that particular family’s members. In the Fijian society, there are also knowledges held in custody by various kinship clans according to traditional roles and responsibilities in a village (see Table 3.1), such as specific methods and practices of fishing, the making of fishing equipment by the members of the fisher tribe, and the making of canoes by the carpenter clans. These will be discussed further in Section 5.2 below.

Garibaldi and Turner (2004, p. 4) define ‘cultural keystone species’ or totems as “the culturally salient species that shape in a major way the cultural identity of a people, as reflected in the fundamental roles these species have in diet, materials, medicine, and/or spiritual practices”. Interconnectedness in the Fijian world is represented by totemism, as expressed by Tuwere (2002, p.143):

The totems represent among other things the interdependence of land, sea or river, and sky in the world of Fijians. They are usually a trilogy of linked *ika* (fish); *kau* (trees); and *manumanu* (bird, animal or insect).

All Fijians have a totem of a plant, an animal and a fish. Rasalato et al. (2010, p. 90) explain that sharks “have a rich background in ancestral stories and play an important part in Fijian myths and legends, resulting in the support of conservation measures by local people”.

There are various definitions of TEK but one that encapsulates the various aspects I am utilising is by Berkes (1999, p. 7) who defines TEK as the “knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings, including humans, with one another and with their environment”. Cultural transmission media in Fiji include songs, dances, rituals, stories, legends, myths and of course by looking and learning during practice from one generation to the next. Berkes (1999, p. 17) explains that the knowledge-practice-belief complex involves four interrelated levels. The first level is the knowledge of animals, plants, soils and landscapes, including taxonomy, life histories, distribution and animal behaviour. The second level is the resource management system, which requires local environmental knowledge, and also includes an appropriate set of practices, tools and techniques. Thirdly, an appropriate social institution, with its associated set of rules in use, norms and codes of relationships. The fourth level is “a worldview which shapes environmental perception and gives meanings to observations of the environment” (*ibid.* p. 18), and also includes ethics and belief systems.

Houde (2007, p. 1) on the other hand, identifies six ‘faces’ of TEK, asserting that non-Natives are usually familiar with the first three. The first face is factual observations, classifications, and system dynamics. This involves knowledge about the anatomy,

habitat and distribution of plants and animals, and understanding the interrelationships between species, and with the biophysical environment. The second face involves the management systems and strategies for ensuring the sustainable use of local natural resources such as resource conservation and multiple cropping patterns. The third face entails factual knowledge regarding past and current uses of the environment which is transmitted through oral history “over generations through narratives, giving a sense of family and community” (Houde, 2007, p. 6). This includes knowledge of historical patterns of land use and settlement, harvest levels and includes the location of medicinal plants and cultural and historical sites. The fourth face involves ethics and values and is concerned with correct attitudes, often identified as values of respect, towards the environment in general, including both living and non-living components. Houde identifies the fifth face as TEK being a vector for cultural identity, with “the stories, values, and social relations that reside in places as contributing to the survival, reproduction, and evolution of aboriginal cultures and identities” (p. 7). Finally the sixth face has to do with cosmology, which relates to the assumptions and beliefs about how things work. It involves the worldview, which explains the ways in which things are connected.

There is a favourite phrase uttered with pride and special intonation by my male fishermen kinsfolk: “*O au na kaiwai!*” which is translated as “I am from the sea/ocean!” This is a response given as a rebuttal to being cautioned about staying out late in the cold or any other tasks that require endurance and strength. The uttering of this statement projects a picture of bravado and strength since fishermen are supposed to have the skills, knowledge and physique for such tasks. Fishermen leave for the sea well before dawn and may stay out for days, not returning until they have met the size of the targeted catch, while using their fishermen skills and knowledge. D’Arcy (2006) describes how the *kaiwai* (mariners) in Fiji are specialist fishermen residing in Lasakau and Soso in Bau, and in Nasilai and Vutia in Rewa. These sea people were also ‘fishers of men’ much feared for their cruelty and ferocity, and their village Lasakau can be literally translated as feeling ‘at home on a spear’ (p. 115). Personally, this is a part of my ancestral history that I am not keen about repeating since the Nukui people (my ancestors) are also identified in the list of fisher tribes (list in D’Arcy, 2006, p. 115). One particular aspect described by D’Arcy is that these fishers of men would return

from hunts with children tied to the canoe's masts. The children would have died when the skulls would have smashed against the masts during sailing.

Indigenous knowledge (IK) exists in various arenas of the Fijian way of life such as health, spiritual beliefs and environmental survival. For environmental knowledge, indigenous Fijian people have lived and survived in their particular ecosystems for generations, by developing and practicing these knowledge systems. Fijian academic Veitayaki⁹² (2002, p. 396) explained how the Fijian TEK on seasons is captured in the traditional calendar outlining “sources of food available at different times” (see Section 5.2.4, Table 5.1 for the calendar for one of my case study sites).

There are numerous examples around the world whereby TEK and non-indigenous knowledge has both been used in resource management. TEK has been drawn upon resulting in the strengthening of environmental management initiatives by providing knowledge and practices that are specific to a local environment (Berkes, 1998). TEK and non-indigenous knowledge have been used for instance in the monitoring of populations and greatly assisted co-management for sustainable harvests by indigenous people (Moller, 2004) and biodiversity conservation (Gadgil, Berkes, & Folke, 1993). Other circumstances include use of TEK in environmental impact assessment (Usher, 2000), agriculture (Tikai & Kama, 2003), critical research needs identification in tropical ecology (Donovan & Puri, 2004) and most relevant to this thesis in marine conservation (Drew, 2005). For my research, I attended a *talanoa* session at a workshop in Colo-i-Suva in 8th to the 10th September, 2009, where community representatives and other stakeholders (NGO partners, FLMMA and the Fisheries department) agreed on a framework for monitoring marine species after some negotiation. A combination of the community's TEK and the scientific method of the other stakeholders formed the basis of the framework.

This *talanoa* session is part of the adaptive co-management approach adopted by stakeholders in CBMC work in Fiji. Adaptive co-management is a flexible community-based resource management system which is site-specific and implemented by stakeholders (Olsson, et al., 2004). There are four key features of adaptive co-

⁹² Coordinator of the Marine Affairs Programme and Director, School of Marine Studies at the University of the South Pacific.

management according to Armitage, et al. (2007, p.5): “a focus on learning-by-doing; integration of different knowledge systems; collaboration and power sharing among stakeholders; and management flexibility. Of these, I draw on the ‘integration of different knowledge systems’ aspect thereby drawing on the strengths of both the TEK and non-indigenous knowledge for implementation in CBMC (see Section 5.4). This integration can be facilitated by *talanoa* as dialogue to negotiate. Olsson et al. (2004) have also pointed out that different worldviews may be difficult to accommodate. However, they have also suggested that partners (or in this case all stakeholders in the CBMC initiative) put aside their initial assumption, listen to and consider other worldviews, they can all work together to find commonalities to construct new models, and possibly new philosophies for the environment.

In spite of the importance of TEK as a factor in co-management of the environment, there has been little research into how it manifests and influences CBMC in Fiji, especially in indigenous Fijian communities. This situation has led to a lack of understanding about the role that TEK does and should play in CBMC. CBMC in Fiji is happening at the village level where the traditional land owning units (*yavusa*, *mataqali*) and the traditional fishing grounds (*qoliqoli*) owners reside. Any initiative introduced into these village communities should fit into existing systems and dynamics to increase its chance of success and sustainability. An example of such a system existing at village level is the hierarchical nature of the governance system in which TEK is embedded as expressed by an educated Fijian community member:

The vanua has its own hierachial form, the chief and other traditional roles which different factions of the community play for the betterment of the vanua. The qoliqoli is one of the assets of the vanua ... and the management of it needs to be done collectively but following the hierarchy that is there, [the hierarchy] of the vanua... and this is one of the things which partners or external bodies seem to be overlooking. They are not recognising this very important traditional way of living, and a trying to fit that into conservation initiatives.

The community member goes on to explain that only when the partners use an approach which ‘fits in well with local governance’ will there be ‘big changes and great success’.

Widdowson and Howard (2006) have made reference to TEK as a science⁹³, quoting writings by the Royal Commission on Aboriginal peoples. In this thesis, I support the idea of integrating of the two sciences in marine conservation using *talanoa* as dialogue to negotiate and construct new models (Olsson et al., 2004). This idea was pioneered from the mid-1970s by Robert E. Johannes, a tropical marine ecologist working in Palau and South West Islands of the Pacific (Ruddle, 2008). Johannes integrated the “specialized ecological knowledge and traditional marine resource management systems of the Pacific Island fishing communities with western concepts of scientific management” (Ruddle, 2008, p. 13). Rasalato, Maginnity & Brunnschweiler (2010), also describe how TEK is used to identify shark river habitats in Fiji. For instance, they showed that the community’s observation gave valuable information on the shark sizes, the type of species and timing of the sightings. Community TEK included knowledge that some of these sightings co-incided with the abundance of other seasonal fish species which sharks fed on. This information by the community was used by Rasalato et al., to identify shark river habitats in Fiji, an example of TEK and non-indigenous knowledge used in combination in co-management. I will further discuss the idea of integration in Section 5.3.

The aim of this chapter is to explore the form and influence of TEK in CBMC in Fiji using three case examples. I examined TEK under four components: values and beliefs; practices; skills; and knowledge, which I developed after collecting data from the field, and also based them on Berke’s knowledge-practice-belief complex (2008) and Houde’s six faces of TEK (2007). As a consequence of my case study analysis and review of literature, there are three key findings about the influence of TEK on CBMC in Fiji:

- TEK is fundamental to the thinking and practice of marine conservation in Fiji since its four components, values and beliefs, practices, skills and knowledge (see Section 5.2), are central to the Fijian way of life. The four components are also embedded in the kinship network of an interconnected Fijian society, represented by the metaphorical crab.

⁹³ The Royal Commission on Aboriginal Peoples refers to traditional knowledge as ‘Native science’. (2006) *Final Report*, 4, pp. 454-8.

- TEK and non-indigenous knowledge can play complementary roles and could be integrated more effectively. This integration of knowledge systems can be facilitated by *talanoa* as dialogue for negotiation where “participants [are] to reconsider their worldviews” Armitage, et al. (2007, p.27). Integration involves stakeholders to “sit down at a table of negotiation and dialogue in a world where many worlds or epistemologies are welcome.... developing mutually agreed positions” (Reid, Berkes, Wilbanks & Kapistrano, 2006, p. 320).

In Section 5.3 and 5.4 these assertions are examined to discern what they imply about the influence TEK has on CBMC in Fiji, one of the two main objectives of this study. The summary of this chapter is depicted in Figure 5.1 below.

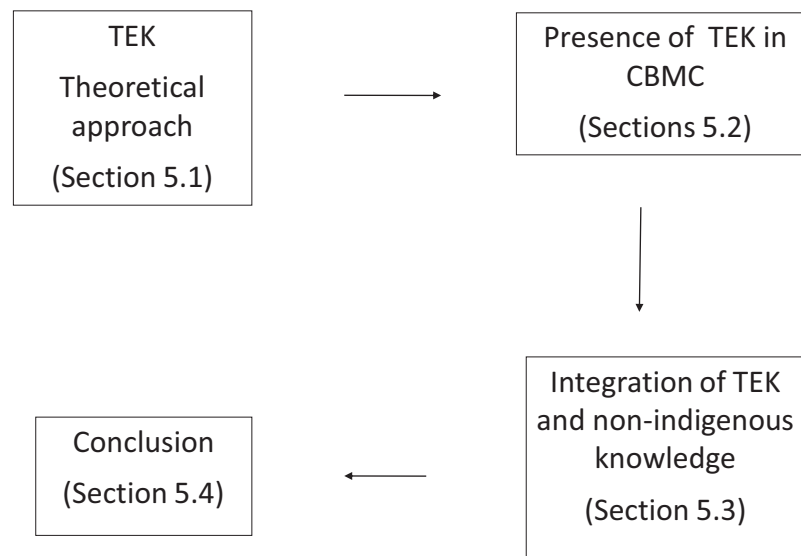


Figure 5.1: Summary of Chapter 5.

5.1.1 A review of the concept of TEK

TEK is part of indigenous knowledge held by a particular group of people with respect to the environment resulting from experience and traditions (Usher, 2000). Berkes et al. (2000) argues that indigenous knowledge, as a way of knowing, is similar, but also different to non-indigenous knowledge. One of the differences is due to the epistemic

origins of the two knowledges about the environment, being based on and “constantly shaped through humans’ practical engagement with the environment” (Farrelly, 2010, p. 3). While non-indigenous knowledge may be built upon objective observations and measurements, indigenous knowledge is made up of some cultural and spiritual dimensions or beliefs (Berkes, 2008).

TEK is site-specific and as Drew (2005, p. 2) points out, also “represents the information necessary for cultural survival”. In the Fiji situation, for instance, a tribe becomes so closely related to their local surroundings that their totemic animal (fish or bird) and plant is usually selected from the local environment. This close relationship with their surroundings is part of becoming “embedded within their interconnected social, cosmological and physical landscape” (Farrelly, 2010, p. 356) so that they can survive in their environment. Totems may feature in CBMC for instance, when their conservation is emphasised. Totems may also be used as traditional gifts during exchange in reciprocal relationships, an aspect of social capital displayed in Fijian culture. This has implications for CBMC initiatives, for instance, when a totem is overharvested during exchange for reciprocation or other traditional purpose, or when the totem concerned is a marine animal that has a long life cycle, needing a longer time to mature to a reproductive age. This is when the need for *talanoa* as dialogue is required to negotiate with community members if the use of totems could be supplemented with the use of other marine species or traditional Fijian artefacts.

The knowledge-practice-belief complex notion with respect to TEK by Berkes (2008), as outlined above, is applicable to the indigenous Fijian society’s relationship with the environment. For instance, as fishermen (*gonedau*), my kinsmen use their local observational knowledge about different species of fish for successfully carrying out practices as fisherman. Associated with these practices are beliefs such as the uttering of special words while fishing so that the fish will bite the bait. Other *gonedau* beliefs include refraining from certain activities before a fishing trip (refer to 5.2.1). According to Berkes (2008, p. 17) there are four levels of knowledge: local knowledge of land and animals; land and resource management systems; social institutions; and worldview. Houde (2007), on the other hand states that there are six ‘faces’ of TEK: factual observations; management systems; culture and identity; ethics and values; cosmology; and knowledge regarding past and present uses of the environment. As stated earlier, in

this research, I adapt Berke's knowledge-practice-belief complex (2008) and Houde's six faces of TEK (2007) to discuss TEK's role in CBMC in the traditional Fijian context under four components:

- 1) values and beliefs
- 2) knowledge
- 3) practices
- 4) skills

As mentioned earlier, I also developed these four components after collecting data from the field since these are the general areas under which TEK was discussed with me during *talanoa* sessions.

5.2 The Presence of TEK

TEK is examined under four main components in the Fijian way of life (*bula vakavanua*) during CBMC implementation (see figure 5.2 below).

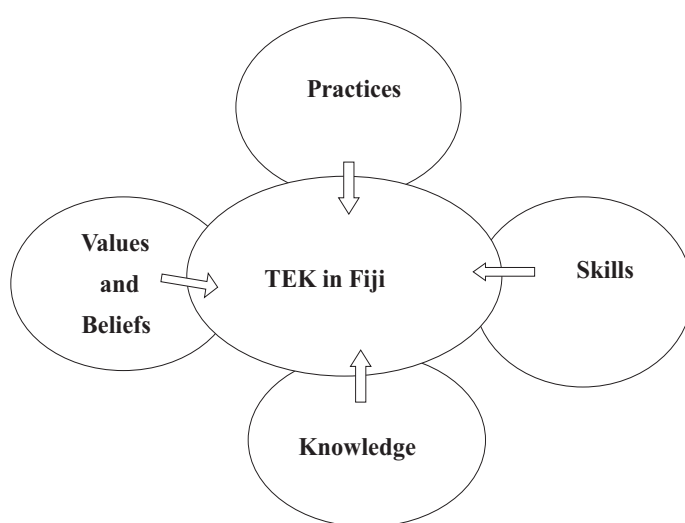


Figure 5.2: Components of TEK in the traditional Fijian way of life.

5.2.1 Fijian TEK values and beliefs

This component of TEK relates to “value statements about how things should be” (Usher, 2000 as cited in Houde, 2007, p.34). Berkes (1988, 1999), says that these statements reflect environmental ethics to avoid overexploitation. In indigenous Fijian society, environmental values are ethical statements and beliefs that guide resource use and may strongly influence the behaviour of individuals and the community as a whole.

Yalomatua (literally meaning ‘old soul’) is a highly regarded term meaning wisdom. *Yalomatua* can be used to describe a person, attitude or action. In the environmental context, it is reflected in the notion of ‘no wastage’ which encourages the optimum and full use of a natural resource. All the parts of an animal or plant are used. In Fiji, all parts of the coconut tree are used: the fruit is consumed, the shell for drinking cups and jewellery, the leaves for weaving and sweeping brooms. The coconut fibres are plaited and used to make belts and as thick cords to fasten house poles together, while the juice of a particular species is consumed for fracture related injuries. The trunk was commonly used in the villages for the same purposes as one would do for tree trunks (e.g. bridge across a stream), but is now a major part of a thriving industry manufacturing exquisite albeit expensive coconut furniture. In North America, Native Americans used all parts of the caribou for consumption, tools, clothing, medicine and hygiene products (Sherry & Myers, 2002).

In indigenous cultures, the value of respecting living things in the environment includes respecting animals such as the processing of the fish and the attitude of the hunter (Fraser, Coon, Prince, Dion, & Bernatchez, 2006). Fraser, et al. add that there is respect for animals in a hunt for instance, based on the belief that non-human animals have intelligence, are perceptive and have the ability to act freely. Berkes (1999) explains how the Cree believe that the animals control the hunt and that the fish allow themselves to be caught by the fisher. In Fiji, Rasalato, et al. (2010, p. 90) discuss how local ‘ancestral legends and myths.... shed light on relationships between these animals and local people’. Berkes, et al. (2000) points out however that not all belief systems are ecologically wise, quoting Diamond (1993) who stated that some of the Papua New Guinea (PNG) tribes continued to have a heavy impact on their native biota. The New Zealand Maoris have also hunted some species to extinction. At my case study site in *Kubulau*, when a communal fish drive takes place, all the individuals taking part take their positions in the water according to their traditional place in society and individuals have been hurt or injured for ‘standing at the wrong place’. This is a good example of how social capital and TEK are linked to social and environmental beliefs and practices. If a person does not know their place in society, they are advised to stay in the boat. At a particular time during the fish drive, one of the ladies from a particular family will place her hand into one of the crevices in a rock and feel for a particular species of fish. If contact was made with the head of the fish, the community carries on with the drive,

while contact with the tail is a signal for fishing to stop, heralded by her cry of “*Cabe! Cabe!*” which means, “get on to dry land”. If any of the villagers decide not to listen to her instructions and continue to stay in the water, there is a belief that the person will get hurt.

In some cultures, the observance of reciprocal relationships between humans and non-human animals involve some customary rules and beliefs for showing respect. These must be followed, such as returning bones to the original environment (Sherry & Myers, 2002). At one of my case study sites in Fiji, it is believed that if fish bones are left intact (no bones broken) and taken back to the seashore after eating, they will grow flesh and swim away during the night.

According to Sherry and Myers (2002, p. 350) “lack of mutual respect will have dramatic consequences. Animals may become difficult to catch or leave the people altogether”. This is clearly demonstrated at my Kubulau case study site where respect is required when processing of the *veata* (marine seahare of the *Dolabella spp*)⁹⁴:

If the Namalata⁹⁵ villagers simply harvest the insides of *veata* and throw away the outside bit, they will not see the *veata* in Namalata. It will run away to Tavua village in Koro⁹⁶. If the Tavua villagers do the same thing to the *veata* it will disappear from Tavua and will be seen back in Namalata.

The story above was related to me by a lady in one of the focus groups. The women were concerned and explained to me how they easily lose the *veata* when the young people or visitors to the village do not process the *veata* in the appropriate manner. These women believed that some of the young people were doing it out of ignorance and it should be discussed openly in the marine conservation workshops.

Banks (2008, p. 26) describes how in PNG myths “explain the origin of mineral resources, link[ing] people to particular places and the resources they hold”. Banks added that these places had spirits linked to them which greatly influenced the life of the

⁹⁴ Refer to Response 5.1.1 in the Appendix 5.1.

⁹⁵ A village in Kubulau.

⁹⁶ An island about 100km from Namalata Village.

individuals. This is similar to the situation in Fiji encapsulated by Veitayaki's comment (2002, p. 400): "the association with the supernatural ensured that the fishing grounds were respected and protected at all times". This is an expression of the notion of 'sacred ecology' as explained by Berkes (2006). In the Fiji situation, Veitayaki (2002, p. 400) continues that the 'concept of sacred ground is prominent in Fijian societies.... sacred fishing grounds were special areas where special rules were observed'. Xu et al. (2006) also explain how, in southwest China, there are sacred landscapes or places which could be hills, lakes and rivers and that these landscapes could be sites of rituals, ceremonies or sanction within a cultural group. In Fiji, there are sites of traditional ecological significance and at one of the sites this included the place where their ancestor caught a fish for his first meal upon arrival. Other places would be old village sites and burial grounds. For marine conservation there are sites, for instance, where only the fisher tribe can fish from. Some of these sacred places have been featuring in the conservation agenda, both for conservation purposes and also as a means to revive Fijian cultural beliefs and values.

Hughes (2003, p.19) states that "Indigenous peoples have a special relationship with the land and natural resources, which is often fundamental to their cultural identity and therefore their survival as distinct peoples". Rasalato, et al. (2010) identified sharks as 'cultural keystone species' or totems (Garibaldi & Turner, 2004; D'Arcy, 2006) for some communities in Fiji. In Fiji "all indigenous Fijians have totems – an animal, plant, fish (or another marine animal) which hold special significance in their lives" (Nainoca, 2009, p. 110). The totemic plant or animal may have been decided by its high abundance in that particular environment or could have a mythical story/legend behind it. The beautiful *Tagimoucia* flowers are only found in Taveuni and is the totemic plant for the Taveuni people. For the Verata case study site the people are not even allowed to say the name of their totemic marine animal (a bivalve) because they have so much respect for it. The respect for totems can even mean deserting a net full of fish:

Fijians have a tree, a fish and a bird.... When I was studying in Qoma, it's always a beautiful sight (when) the ladies or whoever is fishing would abandon their fishing (nets) and runaway 'cause their totem fish got entangled in their nets. (pers. comm., J. Veitayaki, September, 2009)

The practice of sacred ecology and totems is deeply entrenched within individuals to the extent that the belief that punishment is inflicted upon those who do wrong, is sometimes more deterrent than legal instruments. This sacred ecology and the totemic implications should be reflected in the various aspects of CBEM initiatives. Such considerations could be, for example, the starting basis for identification of sites of traditional indigenous significance for conservation purposes such as ascertaining the life history and ecological significance of various habitats of the totemic animal or plant harvest during various seasons. The importance of totems and the role they play in conservation is significant in CBMC. The decline of the Vanua Verata's totem was the reason why Verata, the first ever FLMMA site in Fiji, started CBMC. An indigenous NGO worker who is originally from Verata explains:

Answer: In Verata one of the things we used was the identification of what's traditionally important (and those were) the ones we put on taboo; *kaikoso*, *mana* [mangrove lobster], because they had some cultural significance to the people there.

Question: The species *Mana* is also of cultural significance?

Answer: Two of the villages (are) located within the mangrove area.... Those particular two villages, when there's a feast or something, that's what they supply.

The above exchange in a *talanoa* session during my fieldwork, highlighted the importance of totems and other culturally significant species, for placement under the *tabu*. In this case the *mana* (mangrove lobster) is of cultural significance to those two villages since the villages are located within the mangrove area.

The vision of restoring the land and /or environment to what it was once is also a value usually expressed by the older individuals. One of my respondents, the late Josaia Ravula⁹⁷ expressed the belief that *sautu* will return to the land when TEK is used by doing the right thing at the right time (according to months and seasons: refer to Section 5.2.4), and geared towards the sustainable use of resources. *Sautu* literally means peace

⁹⁷ This gentleman was the coordinator of KYMST (Kadavu Yaubula Management Support Team) – Terrestrial and marine and was a retired Fisheries officer.

and happiness in the land accompanied by abundance and plentiful in harvest. He went on to reminiscence about the good old days when there was *Sautu* but is not happening now because of wastage (*vakasabusabu*) by the people:

Solisoli ni Kalou sa qera ka ca, kana ga na qele.

Translated as:

Produce from God fall onto the ground and rot, the soil eat it up.

Even the translation cannot fully capture the implication of this statement since '*qera*' in this context means fruits falling in great abundance and '*kana ga*' means the soil has no option but to eat it up since the harvesting has already happened and there is still an abundant supply of fruits left on the ground. This belief of no *vakasabusabu* can be enforced as an action point when designing strategy in CBMC. This response is also significant in that this reflects the general response of my indigenous Fijian respondents that were working in NGOs, government and from academia. They still held indigenous Fijian values and beliefs and used them in conjunction with knowledge gained from a western education system as they were involved in conservation work.

During my field work, usually there was some hesitation before the values and beliefs associated with the environment were described. After the first value or belief was shared and the ensuing understanding response I displayed, the respondents were encouraged to talk more about their values and beliefs, especially the latter. It seems that in past circumstances respondents were not comfortable with sharing these which may be due to a number of reasons including the non-appreciative attitude of the previous audience. Underlying all this was the general idea coming through from my respondents that things were better during their ancestors' days, because their ancestors strongly supported their values and beliefs with appropriate environmental practice using traditional skills under the traditional indigenous governance system (*matanitu iTaukei*). At two of my case study sites there were calls for the *matanitu iTaukei* to be reintroduced as they believe enforcement, including sanctions and punishment (including physical beating at times) would be more effective. However, with the prominence given to individual human rights now in place, there is some doubt as to whether these forms of punishment can be carried out, and consequently the

effectiveness of enforcement of rules. (see Section 6.2.8 part c for more discussion on this).

5.2.2 *Practices*

In the context of TEK, practices are carried out for survival but at the same time work to conserve the environment. In Fiji, these practices include the use of sustainable methods for fishing, those in farming for soil conservation, and waste management.

The practice relating to waste management in the indigenous Fijian community involves covering up rubbish when farming. An indigenous Fijian academic re-iterated what he heard from his forefathers relating exposure of rubbish and famine⁹⁸:

The showing or exposure of rubbish is a sign of the famine that will follow.

At the *Navakavu* case study site, it was believed that the rubbish left exposed on the surface will steal the flesh of the root crops (e.g. taro, tapioca/cassava) growing underground so the harvest will be poor. The dealing with rubbish instruction was usually “*maroroi na benu*”. *Maroroi* literally means carefully keep and is also used to talk about children (*maroroi na gone*) and money (*maroroi na ilavo*). In this context therefore it means to carefully put away (*maroroi*) the rubbish. However, the not so environmentally friendly instruction is “*viritaka na benu*”, *viritaka* meaning to throw away, which is now more commonly used in this increasingly throw away generation.

Fishing methods usually involved fish traps which were designed in such a way that they controlled the size and the number caught. Nets used were made from natural creepers with large mesh sizes. Spearing was also encouraged which ensured that fish were caught one at a time compared to the use of nets. There are 60 different methods for catching fish for instance along the Dreketi River in the Macuata province, (Nainoca, Vudikaria, Matai-Tuisuva, & Kalougata, 2005), with knowledge of fishing methods passed down through the generations. However, there are also unsustainable practices such as netting fish as they are swimming into breeding grounds, heavily laden with eggs to spawn.

⁹⁸ Refer to Response 5.1.2 in the Appendix 5.1.

For the associated terrestrial grounds, in Fijian villages every family has a *yavu*: a piece of land allocated in the village where they can build their house. In a similar way to what the Tibetan indigenous people practice (Xu et al., 2006), each piece of land and the house which sits on that land is named in Fiji. The land on the outskirts of the village is owned by various *mataqali* who can use the land for farming. In the traditional hierarchy, the warrior's (*bati*) role is described by the late Ratu Tevita Nawadra⁹⁹ (*pers comm.*) as to farm the land when war was not happening¹⁰⁰:

There are traditional warriors (*bati*) that protect the *vanua*. They also farm the land.... They plant food for use in traditional gathering. They are the ones with the most land in a community since their role is to farm the land. When there is no war, they carry out farming.

These *bati* clans have practiced shifting cultivation for generations and have also developed specialized methods of farming. This includes the practice of planting taro (*dalo*) on a raised bed of soil created by digging ditches. A special digging tool designed and used for taro planting does not unnecessarily disturb the stability of the raised bed. Science has proved that these raised beds have high organic content and reduced nematode populations (Tikai & Kama, 2003). Because of the *bati*'s role in planting, some of the *bati* clans have the most land in various districts and provinces in Fiji. In the same way, the fishermen (*gonedau*) have little land allocated to them since their role is to obtain fish from the sea. As a result of this, when a marine area is placed under the *tabu*, the fishermen tribe have difficulty in accessing alternative sources of livelihood compared to the *bati* who turn to planting, logging or other terrestrial-based income generating activity.

5.2.3 Skills

Skills are inherited through birth and reinforced by oral transmission and training throughout the generations, emphasising the embeddedness of TEK in families and kinship systems. In Fiji special skills could be possessed by a province, a *tikina*, village, *mataqali* or family. Apart from traditional skills associated with the marine environment, such skills are being drawn upon for generation of viable sources of

⁹⁹ This gentleman was the Director of the Fijian Dictionary project. He was also a chief from the *Verata* case study site.

¹⁰⁰ Refer to Response 5.1.3 in the Appendix 5.1.

alternative livelihood during CBMC work. These alternative sources of livelihood help feed the village community as various parts of the *qoliqoli* that were accessed for fishing were being placed under the *tabu*. In a few villages within the province of Macuata the women are well known for their skills in making handicrafts (mats, baskets) using a particular species of reed or sedge¹⁰¹ (*kuta*) which grows in the wetlands in their province. The other examples are salt making in Nadroga, women plaiting mats in Gau Island (in the province of Lomaiviti) to be sold in Suva and pottery making at some sites. Some alternate sources of livelihood were revived and pursued such as farming, as explained by the contact from the NGO partner (IAS – USP) about the Navakavu case study site:

When we started off we knew it was a challenge, the fishing ground was their livelihood – very limited number went on farming. If they were using it, it was very small scale.

At another conservation site in Fiji, as related by an interviewee, WWF helped in the revival of traditional skills of utilizing the *kuta* by rehabilitating the marshes where the *kuta* once grew in. After harvesting, the ladies proceeded with making traditional mats using the *kuta*. The traditional protocol of taking the first fruits (*sevu*) to the paramount chief of the province, the *Tui Macuata*, was also practised. There was a lot of pride and joy at the revival of the traditional mat plaiting skills and *sevu* of the *kuta*, which has been sufficient to ensure the survival of the community-based conservation initiative. This is also a great example of community-based conservation implementation enhancing the survival of Fijian cultural skills and TEK. The cases of Navakavu farming and the Macuata *kuta* outlined above are examples of IAS-USP and WWF being institutions (partners) helping the community with livelihood strategies and developing resilience to cope in a changing environment (Glavovic, Scheyvens, & Overton, 2002). This is in line with the adaptation of my metaphorical crab, where it has to adapt in order to survive. Such initiatives should be encouraged in CBMC so that both the environment and culture are conserved in the implementation of the environmental management process.

¹⁰¹ *Eleocharis dulcris*.

The skills for various traditional duties in the village hierarchy are clearly reflected in various roles such as:

- *Mataisau* – traditional carpenters for roles such as building houses, making canoes and carving, and
- *Gonedau* – traditional fisherman who are also skillful in making fish and other aquatic animals' traps

These roles within the village contribute to the formation of social capital, since the various groups with differing skills and TEK are used in a reciprocal manner. For instance, the traditional carpenter would build a boat for the fisherman using his TEK to select the best wood and his carving ability. The fisherman will reciprocate by taking delicacies from the sea to the carpenter as a token of thanks. This is an example of the interconnectedness of social capital and TEK lived out within the kinship system in the *bula vakavanua*.

For the fisherman (*gonedau*) the making of the fish traps is a skill passed from father to son. The skill of selecting the materials to make the fish trap (which species of reeds/creeper to use), how to make it (plaiting of creeper/manufacture), where to place the trap (*ba*). One such example of an elaborate fish trap is found at Navakavu case study site in Waiqanake village as described by a community elder¹⁰². The fish trap (see Figure 5.3 below) is not simplistic but has doors and chambers some of which have special names¹⁰³:

Our ancestors called this trap the 'Godly trap'. Reeds are cut and made into traps then placed in the sea ... when the tide comes in, the fish swims into a long wall of reeds which it follows until it reaches the first door called '*vakalomaniwai*'. It swims in then enters the second door '*naivakavura*'. It keeps swimming until it reaches the third and last door into a chamber called '*lomanilevu*'. At this point the fish cannot escape.

¹⁰² *Turaga-ni-koro*, Waiqanake village Navakavu Marine Managed Area.

¹⁰³ Refer to Response 5.1.4 in Appendix 5.1.



Figure 5.3: Fish Fence in Fiji

The chambers of the fish fence cannot be clearly seen from Figure 5.3 above since parts of the chambers are always under water. However the thickening of the fence, especially to the right hand side of the picture indicates the presence of several walls separating the chambers. The chambers are used as in this fish traps so that the fish are left swimming in them after the tide has gone out. This is done for two reasons: the fish is not harmed when caught (compared to spearing or being netted); and for selective fishing. For the latter, only the big fish are taken and the smaller ones are left swimming in the chambers, or released by uprooting part of the fence. This is an example of TEK being used for conservation purposes.

For the *mataisau* (carpenters) their inherited skills are aptly described by Seruvakula (2000, p.28):

“O ira na mataisau era sucu vata mai na taledi me ra dau tara vale, na ta waqa, na sivilivi, ta lali, sivi tanoa”.

Translated as:

The carpenters are born with the talent to be skillful in building houses, shipbuilding, general carving, making the Fijian drum (*lali*) and *yaqona* bowl (*tanoa*).

Seruvakula (2000) adds that the ancestral god of these carpenters is Rokola and these carpenters are found in Nukutubu village in the Rewa¹⁰⁴ province and as the Leamaki people in Kabara¹⁰⁵ and Jafau in Fulaga. These tribes of people, although now live in different provinces, are connected by their common ancestral god, *Rokola* and have a special bond and relationship with each other. Seruvakula (2000) also praises the handiwork of the carpenters commenting that their superb handiwork is easily distinguishable in their carvings and explains that there were no nails in the past and coconut sennit were platted beautifully to hold things together (including building posts and parts of canoes). These coconut sennit were then stabilized by a special plating termed '*kola*' in honor of their ancestral god *Rokola*.

However, traditional fishing skills and carpenter skills were continuously being lost as faster more modern westernized methods, such as nylon nets of various mesh sizes and nails replacing the sennit, are increasingly being used and powered motor boats facilitated faster movement around the *qoliqoli*.

5.2.4 Knowledge

According to Houde (2007) this component of TEK relates to knowledge about the environment including the ecology of living things, ecosystems and how they interact, and past and current uses of the environment. For the Pacific island fishermen, Johannes (1993, p.144) states how these fishermen have “extensive knowledge.... concerning the seasons, lunar periods, and precise locations at which many reef food fish aggregate to spawn”. In my fieldwork at the Verata case study site I was fortunate to be able to work with the community to put together a traditional calendar specifically for Verata (see Table 5.1 below, original Fijian version in Appendix 5 .2) based on the Fiji traditional calendar (see Table 5.2 below). Veitayaki (2002, p.396) explains that “Fijian knowledge was exemplified by the traditional calendar which was based on what sources of food were available at different times; indicating the people’s close relation with their surrounding environment”. The twelve months of the year in the Fijian calendar are also named according to what tasks should be carried out or a particular phenomenon taking place in the environment. This is also similar to the aboriginal *Tanyuwa* tribe of

¹⁰⁴ A province on Viti Levu where Suva is also located.

¹⁰⁵ Kabara and Fulaga are islands in the Lau province.

Australia who have a circular chart of the 12 months of the year illustrating knowledge of their animal and plant resources (Baker, 1993, p. 137).

While Table 5.1 is specifically for Verata, Table 5.2 is an adaptation from two sources that are used for Fiji in general. Because of the difference in soils, aquatic features (marine and freshwater) and weather in parts of Fiji, different types of plants and aquatic animals are found. A member of the *talanoa* group that participated in the drawing up of the Verata calendar (Table 5.1) stated that some of the plants and animals appearing in Table 5.2 were not found in their environment. However, some fish and plant food in their own surroundings that contributed to their livelihood were not found in Table 5.2. He added that he would find it easier to teach his children and grandchildren about seasonal fish and fruits using a Verata calendar. I also noticed that when we were drawing up the table, instructions about what to do during certain months were also included, which I have indicated with an asterisk (*) in the months of March, May June and November in Table 5.1. I was told to include these in the calendar. At some point there were further debates about further instructions to include, which in the end the group decided to leave out. Meanwhile all these debates and compiling of the table was done in an atmosphere of fun around a bowl of yaqona. It was also interesting that statements of observations were voiced, which I have indicated with a hash (#) in the table below. These observations with the expressions ‘start to’ and ‘getting ready to’, showed how interested they were in the behaviour and physiology of the animals that mattered to their livelihood: the octopus starting to appear in May, the *ta* or leatherjacket unicorn fish starting to fatten up in May, and the *lairo* or land crab getting ready to spawn in December. An interesting part of the *talanoa* session was the relating to me by one of the group members (while the rest listened in complete silence) of the phenomenon that happens in December, indicated by a double asterisk (**) in Table 5.1. It was interesting because right through the session, the atmosphere was such that several people may be talking all at once and a debate may happen, to clarify contributions or because of slight disagreement over observations. According to the informant, new-born baby sharks swim towards land during December and along the coast. The baby sharks are swimming with their eyes still closed. As they come under the *sinu* trees (Generic name for several varieties of trees of the *Phaleria* species) the flower pods of the *sinu* plant pops open. An actual popping sound was attempted several times for the perfect tone that was acceptable to the *talanoa* group. The informant

continued that when the baby sharks hear the popping sound, their eyes pop open and they swim out towards the open sea. They all agreed that it was an interesting phenomenon to watch.

Table 5.1: *Verata* traditional calender

January -abundance of rabbitfish (Nuqa) -land crab (<i>lairo</i> , <i>qari</i>) and spawns - <i>kaikoso</i> matures - Abundance of <i>marine</i> shell fish (<i>sici</i> , <i>yaga</i> and <i>golea</i>)	July -abundance of octopus(<i>kuita</i>) and <i>ta</i> - flowering of the <i>vaivai</i> and <i>drala</i> plants -digging up of gardens, planting of yams -spawning of the fish <i>kawakawa</i>
February - <i>wi</i> and <i>ivi</i> plants bear fruits -abundance of citrus fruits	August -abundance of octopus (<i>kuita</i>) - flowering of three species of mangroves
March -digging of gardens to plant yams (<i>uvi</i>) - <i>gasau</i> plant flowers -crab and <i>kuka</i> mature -*cover the fish when sun drying to prevent spoilage	September -flowering of mango plants -transplant of yam sprouts -spawning of <i>kawakawa</i>
April -abundance of the fish big-eye scad, (<i>tugadra</i>) <i>salala</i> - <i>kaudamu</i> plant flowers	October - <i>makosoi</i> and <i>dabi</i> plants flower - <i>vesi</i> plants produce fruits
May - <i>doi</i> plant flowers -abundance of <i>vavai</i> , <i>mumu</i> -*plant taro for Christmas season -abundance of <i>salala</i> -matua na uvi leka -#Octopus (<i>kuita</i>) start appearing -#the fish <i>ta</i> start to fatten up	November -pineapples and <i>kavika</i> ripen -crab (<i>qari</i>) well filled with spawn -abundance of the fish <i>walu</i> -*best time of the year to set up fish fences
June - abundance of octopus (<i>kuita</i>) -the fish <i>ta</i> , spawns -abundance of and spawning of the fish silver biddy (<i>matu</i>) -abundance of the fish <i>ceva</i> , <i>daniva</i> -fruiting of the tree <i>dakua sasalu</i> -*weeding to plant yams (<i>uvi</i>)	December -**the flower pods of the <i>sinu</i> plant pops open, making a distinctive sound -**baby sharks appear close to the coast, and open their eyes -abundance of the fish <i>nuqa</i> -the flowering of the <i>sekoula</i> tree -spawning of the fish <i>saqa</i> -#the land crab <i>lairo</i> getting ready to spawn
All year crops/fish: -crops : pineapple, taro, breadfruit -fish: <i>kawago</i> , <i>saqa</i> , <i>doko ni vudi</i> , <i>damu</i> -other marine species <i>kaikoso</i> , <i>dairo</i>	

KEY: * signify instructions, # observation of behaviour, and ** the phenomenon

Note: English and scientific names of plants and animals in Appendix 7

When the community members and I were drawing up Table 5.1 during a *talanoa* session, a comment that came through concerning the crabs spawning state in the month of November was “*rawarawa na mokuta na nuqa ni bibi na ketena*”, meaning that it was easy to catch the crabs since it was heavy (with eggs). I was pleased to note that the comments quickly came from some of the other participants that now realise that it is an unsustainable practice to harvest while crabs and other animals are spawning.

Table 5.2: Fijian traditional calendar

January <i>Vulainuqalevu</i> (Month of rabbit fish) - Abundance of rabbitfish (<i>nuqa</i>) and edible shell fish and bivalves, land crab (<i>lairo</i>) spawn - Mango, breadfruit trees bear fruit	July <i>Vulaicukicuki</i> (Month of digging in gardens) - Abundance of octopus (<i>kuita</i>) and rock cod (<i>kerakera</i>) - planting of yams
February <i>Vulaisevu</i> (Month of first fruits offering) - Yam, <i>dalo</i> (taro), cassava gardens mature - Offering of first produce (<i>sevu</i>) made to chiefs and the church	August <i>Vulaisenidrala</i> (Month of <i>drala</i> plant flowering) - Octopus still in abundance and the fish little priest (<i>vaya</i>) - freshwater shell fish (<i>kai</i>) matures
March <i>Vulaikelikeli</i> (Month of digging in gardens) - Crabs(<i>qari</i>), mud lobster (<i>mana</i>) and <i>kuka</i> mature and have eggs - yams are dug for consumption	September <i>Vulaivavakada</i> (Month of sowing seeds) - Yams begin to sprout and sticks put in place to support the plant. - Rock cod (<i>kawakawa</i>) spawns - Mango trees flower
April <i>Vulaigasau</i> (Month of reeds) - Big-eye scad (<i>tugadra</i>) plentiful - Reeds (<i>gasau</i>) thrive and flower	October <i>Vulaibalololailai</i> (Month of less <i>balolo</i>) - Some sea worms (<i>Eunice viridis</i> , <i>balolo</i>) collected - breadfruit matures, <i>makosoi</i> trees flower, <i>vesi</i> trees bear fruit
May <i>Vulaidoi</i> (Month of the <i>doi</i> plant) - Abundance of chub mackerel (<i>salala</i>) - <i>Doi</i> plant flowers and bears fruits	November <i>Vulaibalololevu</i> (Month of abundant <i>balolo</i>) - Abundance <i>balolo</i> worms - <i>Makosoi</i> trees flower - Pineapples ripen and <i>kavika</i> plant bears fruit
June <i>Vulaiwerewere</i> (Month of weeding) - Clearing of new yam gardens begin - abundance of fish silver biddy (<i>matu</i>), sardine (<i>daniva</i>) and gold spot herring (<i>herring</i>)	December <i>Vulainuqalailai</i> (Month of small rabbitfish) - Abundance of small rabbitfish (<i>nuqa</i>) while trevally (<i>saqa</i>) spawn - <i>Sekoula</i> , <i>kuasi</i> and <i>buabua</i> trees flower

Adapted from Telawa (2003); Vetayaki (2002).

McCay and Jentoft (1998, p. 21) suggest the “inclusion of user knowledge in resource management as a way of re-embedding management responsibility within local community”. In Fiji, traditional knowledge is used by partner organisations during

Management Planning Workshops to enhance the scientific framework drawn up to be implemented in CBMC initiatives. In this context, the knowledge is being used to a large extent to ‘plug’ the gap in the scientific knowledge, an instrumental approach to TEK that does not work for CBMC. Foale (2006, p. 129) points out, there are “empirical gaps in both scientific and indigenous knowledge”. These gaps provide spaces for *talanoa* as dialogue (see Section 5.3), to negotiate and to find commonalities to construct new models, and possibly new philosophies for the environment. This might result in ownership of the new knowledge model by all the stakeholders, especially the village community, and the avoidance of situation described below by an indigenous NGO worker:

Considering the amount of training workshops done, meetings done, as soon as you turn your back, its back to square one – they go out fishing.

There are various reasons why the community may be breaking the rules or carrying out fishing when they were not supposed to. One possible reason is that the members of the community may have not agreed in meetings about *tabus*, but out of ‘respect’ did not say anything. The other reason is that there was a financial need that had to be met.

Meanwhile TEK is being used by individuals in the community for daily survival such as the women collecting shellfish and other shallow area harvesting such as mangrove fish. Fishermen venture out into the deeper waters using the relevant skills and fishing equipment, both modern and ‘traditional’, for their catch. At one of the study sites, the leader of the fisherman tribe was continuously being picked on in jest as having the largest fish traps, but the respect held for him was evident. From returns on his harvests he has managed to open a shop and he is utilizing his knowledge to build a quasi-natural fish pond about 100m from his home for aquaculture purposes. This was also the case for the leader of the fishing clan in the fishing village at another case study site. He has a village shop and acts as a middle man to trade with fish sellers at the nearest town.

5.2.5 *Vector for cultural identity and transmission modes*

In Fiji, TEK is passed from one generation to the next in indigenous Fijian society in two main ways: verbally and by watching and learning. Olsson et al. (2004, p. 77) explains that “knowledge acquisition is an ongoing dynamic learning process”. In the Fijian situation this process occurs at two levels: the younger generation acquires the

knowledge from the older generation, while both generations continually learn to integrate knowledge from the changing environment in order to use the TEK and survive as the ‘crab’ walks on.

Oral transmission of TEK can be carried out in various forms in Fiji such as stories, myths, legends, songs and chants. These modes of transmission are also linked to places and are the basis of an indigenous Fijian’s sense of place or feeling of home and identity:

- 1) Stories (*talanoa*) and myths/legends (*tukuni*). There are numerous stories and myths in Fijian society which serve the purpose of transferring values and beliefs to the next generation, similar to Aesop’s fables.
- 2) Sayings/idioms (*ivosavosa* or *i bole*), an example being the crab saying explained in Chapter 6. Another marine animal that has a saying is the shark: “*Qai saumi ga ena ua levu*”, which is translated as: “I will pay you back at high tide”. This describes how the shark cannot swim to the coastal shallow waters when swimming after the small fish, an ecological observation. The lesson behind this saying is that, the revenge (in response to a negative action) or reciprocation (in exchange for a positive action) will take place when the “time is right”.
- 3) Songs (*sere*) and chants (*vucu*). From one of my case study sites, there was a chant that the fishermen sang when they went out to sea. When they reached the targetted area, they would throw their fishing lines and nets over the side and chant to the fishes, asking them to come and swallow the bait. The fisherman explained to me that the type of bait used was determined by the type of fish they were targeting to catch. So, as they threw the fishing lines over the side of the boat, they would chant out to that particular fish, calling it by name. The fisherman actually sang the chant to me, but because of confidentiality, I did not record the chant or write down the words. In seafaring in Oceania, D’Arcy (2006, p. 71) describes how “songs were designed to keep the crew alert, confident, and aware of dangers and markers”. D’Arcy also stated that there were few keywords in the phrases of the song, and that the meanings were not always transparent, such as the sailing songs of the Marshall Islands.

- 4) Dances (*meke*¹⁰⁶). Dances are done by women only, men only, sitting down or standing, women may use fans while men may use spears or clubs. An example is the Fijian *meke* from the Navakavu case study site. As D'Arcy states above, there are a few keywords in the *meke* and the meaning is not quite clear. When I asked the villagers what the *meke* was about, they answered that it tells the story of the movement of their ancestors over land and sea. They informed me that the *meke* belonged to their village, and it was special to them. They performed it at special occasions. They gave me a copy of the words of the *meke*. Out of respect for them I will not publicise the copy.
- 5) Poetry (*serekali*). These may range from a single verse to a long poem with a lot of verses. The simplest one taught to small children describes how a butterfly, flies around easily from one place to another. The adult then explains to the child why the butterfly is busy flying around: for pollination.

In Fiji, some of these stories, myths, legends, songs and chants are also linked to places and are the basis of an indigenous Fijian's sense of place or feeling of home and identity. I was fortunate and privileged to be able to sit down with a group of elderly people from a particular village at one of my case study sites, to help them recall and put together the words of a chant, since it was evident in my fieldwork at that case study site that some parts of the chant had been lost. The group sang the chant and explained to me what certain parts of the chant mean (see Appendix 5.3). There was a sense of pride and awe as they talked about the words of the chant relating to the 'power of the waves' and the appearance of the seasonal fish within their *qoliqoli*. There was a general consensus that the chant should be taught to the younger generation during CBMC workshops so that the younger generation would appreciate the cultural significance of some ecological features of their environment. This is a good example of CBMC work where TEK transmission helps in the survival of culture, and where connectedness in the kinship bonds is used for passing knowledge between generations.

¹⁰⁶ These dances are done sometimes by women only, and sometimes by men only, either sitting down or standing, women may use fans while men may use spears or clubs. Several different clubs are used in the club dances by men. Clubs copy those that had existed during warring days.

5.3. Integration of TEK and Non-indigenous knowledge.

TEK and non-indigenous knowledge play complementary roles and one should not be discarded or privileged over the other, because both have strengths and weaknesses in the implementation of CBMC (Moller, 2004; Foale, 2006; Houde, 2007). TEK, in the *bula vakavanua* context and within a co-managed CBMC situation, is not static but changing, and the crab continues to draw on it to survive. Armitage, et al. (2007, p. 5) states that as “an emergent outcome of the co-management and adaptive management narratives, adaptive co-management may represent an important innovation in natural resource governance under conditions of change, uncertainty and complexity”. The analogy of the metaphorical crab is again appropriate here, as the crab adapts, using various innovations, in order to survive and continue the ‘walk’ in a changing environment. Adaptive co-management has various definitions and the definition by Olsson et al. (2004, p. 75) that adaptive co-management is “flexible, community-based systems of resource management tailored to specific places and situations, and supported by and working with, various organizations at different scales” encapsulates several important aspects. Firstly it is flexible, so that changes can be made to the approach, ensuring sustainability of the initiative. Secondly, it is community-based thus promoting a sense of identification with and ownership of the management initiative. Being tailored to specific places and situations inevitably calls for the input of the community within those places, and in the Fijian context, this implies the village communities, who are also resource owners.

The differences between TEK and non-indigenous knowledge arise from the differing motives and worldviews (Berkes, 2008) during their conception and continuing development. TEK is born out of the living experience of the indigenous people, who have organically developed it, and their culture in the environment. Non-indigenous knowledge is more interested in understanding the world, which has also given rise to western environmentalism notions of sustainability. According to Armitage, et al. (2007, p.27), negotiation ‘entails a form of communication that enables participants to reconsider their worldviews... and co-managers also need to agree (or at least agree to disagree) on values and goals. Integration involves stakeholders to engage in *talanoa*: “sit down at a table of negotiation and dialogue in a world where many worlds or epistemologies are welcome.... developing mutually agreed positions” (Reid et al., 2006, p. 320). This involves listening to and considering other worldviews, working

together to find commonalities to constructing new models, and possibly new philosophies for the environment (Olsson et al., 2004).

There are four key features of adaptive co-management according to Armitage, et al. (2007, p.5): “learning by doing, collaboration and power sharing among community, regional and national levels, and management flexibility”. I draw on the ‘integration of different knowledge systems’ aspect of adaptive co-management definition provided in this section. I concur with the notion of integrating TEK and non-indigenous knowledge as part of an adaptive co-management approach thereby drawing on the strengths of both the TEK and non-indigenous knowledge. Berkes (2009) calls for the co-production of knowledge, thereby constructing new models, through traditional knowledge and non-indigenous knowledge partnerships and dialogue (see Figure 5.4 below), negotiating “for mutually agreed position” (Reid et al, 2006, p. 320). This is especially relevant now since “there is increasing acknowledgement from within the scientific ranks of the need of input into environmental management and conservation, scholarship from knowledge traditions other than western science” (Chambers, 2009, p. 197). The notion of co-production and integration can help overcome the tendency to have one form of knowledge being seemingly superior over the other, or can survive without the other in CBMC since both have important complementary roles to play in CBMC.

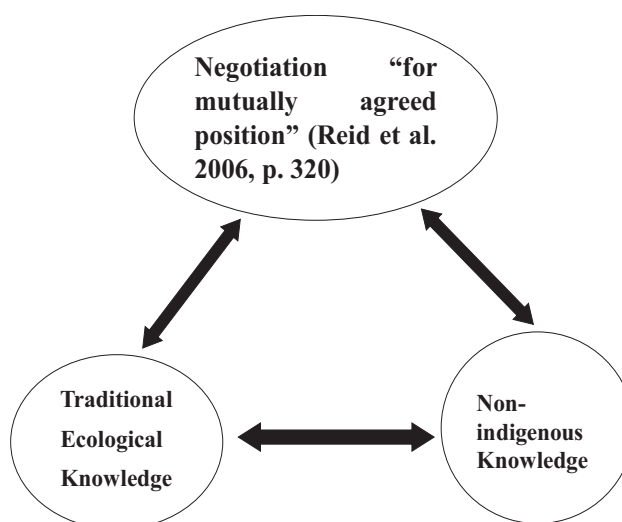


Figure 5.4: Integration between Non-indigenous knowledge and TEK using negotiation

Foale (2006), for instance, talks about integrating TEK with the knowledge of fishery biologists while Veitayaki (2002) states that TEK must be incorporated into resource management arrangements. According to Houde (2007) some of the advantages of integrating TEK are for the enhancement of western scientific knowledge and vice versa, and for the implementation of decentralised and appropriate management regimes. In my work for EIA projects, I often utilise the TEK of the local community and our EIA team's scientific survey data, to set criteria, indicators and management of species in that particular environment. This is also in line with Houde's (2007) suggestion for another opportunity of integrating TEK and non-indigenous knowledge for EIA work. Houde (2007) also suggests, integration will also result in the inspiration for new environmental ethics for both TEK and non-indigenous knowledge. This is especially important in Fiji's situation where the indigenous environmental values and ethics have to be balanced with traditional obligations which require harvesting and ceremonial use of specific marine animal species (such as turtles). Rasalato, et al., (2010) discuss how the community's TEK is used to provide information about the presence, behaviour and ecology of sharks and timing of sightings in the river habitats in Fiji. This information by the community was used by Rasalato et al., to identify shark river habitats in Fiji, an example of TEK and non-indigenous knowledge used in combination in co-management. Integration can also result in what Houde (2007) terms a re-evaluation of long held indigenous assumptions and theories about the environment, and possible changes in the indigenous Fijian way of life for adaption purposes.

I see integration happening in the FLMMA work with CBMC in Fiji. I was fortunate to be the secretary of a session in the FLMMA national workshop (September, 2009) where the scientists from tertiary institutions and NGO partners, together with community representatives were trying to establish ways of integrating scientific and traditional environmental observations. These observations included setting acceptable (to both TEK and non-indigenous knowledge) parameters about recording numbers and sizes when monitoring fish stocks. Observations by community members also had to be more specific than what is currently practiced. For instance, in monitoring environmental change due to global climate problems, the use of the metric system can be used with observed visual changes in describing rising sea levels.

There are also problems associated with integrating TEK and non-indigenous knowledge. Reid et al., (2006, p. 319) states that scientists have a common lack of respect for local and traditional knowledge. Other barriers to integration include the lack of common language especially when TEK is created and transferred in a language and cultural context different from the non-indigenous knowledge knowledge (Casimirri, 2003). Apart from this, according to Berkes et al., (2000, p. 1252) “not all traditional practice and belief systems were ecologically adaptive in the first place, some became maladaptive over time due to changing conditions”. TEK is not made up only of observable data as is the usual case with non-indigenous knowledge. TEK also includes some cultural and spiritual elements based on cosmologies that are fundamentally different to western worldviews, and very difficult to integrate into CBMC. As a result, these elements of TEK are often not integrated, and this undermines the holistic nature of the TEK. This is explored further in Chapter 6 below.

5.4. Concluding Remarks

This chapter has briefly outlined some of the roles that the Fijian way of life (*bula vakavanua*) play in influencing the implementation of CBMC in Fiji with a focus on TEK. The community’s own values and beliefs should be explicitly acknowledged, respected and recognized by partners in CBMC. Community aspirations and their values and beliefs should also be reflected in the Visions and Goals of the CBMC initiatives. Traditional skills and knowledge should also be utilized to the maximum such as using the *bati* (warriors) to guard the *qoliqolis* (traditional fishing grounds). Strategies should include protection and enhancement of areas of traditional and traditional/sacred ecological significance. Within their community, Fijians ought to be able to live and practise TEK in accordance with their traditions. Outside that community, the CBMC partners should recognize and respect these traditions in order to attract greater Fijian participation in the implementation of CBMC initiatives and as a possible way of achieving this is by adaptive management. Armitage, et al., (2007, p. 5) states that the concept of adaptive co-management “may represent an important innovation in natural resource governance under conditions of change, uncertainty and complexity”. The analogy of the metaphorical crab is appropriate here, as the crab adapts, using various innovations, in order to survive and continue the ‘walk’ in a changing environment. Of the four key features of adaptive co-management described by Armitage, et al., (2007,

p.5), I have drawn on the ‘integration of different knowledge systems’ feature, thereby highlighting the way in which the strengths of both TEK and non-indigenous knowledge for implementation in CBMC can provide complementary benefits.

In the next chapter, I use the metaphor of the crab to illustrate connectedness between humans and their natural environment in the indigenous Fijian world. The metaphorical crab reflects the connectedness of *bula vakavanua*: social capital (Chapter 4) and TEK (this chapter) in CBMC initiatives which are practiced within a kinship framework. The crab has to survive and evolve in order to adapt to changing environmental, economical, social and cultural conditions. The survival and evolution involves incorporation of the changes through the process of negotiation or *talanoa* using “careful and intelligent communication” (Foale, 2002, p.2) for “the opportunity to probe, challenge, clarify and re-align” (Vaiolleti, 2006, p. 25) perspectives and arrive at a mutually agreed position (Reid et al., 2006, p. 320), that will result in effective CBMC.

Chapter 6

Nomu i qaiqai ga Qei, noqu i qaiqai

(I'll walk how you walk, mother)

The traditional and community-based marine resource management in Fiji is evolving to meet the challenges of contemporary societies.... coastal Fijian communities are responding to the ecological and socio-economic changes in their realm (Veitayaki, 1998, p. 47).

6.1. Introduction

This chapter will demonstrate the interconnectedness of all things, both ancient and modern in a Fijian society during the implementation of CBMC. This interconnectedness is expressed through the mud crab, *Brachyura spp*, commonly found in Fiji, and especially in the Rewa delta where my people dwell. Walker (2001, p. 1) discusses a 'holistic integration of humans and the natural world, including all beings, processes and creation' and I am using the crab as a metaphor to illustrate this connectedness in the *bula vakavanua*. TEK and social capital are interconnected and embedded within the kinship network of the Fijian society. As Veitayaki mentions above, the Fijian coastal communities have to respond to ecological and socio-economic changes in the environment. In this co-management initiative, *bula vakavanua* (the crab) has to be able to adapt to changes in its surroundings in order to survive. In the same way, the *bula vakavanua* has to adapt to changes in the environment, with the Fijian community engaging in *talanoa*-dialogue to negotiate through the changes in the environment. Armitage, et al., (2007, p. 5) state that the concept of adaptive co-management "may represent an important innovation in natural resource governance under conditions of change, uncertainty and complexity". Negotiating any differences of opinion through *talanoa* is part of a collaborative strategy between stakeholders in a co-management initiative such as CBMC.

As an indigenous Fijian woman, from a traditional fisher tribe and brought up in an urban area (approximately twenty minutes drive from my village), I was educated in Western educational institutions. My six years of high school were spent in an

indigenous Fijian girls' boarding school. The school provided "both an academic and cultural foundation for the education of young Fijian girls.... a unique attempt to integrate culture in modern education" (Firth & Tarte, 2001, p. 83). Academic excellence was expected and Monday afternoons saw compulsory *meke* practice and learning Fijian chants (*vucu*). Extracurricular activities included learning to make Fijian handicrafts, such as mat-weaving and tapa printing.

Walker (2001) quotes Marilou Awiakta, Cherokee poet and author, describing the effects of what she refers to as the paradigm blindness that characterises Western educational institutions:

I was centred and happy in my heritage until I went to college and began Western education in earnest. Everywhere I turned I found a 'squared world', a society so compartmentalized that life, including my own, had no room to move around, to breathe. For twenty years I struggled against the Square World, but I unwittingly internalized it, tore my life web and stuffed the broken strands into the boxes (Awaikta, 1997, p. 777).

I found this especially relevant in my life from the transition between high school and university. In high school I was still encouraged and educated with my traditional culture. However as I entered university, an education involving a science degree helped me scientifically understand nature, especially marine and fisheries biology and ecology. However, life in the classroom seemed to be a separate world altogether from real life in the indigenous community in studying subjects not especially relevant to my Fijian way of life. This is similar to what Durie (2004, p. 12) pointed out about aspects of classroom education as being "not especially relevant to Maori".

Once out of university, I was at an age and had attained an economic status to start contributing towards, and more importantly, attending my family's and extended family's traditional Fijian obligations and functions in the Fijian way of life (*bula vakavanua*). Unwittingly, I had also started the process of putting my 'broken strands back together'. As an adult I was fully immersed in the practice, and became part of the Fijian social capital, practising its values and as much as possible, abiding by traditional

protocols. A postgraduate study in environmental sciences and involvement with CBMC after graduation, helped accelerate this process of appreciating the interconnectedness of humans and the natural world in the indigenous Fijian society.

Going through the western education system and being brought up in an urban setting, I was still not fully appreciative of the richness of my culture. Interestingly, as I commenced fieldwork in my doctoral research, I interviewed two tertiary qualified indigenous Fijians, and pro-active members of the CBMC stakeholder-communities in Fiji. They expressed that TEK is highly romanticised, a sentiment that I would have agreed with at that time. Surprisingly during my fieldwork interviews with them, both gave responses and stories (*talanoa*) which showed that they believed in values and beliefs held by the community and the Fijian society in general. However, they pointed out that ecological knowledge is disappearing as the older members of the community are passing away. Whether TEK is romanticised or not, it is “here to stay, even if what is represented is forever and always disappearing” (Agrawal, 2009, p. 158) The dissertation journey continues to be a personally illuminating one for me. I have since learnt, amongst other things, that TEK is far more than simply knowledge. It is values, beliefs, ecological knowledge, skills and practices that helped our ancestors survive in their environment. More importantly, it is still helping individuals and communities in Fiji survive and even live full and rewarding lives.

During my dissertation journey, my ‘broken strands’ continue to come back together, re-affirming in my mind the connectedness of various aspects of humans and environment in the Fijian way of life, *bula vakavanua*. Durie’s (2004, p. 5) explanation of the oneness of indigenous conception of humans and the environment is pertinent here:

Because human identity is regarded as an extension of the environment, there is an element of inseparability between people and the natural world. The individual is a part of all creation.

All creation, including humans, their governance systems, processes and social contexts are interconnected. The two influences in my life have been the *bula vakavanua* upbringing and the western education system. I honour both influences. These

influences have steered me towards using the mud-flat crab (*Brachyuran species*) to illustrate this interconnectedness within CBMC.

6.2. The crab: Nomu i qaiqai ga Qei¹⁰⁷, noqu i qaiqai

In this thesis the mud-crab is used as a metaphor to illustrate inter-connectedness. Why the crab? The mud-crab is commonly found in Fiji and inhabits both terrestrial and marine ecosystems. This is parallel to the CBEM work, which covers both land and sea environments. The indigenous Fijian society has proverbial or ancestral sayings associated with phenomena in nature. Ancestral sayings are “formal expressions used in pre-literate societies that are resistant to change through time and communicated orally from generation to generation” (Wehi, 2009, p. 268). Wehi elaborates that these sayings form an important part of oral tradition, and are used to communicate important truths, “often using metaphorical phrases based on observation of natural phenomena” (2009, p. 268). The Fijian ancestral saying of the crab (*bole nei Ra¹⁰⁸ qari*), emphasises its distinctive sideways gait, one of the few that does so in the animal kingdom. My Rewan ancestors observed this unusual animal behaviour of sideways walk, and used it to communicate and emphasise an important truth. The saying “*Nomu i qaiqai ga Qei, noqu i qaiqai*” literally means, “How you walk mother, that’s how I’ll walk”. The saying is in the *Rewan* dialect which is learnt all over Fiji, and serves as a reminder both to the mother (or ancestors) and the child (or descendants). For the mother or ancestor, the warning is to walk bearing in mind that your offspring are watching and learning. For the child/descendant it is to walk in the worthy manner that the mother (or ancestor) walked. This is exactly how the *bula vakavanua* is passed down from one generation to the next: by looking, learning and imitating. In CBMC, the walk of the crab is influenced by economic, social and environmental factors, to which the crab has to adapt, led by the older generation and watched by the younger generation in the Fijian society.

Ravuvu in his book “The Fijian Ethos” (A. Ravuvu, 1983), outlined his findings from studying traditional Fijian ceremonies. According to Ravuvu (1987, p.vii), these ceremonies “reflect their (Fijian) worldview, and define the social and political

¹⁰⁷ This is the term for ‘mother’ in the *Rewan* dialect.

¹⁰⁸ *Ra* is a respectful title similar to Mr.

structures, religious beliefs, values and practices inherent in Fijian communities”. Tuwere (2002), drawing upon Ravuvu (1987), refers to the following as the “words of a ceremonial prayer and blessing (that) are common and familiar in the context of traditional ceremonies today”:

May the way of the *vanua* be firm. May the custom of the kinship be stable. May the chiefly station be truly supreme. May the light of civilization be enhanced. And the church flourish. Be it done! (*Mana ei-dina!*) May it truly be (p. 63).

This common ceremonial prayer aptly summarises the components of the *bula vakavanua*: *Vanua* (the physical, social and cultural dimension), kinship (*veiwekani*), chiefly station (traditional governance system), civilisation (westernization, science and education) and the church (*lotu*). However, I do not agree with the use of the term civilization in the ceremonial prayer above since it implies that the Fijians are uncivilized without the western influence. The Fijians had their own form of civilization.

To illustrate connectedness, I draw upon my indigenous Fijian background from a fisher tribe and use the metaphor of the crab (see Figure 1.2) to represent the *bula vakavanua* in the CBMC initiative (see Table 6.1 below). Firstly, the hard shell covering is called a carapace and symbolizes the CBMC initiative itself, that, although being carried by the community, also protects the community. This is because if the CBMC is successful, the community’s environment is protected and livelihood sustained. Secondly, the two eyes represents the lenses through which the Fijian community view the world: through the *vanua* and Church (*Lotu*) worldviews. The legs represent components of the *bula vakavanua* that I am focusing on in this thesis: social capital and TEK. The interconnectedness of the social capital and TEK (legs of the metaphorical crab) contribute to the total movement and performance of the movement of the crab, under community initiative (CBMC in this case). In the Fijian context, the initiative could also be a health-oriented or another community development initiative. The legs also affect each others’ performance. For the mudflat crab, when a predator grabs one of the legs, the crab will shed it and it will grow back later. This shedding of the leg in the life of a living crab is parallel to when one of the ‘legs of CBMC’ is weakened. The leg will

need to be strengthened and ‘regrown’ by the community since the functioning of all the parts of the ‘crab’ contributes to the success of the CBMC initiative.

Table 6.1: The metaphorical crab and *bula vakavanua* in CBMC

	The crab	Role or influence	<i>Bula vakavanua</i> equivalent	<i>Bula vakavanua</i> in practice in CBMC
1)	Carapace	Cover/Protection	CBMC initiative	Overarching initiative CBMC in this case), umbrella/ protection.
2)	One pair compound eyes	Seeing the world	Vanua and church (<i>lotu</i>) worldviews	Worldviews which frame the world in which <i>bula vakavanua</i> is lived.
3)	Five pairs of legs	Mobility	Social capital	Interconnected and embedded in a kinship system, social capital and TEK drawn upon to facilitate CBMC.
			TEK	
4)	The surroundings of the crab	The environment in which the crab is surviving.	Non-indigenous knowledge	The environment has has various factors which influence and shape the ‘walk’ and life of the crab.
			Kinship	
			Fijian culture	
			Traditional governance	
			Westernisation and other cultures	
			Western Governance	

The course of this chapter is summarized in Figure 6.2 below. Firstly, Sections 6.2.1 and 6.2.2 describe how the church (*lotu*) and Vanua worldviews influence the Fijian way of life (*bula vakavanua*) in CBMC implementation. Section 6.2.3 outlines the connectedness of social capital and TEK in the CBMC initiative. The factors in the environment of the crab are outlined in Section 6.2.4 – 6.2.9. Also included in this section is a discussion of the Fijian culture, but in this work I have chosen to discuss only five aspects of the Fijian culture that do not build up social capital and are not conducive for CBMC work. These five aspects are effectively barriers to CBMC implementation. Four positive aspects of Fijian culture are discussed under social capital. These factors influence and shape the ‘walk’ and life of the crab.

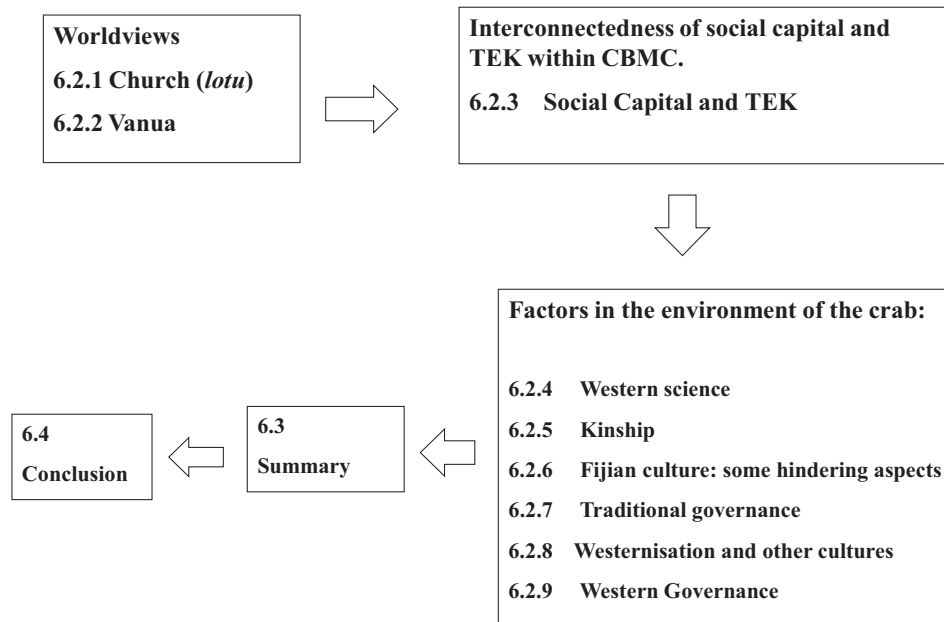


Figure 6.1: Summary of Chapter 6

6.2.1. Church (Lotu)

When I arrived at one of the sites an unusual sight greeted me: a big sign-board in front of one of the houses on the way into the village proper. The sign board was advertising a church other than the Methodist church. The Methodist church building was sitting about 500 metres further on. It was during the first focus group at that site when the issue of ‘new’ churches (Pentecostal) and their influences on the *bula vakavanua* and implementation of CBMC was discussed.

According to Newland (2004, p. 2), “the Methodist Church is the oldest and most powerful church in Fiji”. Newland adds that it “incorporated many indigenous ideas and allowed other pre-Christian practices to continue alongside its teachings”, thus, to a certain extent, indigenizing or traditionalising Christianity. The Methodist church also reinforced the chief’s position as the head and preached submission to authority. In most of the Methodist Churches, the chief sits in a special seat up the front. Tomlinson (2004, p. 654) writes that “In Oceania, history is often described as a transition from ‘darkness’ to ‘light’ with the latter signifying an age of Christian enlightenment”. Through the

church, Jehovah's power and worship has replaced ancestral worship. If ancestral worship is done, it is done in secrecy since it is looked upon with great scorn. This is because when missionaries arrived in Fiji in the 1800's, Ravuvu (1988, p. 56) explains that "they labelled everything that did not comply to their Christian morality as *ka vakatevoro* (things in the nature of the devil)", so ancestral worship was equated with devil worship. On the other hand, Hunt, (1843, p. 164) wrote that "the whole belief in witchcraft was formerly a positive advantage to the community.... Until Christianity broke it down, the villages were kept clean, there were no festering rubbish – heaps. No filthy *raras*¹⁰⁹". This is because of the belief that rubbish will steal crops, so a harvest will be poor (see Section 5.2.2).

Other biblical teachings included respect, loving one another, and sharing. Apart from these, the issue of governance or responsible stewardship over nature and the environment, is emphasised in a lot of sermons, based on a verse from Genesis¹¹⁰, as verbalised by an indigenous Fijian respondent in the following statement:

Authority has already been given already from Him – *dou raica, dou vakatawa, dou kania, dou vakayagataka* (January, 2010).

Him refers to God while the second part of his statement are the words of God, translated as:

You see, you manage, you eat, you use.

The word *vakatawa* is used when you look after something that is not yours, and is similar to the term guardianship or being custodians of. This is in line with the Fijian belief that natural resources are held in custody for future generations.

When a *tabu* or a marine protected area in a *qoliqoli* has been decided upon, a date is set aside when the *talatala*¹¹¹, chiefs, members of the community, NGO partner and other stakeholders travel to the *tabu* area where the *talatala* will bless it and declare the *tabu*.

¹⁰⁹ In the village context, this refers to the village green.

¹¹⁰ Genesis 1:28b-29. "Rule over the fish in the ocean, the birds in the sky, and every animal over the earth. I have provided all kinds of fruit and grain for you to eat" (NIV). Genesis 1:17 "Cursed is the ground for your sake" (NIV).

¹¹¹ Church minister or pastor

Usually members of the community will not dare venture into an area that has been declared *tabu* with God's blessings as explained in the following statement:

We (FLMMA) have always thought that the installation of the *tabu* be done by traditional means, that really has the whole village behind it and also the church backing it to really impress on people how important it is.... and to put the fear of God and fear of ancient gods into them (FLMMA committee member, April, 2010).

This is also verbalised by one of the community members when it comes to poaching in their particular village. According to him there is a common saying in the village: 'Keep stealing, one day you will be stolen from', because they believed that God in heaven is great and is their most powerful *qoliqoli* warden. Some of these beliefs that natural justice happens and that offenders are punished by God is re-inforced when those who violate the *tabu* suffer misfortune, for some offenders it even means losing their life. A story was related to me by an interviewee about an incident from his village where CBMC was underway. There was a young man from his village that was well known for always violating the *tabu*. This offender went fishing with a group in January this year (2010) in waist-deep water. He disappeared while they were fishing, and only one leg was found drifting in the water a few days later. The comment that was said in the community about the incident was that "when we practise *kana cala*¹¹², one day the fish will eat us". In this way, the belief of "reaping whatever you sow" that is preached from the pulpit serves as an enforcement tool and has been used effectively in CBMC work.

According to Tuwere (2002, p. 141), "*Tabu* and *mana* together provide a way of imposing discipline, social control, and an understanding as well as an awareness of spirituality and implications". Newland (2004) describes how the relative newcomers, the Pentecostal denominations have contributed to the demonization of the indigenous religion. Newland explains that this is done by declaring that "many traditional ideas and practices associated with ancestral worship – from *yaqona* drinking to fire walking" (2004, p. 2) are demonic in nature. The Pentecostal philosophy of rejection of *yaqona* drinking has led to members of their denominations "distancing themselves from the wider village sociality" and the "threatening [of] the continuity of village life"

¹¹² *Kana cala* is translated as 'wrongful eating' and means eating something that you are not supposed to eat.

(Newland, 2004, p. 2). Apart from this, there has also been some debate about the different interpretations of the bible by different denominations. A community member at one of my case study sites commented ¹¹³ that members of new churches (meaning Pentecostal) use the *tabu* for fishing. The basis of their violating the *tabu* is the belief that all natural resources have been provided by God for use. Two names had been brought up in the village meeting, and they were both members of the new church. When they were called to come to the chief's house to be told off, they did not turn up because they only obeyed God and the legal government authority. CBMC work has to contend with Pentecostal church members not facilitating CBMC work and village life in general as explained above. As I sat in the village hall in the *talanoa* session where this issue was discussed, the mood became more serious. Someone even asked me what should be done, and I diplomatically replied that I am not familiar with the situation and context in the village. Amidst the passing around of *yaqona* cup, discussion on the solution continued. At the end of 'my' *talanoa* session, it was agreed that another *talanoa* should take place. This will involve bringing together the leaders of the various churches to clarify interpretations of the bible. Bringing the various church leaders together is especially important to clarify denominational views concerning resource use, and also views on submission to chiefly authority. At the same time, boundaries and ground rules should be agreed upon by the community, sanctioned by the church leaders and chiefs, concerning the village norms and practices.

It is also a concern within FLMMA work in Fiji that different interpretations of the bible are causing non-recognition of traditional authority and the breaking of the *tabu*, contributing towards the breaking down of social life. According to a FLMMA committee member¹¹⁴, FLMMA wants to tap into what he terms as 'faith' conservation area, to understand the influence of *lotu* on CBMC, an area of future research. Apart from the *lotu* beliefs, the indigenous Fijian also has a Vanua worldview which also impacts on the running of CBMC initiative.

6.2.2. Vanua Worldview

Houde (2007, p. 8) states that a worldview "explains the way in which things are connected" and agrees with Berkes (1988) that it also "gives the principles that regulate

¹¹³ For original Fijian version refer to Response 6.1 in Appendix 6

¹¹⁴ For original Fijian version refer to Response 6.2 in Appendix 6

human-animal relations and role of humans in the world”. Berkes (2008, p.18) explains that the worldview “shapes the environmental perception” and “gives meaning to observations of the environment”. The Fijian worldview has also been deeply influenced by a Christian value system (Berkes, 2008; Houde, 2007) which has also been the case for the *vanua* worldview in Fiji. Sometimes there is even confusion as to where the Fijian belief originates from as I found with one of the indigenous graduate interviewees¹¹⁵. He was not sure whether the Fijian belief comes from the Christian God in heaven or from our ancestors. The interviewee goes on to explain that the Fijian worldview makes us believe that we are related to organisms in the environment, and saw himself as being related to the fish, using an example from the marine environment. This relationship, he believes, is the basis of Fijians having a plant and a fish totem. In his *talanoa* response he also verbalised what I experienced as a belief while growing up in Fijian society. If something bad happens to a Fijian, he/she has been taught to examine his/her life and see if he/she has committed a wrong in any areas of his/her life: in nature or in his/her relationship with other people within the *bula vakavanua*. The next step is to carry out corrective measures by putting things right with God above (seeking forgiveness through prayer) and with the individual(s) he/she has offended by carrying out a *matanigasau*¹¹⁶. The respondent then explains that for those who still highly honor the traditional chiefly system, the declaring of a *tabu* by a chief is sufficient for them to not fish in the *tabu*, otherwise, both the church minister and the chief are used to declare the *tabu*. However in some cases, in spite of the declaring of the *tabu* by both the chief and church minister, individuals within a community still break the rules by fishing in the *tabu* (see Section 4.2.2 about the fisher tribe’s situation).

Berkes (2008) asks an important question, “Are traditional worldviews relevant to present day resource stewardship?” (p. 68). *Tui Nale*¹¹⁷, the chief of the fisher tribe for one of the case study sites discusses his view on the survival of turtles in the Year of the Conservation of Turtles¹¹⁸, with a Senior Fisheries officer:

¹¹⁵ For original Fijian version refer to Response 6.3 in Appendix 6.

¹¹⁶ This is also termed *bulubulu* and it is when *yaqona* is presented to seek forgiveness from the person(s) one has offended.

¹¹⁷ A pseudonym has been used to protect the identity of the person.

¹¹⁸ For original Fijian version refer to Response 6.4 in Appendix 6

I asked the *Tui Nale* about the turtles. At that time pressure was coming from IUCN¹¹⁹ that turtle numbers were decreasing. I asked him “The world and science are saying that the number of turtles is decreasing, what is your view?”. He answered; “Even if the world comes to an end, the turtles will still survive”. That’s the perspective of a custodian of the *qoliqoli*. They even believe that if one of them (fisher tribe) dies, they will be re-incarnated as turtles (Senior Fisheries Officer, January, 2010).

From the response above, it is evident that *Tui Nale* as the chief of the fisher tribe for one of my case study sites, does not believe in the western form of conservation of turtles. Instead *Tui Nale* believes that turtles are destined to survive, and as long as *Tui Nale* and his tribe are surviving, the turtles will also survive. This is an indigenous thought with regards to conservation and is a problematic view from the western scientific conservation perspective, because it assumes that turtles will survive regardless of human use and environmental change. History is replete with examples of species that have become extinct for one or both reasons. The statement acknowledges connectivity between nature and man (fisher tribe) but this is an example of a potentially problematical Fijian worldview. What implication does this perspective have for the CBMC initiative? As Reichel-Dolmatoff (1976, cited in Berkes, 2008, p. 70) states “the researcher needs to study the worldview as the organizing concept behind the cultural ecology of a group, without which the logic of many traditional management systems would be difficult, if not impossible, to access”. In CBMC implementation, the partner organization should identify traditional worldviews that may complicate CBMC implementation from a western scientific perspective. Discussions and negotiations should take place between community members and stakeholders (NGO, government departments etc.) to arrive at a consensus about appropriate boundaries of acceptable practices pertaining to such worldviews.

6.2.3. Social Capital and TEK in CBMC

This section will look at the connectedness of social capital and TEK in the implementation of CBMC. A respondent, for instance, explains how belief affects in the

¹¹⁹ International Union for the Conservation of Nature.

enforcement of the *tabu* behaviour. This belief involves eating food one is not supposed to eat (*kana cala*)¹²⁰:

When they meet at a traditional function, the people from Verata's food will be the products from the sea, whereas the fisher tribe's food will be pork. They believe that if you eat the wrong food, there will be diminished harvest from the sea (Interviewee, January, 2010).

The Verata people discussed above are people of the terrestrial places or dry land, *kaivanua* (D'Arcy, 2006, p. 87) who will eat seafood, reciprocated with fishermen eating land food such as pork and taro. This statement shows connectedness of social behaviour, violation of which will result in diminished harvest in the sea since everything is interconnected.

The social capital aspect becomes very important when mobilizing community effort as verbalized in the following statement:

To mobilize resource management activity at the local level is based on that strength – that people in the community have their social relations, their ties (Fijian academic, September, 2009).

According to one of the community representatives (January, 2010) at one of the case study sites, an increase in cooperative endeavours indicating unity of the people, has been a consequence of CBMC. An NGO worker highlights the link between unity through participation/non-participation in marine conservation initiatives and household income (Nature's Investment Bank, 2007). The research indicates a doubling of household income in households involved in CBMC, because social cohesion or social capital developed in CBMC included Fijians showing unity and working together in better ways. The interviewee commented that the community members applied this unity (social capital) to other things they needed to do such as economic initiatives within the community.

¹²⁰ For original Fijian version refer to Response 6.5 in Appendix 6

The non-observance of cultural rules and norms has been attributed to the loss of *mana* (properity and abundance) as is outlined in the following response. It also encompasses reciprocation, *kerekere*, loving and caring for each other, a cultural social capital aspect¹²¹:

They should go back to the good times of Vakade¹²². When we return from fishing, firstly we take the fish to the one who should have the first share¹²³. He will also reciprocate accordingly. We used to feed visitors, government officials¹²⁴ (*vakailesilesi*). Now this is one of the reasons for decreased fish stock; because we are not practicing that Fijian custom (Community member, November, 2008).

I experienced this custom of looking after the government official (*vakailesilesi*) last year, for instance, when my unmarried son was posted as a medical doctor to Ono-i-lau. The island is closer to Tonga than Fiji, and being so far away from home, I was a bit apprehensive about his source of food. However, in Fijian villages, the *vakailesilesi* are looked after as part of loving one another (*veilomani*) and caring about one another (*veikauwaitaki*). So, he had some families in the village that would practice the above, regularly bringing fish to his living quarters in the medical compound. His sourcing of root crops (*kakana dina* such as taro and cassava) was interesting: whenever he needed some cassava or taro, he would pick up his cane knife after work, and walk towards the village path that led to all the plantations. Of course he had no garden! He walked with whoever he met walking towards the plantation, helped weed the man's garden for a little while, and then dug up some root crops for himself. He laughed at my response of, "What! Can you do that?" Nevertheless, apart from being amused, I was also greatly relieved that cultural behavior is still being practiced there.

TEK values and beliefs strongly influence peoples' behaviour. For the following case, unsustainable (from non-indigenous knowledge view) traditional practice was displayed involving the social capital value of reciprocation and networks (kinship), together with

¹²¹ For original Fijian version refer to Response 6.6 in Appendix 6.

¹²² Name of place has been changed for cultural sensitivity and confidentiality.

¹²³ This means the chief.

¹²⁴ These are government officials (such as teachers, doctors and nurses) who have been posted to a particular district.

the Fijian cultural practice of respect for other chiefs and using TEK of traditional fishermen. The paramount chief of one of the provinces that is paving the way for provincial conservation efforts endorsed the decision by his *Vanua* to allow traditional fishermen to harvest 80 turtles as his province was hosting a national traditional function. The NGO partners and some of the other stakeholders were surprised and even shocked. Morgan (2007, p. 66) explains the significance of the turtle: “In the indigenous (Fijian) context, turtles are a form of property that has a value as a marker for group identity, prestige and position” while Thomson (1968, p. 322) explains that “in Fiji, the royal fish is the turtle” and that “every considerable chief had turtle fishers attached to his establishment”. In this situation of harvesting 80 turtles, traditional values and expectations influenced the chief’s decision. He approved the turtle harvest which had to be taken as gifts to other noble chiefs who were visiting his province to attend the national traditional function. This priority of traditional value was explained to me by an educated community member:

It’s our value system that finally defines what we are going to do....our *lotu*, the *vanua*, and our relationships. We will break all conservation rules, all because of that [*lotu*, *vanua* and relationships or *veiwekani*]. To us these are higher on our value systems, and we still go by what we value.

The belief that when TEK is properly used in utilising what God has given will result in abundance is stated in the following response¹²⁵:

That (TEK) is still here today. Our ancestors used it, and we are still using it today. We’re still following that knowledge today. If that TEK is properly used, this great God will bring back to us our food (abundance) (Community member, November, 2008).

This statement shows the belief of the relationship or connectedness between social behavior (‘properly using TEK’), TEK and the existence of *mana* given by God, in the land. There was a general feeling that *mana* has been lost in the Fijian community resulting in barrenness of the land and depletion of fish stocks. The loss of *mana* been linked to loss of TEK, especially knowledge about totems, due to living in towns and

¹²⁵ For original Fijian version refer to Response 6.7 in Appendix

westernization (*pers comm.*, J. Veitayaki, September, 2009), and again shows interconnectedness of all things in Fijian society as portrayed by the crab metaphor.

Halpern (2005) and Robinson & Robinson (2005) suggest that social capital may be manifested in various ways in different cultures and points out the cultural specificity of social capital after working with New Zealand Maori. I will now focus on features of the Fijian culture that also build social capital and how they affect other aspects of CBMC. These features are: loving one another (*veilomani*), respect (*veidokai*, *veirokorokovi*), unquestionable duty and service (*qaravi itavi*) and Fijian borrowing (*kerekere*). These aspects of Fijian culture are facilitative in nature in the implementation of CBMC.

The co-operation by individuals in families, extended families, district and provinces for traditional obligations and the carrying out of traditional duties is capitalized upon in CBMC as reflected in the statement below¹²⁶:

Well, one aspect that we [FLMMA] were also looking at, that was thought to be advantageous for us [FLMMA], is the practice of co-operation for traditional functions and tasks.... the *solesolevaki*. Because we (Fijians) practice a lot of *solesolevaki*. So FLMMA thought that would be one of the contributing factors towards the success of FLMMA (FLMMA Committee member, January, 2010).

At times, personal problems are momentarily forgotten as indigenous Fijians respond to the call of traditional obligation and duty¹²⁷ as related by an interviewee (Community member, November, 2008) about a districts' fundraising initiative. It was just after Cyclone ABC¹²⁸ hit Fiji, when the first ever Miss Vavila¹²⁹ fundraising festival was held. Houses had been damaged all over Vavila and when the Miss Vavila festival day arrived, damaged houses were left behind in the various villages as people came because the chiefs of Vavila had called them for the fundraising. A large amount of money was collected in line with Ewins (2009, p. 214) comment that " Apart from

¹²⁶ For original Fijian version refer to Response 6.8 in Appendix.

¹²⁷ For original Fijian version refer to Response 6.9 in Appendix.

¹²⁸ Name and year of Cyclone withheld as identification can reveal name of area hit.

¹²⁹ Name has been changed for confidentiality.

money required to underwrite their increased dependence on Western goods, food, travel, schooling, levies to the District administration and the church, quite extraordinary amounts of money are expended on ritual events”. Generally Fijians will momentarily forget their personal problems to give a hand (financial, material goods, time or even physical help) towards functions or tasks. This lending a hand, or sense of unquestionable duty and service (*qaravi itavi*) is usually based on respect for chiefs and/or loving ones’ relatives (blood, Vanua links) to ensure that the traditional obligation or function is successfully carried out. As discussed earlier, respect (*veidokai*, *veirokorokovi*) not only for chiefs, but to other individuals is important in the Fijian society, and it influences behaviour as described by Becker (1995, p.17); “the demonstration of respect for chiefly or senior authority and for Fijian custom is a central feature of the core values governing behaviour and bodily demeanour”. Ravuvu (1987, p. 103) explains how Fijians use several concepts to describe desirable qualities in personality, including “*veidokai* (respect), *vakarokoroko* (deference), *vakarorogo*(attentive and complying) and *yalo malua* (humble)”.

I have also classified Fijian borrowing (*kerekere*) as part of Fijian culture that builds social capital, but I contend that it is not really borrowing. Rather it is Fijians exercising the cultural value of ‘relative ownership’ as I will explain below. Sahlins (1993, p. 856) explains that *kerekere* is part of the Fijian way of life:

“Cery Cery fuckabede is Osborn’s¹³⁰ immortal transcription of *kerekere vakaviti* - which demonstrates that Fijians objectified the practice, perceived as a custom, and claimed as their own months before the first missionaries came, decades before Fiji became a colony, and almost a century before a colonial campaign of censure is supposed to make them self-conscious of it”.

I believe that the word *kerekere* is inappropriate since material goods such as clothes and household goods circulate from person to person and group to group, making the notion of ownership relative. I contend that Fijians do not *kerekere* but are simply exercising the notion of ‘relative ownership’. One young woman explained that within the community “there isn’t anything that belongs to you that

¹³⁰ Osborn, J. W. 1833-36. Journal of a voyage in the ship Emerald during the years 1833, 4, 5, & 6. MS, microfilm, Pacific Manuscripts Bureau 223: 269-446 (original in the Peabody Museum, Salem, MA).

really belongs to you – actually, that belongs to your uncle, to your auntie, to your cousins or anybody.” (Becker, 1995, p. 25). The notion of ‘relative ownership’ is important in the CBMC work, when emphasis is on custodianship of the *qoliqoli*: that the *qoliqoli* is not owned by the current members of the Fijian society but held in custody for future generations, thus I prefer the use of the word *vakatawa* (see Section 6.2.1), which is in line with the concept of inter-generational equity in environmental conservation.

Toren (1999, p. 35) explains that in “*kerekere* there is both an obligation to give and an obligation for the receiver to accede to some future *kerekere* on the part of the giver, that is to say a *kerekere* of a similar kind, but this may not occur until a considerable time has passed’. The event described below shows how *kerekere* can be misused in CBMC:

This story was related to me by the *Tui Vatea*¹³¹. They [the community] had this *tabu* for two years, and, their very close relations from inland were raising funds for their church. So, they came and made their traditional presentation to the people of Vatea to fish the area for their church. They [Vatea people] agreed of course, and they’ve never been able to close it after that. So those kinds of things are now happening (Indigenous respondent, September, 2009).

In this situation the Tui Vatea and his people because of the sense of family and Vanua obligations, were obliged to say yes to their inland relatives who had come to ask for fishing in the *tabu*. The implication for CBMC is that this situation can occur at any of the conservation sites. Traditional obligatory practices with communities distant from the marine area can impact on the management of that area. This situation again shows interconnectedness in the Fijian society, where *kerekere* took place within the kinship framework, to break a *tabu* for meeting traditional obligations. This is an aspect of Fijian culture that has to be re-visited and modified if necessary for the ultimate benefit of the Fijian community. A possible strategy to prevent this situation of breaking the *tabu* because of *kerekere* is to have the stakeholders such as the Ministry of Fijian Affairs, Provincial and *Tikina* Councils agree to a policy of prohibition of *kerekere* of

¹³¹ Name changed for confidentiality

qoliqoli that have been placed under a *tabu*. There needs to be dialogue in order to reach a consensus on a constructive action for the way forward.

6.2.5. Western knowledge systems/science

Referring to non-indigenous knowledge and TEK, McGregor (2009, p. 6) states that with “these two knowledge systems working together, a powerful approach can be developed to address environmental problems facing humanity”. In CBMC in Fiji, TEK and non-indigenous knowledge is used in combination while building community capacity for monitoring skills:

The other thing that was successful is having them (community) do the monitoring. The community-based approach included the monitoring. That goes into skills; people know how to identify fish, count fish. Obviously the skills, identification, counting, finding what was there was important, we could just formalise that into transects.... again, it was building on their skills (NGO worker, April, 2010).

Non-indigenous knowledge used by FLMMA, has continued with the Fijian practice of the use of *tabu* as explained¹³² by an interviewee (FLMMA community member, January, 2010). He said that one of the things that FLMMA thought was a positive aspect of the community’s TEK towards CBMC was that the Fijian culture already had the *tabu* concept. In the Fijian society when a chief passes away, a *tabu* is imposed on land or in the waters for certain periods, such as 100 nights or three months, or even for one year. The interviewee added that when the MPA or the concept of no-catch zones was introduced, it only re-affirmed that traditional way of management.

Even though *tabu* was already being used in the Fijian traditional life, modification had to be suggested to the community by the FLMMA in order to maximize its ecological benefits. An interviewee (Fiji academic¹³³, April, 2010) stated that usually *tabus* are temporary in Fijian traditional practices. FLMMA had to explain to the community concerning the *tabu* that ‘If they’re good for 100 days, they’ll be a lot better for a 1000 days or three years. Some of the villages have a three-year closure of the *tabu* which

¹³² For original Fijian version refer to Response 6.10 in Appendix.

¹³³ Name withheld for confidentiality.

may be continued or moved to another area within the *qoliqoli*. If the community needs money for a fundraising event (*soli*) or fish for a feast (*magiti*) the *tabu* may be opened up. The interviewee commented that there were various traditional options for the community about the *tabu*, and FLMMA's role is to provide advice.

Non-indigenous knowledge is also used to help in the identification of *tabu* sites as explained by an interviewee (NGO worker, April, 2010). He explains that at one of my case study sites the *tabu* was initially placed at the down current end of the area, because the villages wanted it as faraway from the urban centre as possible. In this case the community was also considering social issues, and not only ecological ones when selecting the *tabu* site. They were advised by scientists in the partner NGO that because of the current the juvenile fish would swim towards the next village. However the *tabu* was still placed in the community-selected spot. After a period of time the villages saw that there was little improvement while the next village was having increased fish stock. The villagers moved their *tabu* and are now seeing more fish in their *qoliqoli*.

6.2.6. Kinship (*veiwekani*)

Weka is defined as (Capell, 1999, p. 282) 'a relative' or 'friend' whereas *veiwekani* is a relationship acquaintance: political relations between two independent nations or tribes. In the Fijian situation, relationships can range from that between two individuals to the relationships at confederacy level (see Figure 3.3 and Table 4.1 for some examples). Becker (1995, p.17), elaborates on kinship in Fiji:

In Fiji, as in other Melanesian and Polynesian cultures, social action is guided by the tight affiliation of individuals with their communities, Fijian identity is grounded in one's connections to the immediate kinship group and social network.... Innumerable mechanisms connect the Fijian individual to a dense social network comprised of kinship, historical, regional, and mythical relations.

Veiwekani adds value to the CBMC work and FLMMA has recognized this aspect as strength to draw on in the CBMC implementation¹³⁴:

¹³⁴ For original Fijian version refer to Response 6.11 in Appendix.

I think that (relationship) is a strength that is often unmentioned... the bonds of kinship was already in the villages. That is a big bonus to FLMMA's work. (FLMMA committee member, February, 2010)

The interviewee went on to explain that when a training or FLMMA meeting is called within a village or district, the representatives are selected on a *mataqali* or *tokatoka* basis, so he/she can speak on behalf of the *mataqali* or *tokatoka*. The implication is that if an agreement is made during the meeting, the representative is obliged to disseminate the information to those he/she is representing.

Kinship (*veiwekani*) is identified by Ravuvu (1987, p. 247) as “a basis of solidarity, regeneration and continuity”. He adds that sometimes the relationship or “alliance has its origins in the distant past, but need to be reaffirmed occasionally in order to continue”. However, whether to continue the relationship or not is a personal choice. Those who do not maintain kinship relations, risk being labelled a ‘person with no relatives’ (*tamata sega na wekana*), and looked down upon in Fijian society. This occasional re-affirming by those who wish to retain kinship links is described by Becker, (1995, p. 17):

“...complicated protocols for ritual exchange maintain mutually beneficial channels of reciprocity among a variety of social groups. Exchange of food or items of traditional value (*i yau*) such as mats, bark cloth, whale's teeth, *yaqona*, and drums of kerosene”.

In the Fijian custom, one goes and visits (*veisiko*) other members of the family or extended family that are linked either by blood, marriage or *Vanua*. A new development has been the kinship through the church (*veiwekani vakalotu*) and kinship through one's profession (*veiwekani vakacakacaka*). In the towns, it will involve taking food (from the market or supermarket) or simply taking money to give to older relatives such as grandparents. In the villages, what may be taken would be the traditional artefact of one's *Vanua* or even totemic fish or turtles. The relatives or kin being visited will reciprocate, giving back goods to those visiting them as a sign of respect and gratitude to those visiting.

In CBMC, relatives from coastal villages usually visit kin in interior villages with fish, shell fish and other marine animals. The interior villages reciprocate with garden

produce such as *dalo*, yams and cassava. Cultural changes in *veisiko* have also been suggested for biodiversity conservation as explained in the following story¹³⁵ by an interviewee (Indigenous NGO worker, February, 2010). The interviewee explains that every Christmas or during named holidays¹³⁶, traditional fishermen from a coastal village would visit other inland villages that they have traditional kinship links with. These fishermen would take giant clams, and in return will be given taro in reciprocation. This has been the practice over generations. However, the giant clam population was decreasing so the NGO partner talked with the elders of the *Vanua* explaining that it takes longer for the giant clams to grow to adults compared to fish. It was suggested that the fishermen took fish instead of giant clams. It was also suggested that they have piggeries so that they can also take pigs. The fishermen decided on a few alternatives when carrying out traditional functions. For instance, if it is an important traditional function, giant clams will be taken but for other smaller functions such as *kau mata ni gone*¹³⁷, they will only take fish. As for the practice of taking giant clams to related villages, for more important functions, there is likely to be a combination of giant clams and fish given. This is an example of a change in norm and practice in Fijian culture for this community. Halpern (2005, p. 319) states that “social norms, understandings of what constitutes acceptable or appropriate behaviour and even the very definition of what a situation is, are ‘negotiated’ between those present This particularly applies to new or unfamiliar situations. Social norms do not spring out of ether; rather they evolve or are generally negotiated over long periods of time”. After some advice on the lifecycle of the giant clams from the partner NGO, consultation and negotiation among community members, they decided to take combinations of fish, pigs and clams, thus preserving the numbers of the giant clams. In the same way that the metaphorical crab has to adapt to changing environment and external changes, this community adapted by changing its practice after collaboration and negotiation.

6.2.7. Some hindering aspects of Fijian Culture in CBMC

Social capital and TEK are just two aspects of the Fijian culture in the *bula vakavanua*. I have also discussed some aspects of Fijian culture which also build social capital and

¹³⁵ For original Fijian version refer to Response 6.12 in Appendix.

¹³⁶ These are days such as Easter, Christmas, Boxing day.

¹³⁷ *Kau mata ni gone* – when the eldest child (and siblings) are traditionally taken to their mothers’ village.

help facilitate ‘working together’ or collective action in CBMC. These aspects of Fijian culture are: loving one another (*veilomani*), respect (*veidokai*, *veirokorokovi*), unquestionable duty and service (*qaravi itavi*) and Fijian borrowing (*kerekere*). This section will also cover some aspects of the Fijian culture that are not conducive for effective CBMC, from a western point of view. These hindering aspects of Fijian culture that influence CBMC include gender roles, oral tradition, kava (*yaqona*) drinking, *veiqati* (jealousy), and *veivakaisini* (cheating others).

a) Gender roles

The gender roles and women’s place in society came out clearly in a *talanoa* that happened in the home of one of my respondents. In the village, in the presence of men, women will hardly talk or voice their opinion. Within the family, there is some or even a lot of laxity. However under formal or quasi-formal circumstances, restraint can still be exercised. The conversation below was not planned in advance. As those who have done research in Fiji using *talanoa* would have experienced, anyone can walk in anytime during a *talanoa*. As a background, I was just coming to the end of a *talanoa* with a respondent when the wife and three daughters (aged 32, 28 and 26 years) walked into the house. The following *talanoa* took place between a family, father, mother, three daughters, and I¹³⁸:

Q: During marine conservation work, meetings are held. Do you [ladies] also sit in the meetings?

A: No. [two voices in unison]. Only the men.

Q: Do you [ladies] also want to sit in the meetings?

A: [Laughter from the daughters. Mother had a smile on her face. The oldest daughter replied]. Well, rightfully we should, eh? Because this [initiative] belongs to us all, eh? It is only right that we should also come and sit in.

A: [Father cuts in while the daughter was still talking]: Well, if researchers come, they [ladies] take part in hosting¹³⁹ [the researchers], they [ladies] are also interviewed.

Q: About their knowledge, eh?

¹³⁸ For original Fijian version refer to Response 6.13 in Appendix 6.1.

¹³⁹ This means making tea or preparing a meal.

A:[32 year old daughter cutting in] Well, in the event of meetings, we don't [take part].

[Loud single cough from the father, daughter continues]

Only the men sit in the meetings.

[Two loud dragging coughs from the father.]

Q [directed to the cougher]: *Kemuni*¹⁴⁰, in your opinion, can the ladies also sit in the meetings.

[Long pause, I waited patiently].

A: Yes, the ladies can also sit in the meetings, but there are no mature [old] ladies left, only this [younger] generation, [indicating daughters with the movement of the head]. These ones, no. [soft laughter from the daughters who nervously looked at their father].

[The father then changed the subject.]

I could not wait to get home to re-listen to the recorded interview. The conversation was replayed in my mind over the next few days. I thought of all the women in various villages: old women, wives and young women, and their circumstances. They are often the ones who fish and glean upon the seashore daily, but do not have the prominent voice that they deserve. On the other hand, their knowledge is acknowledged by the NGO partners as reflected in the following comment:

“The first place where we worked, the women knew how to count the *kaikoso*. Men tried to do it and they would get a certain number, and then the women would show them how to dig around and get the right numbers” (NGO worker, April, 2010).

The women's voices definitely need to be heard more and be part of the decision making process as agreed by an indigenous Fijian graduate male interviewee (August, 2008) who also works for an NGO. He points out that the degree of involvement of women in CBMC work differs from one village to another. He adds that generally women are often not part of the decision making process and in a lot of cases women

¹⁴⁰ I addressed him as *kemuni*, instead of calling his name or simply saying *iko* (you). This (*kemuni*) is respectable address. It is a plural pronoun used as an address to show respect. I also used *nomuni* instead of *nomu* (yours). .

are not even part of the discussion. However, he expressed the opinion that women tend to have a more long term view.

Womens' participation should be encouraged in CBMC work to use all the potential in the community. The other CBMC partners (such as NGOs and government departments) have to take measures to increase the participation of women in CBMC using a two-pronged approach. Firstly, the CBMC partners could specify the number of females that should be members of the *qoliqoli* committee or to attend training workshops. Secondly, there could be some males within the CBMC initiatives (such as a chief or indigenous male graduate) who could be a spokesperson and recommend to relevant male-dominated fora (and even Provincial and *Tikina* councils) to have more female representation and participation in CBMC.

b) Oral tradition

The oral tradition of the Fijian culture is at times not conducive to the CBMC work. For instance, because of the oral tradition, some of the TEK has been lost as explained¹⁴¹ by a community member (January, 2010). According to him, some of the elders conversant and experienced with TEK are still alive in his village today but the knowledge is not being documented. In the oral transmission of TEK, the community members were not told why *lolaki*¹⁴² was their totem and the significance of totems was often not emphasised to them. He concluded that the problem with the Fijian culture is the mode of transfer of knowledge.

For instance, 'poaching' has been done by neighbouring villages or *Vanua* because of communication breakdown as related¹⁴³ to me by an interviewee (community member, November, 2008). He explained that, in some places, *qoliqoli* owners who have set up a *tabu* did not go to the neighbouring villages to inform them. As a result of that communication breakdown, some of the members of the neighbouring villages came and poached by 'accident'.

¹⁴¹ For original Fijian version refer to Response 6.14 in Appendix

¹⁴² Pseudonym used for totem name to protect the identity of the community

¹⁴³ For original Fijian version refer to Response 6.15 in Appendix.

In Fijian homes, families would get together at a certain time in the day, usually in the evenings, to read the bible and pray. I remember that, as a child, my eldest son would love to preach long sermons when it was his turn to take family devotions. When he was about 10 years old, it was his turn to take the devotion at the end of a particularly long day. His sermon had been going on for about 40 minutes and all the members of the family had fallen asleep except him and I. I knew that I would probably have to sit for another half an hour before he was done. So I pretended to go to the kitchen for a glass of water (shame on me!). He was not discouraged and continued to preach to a sleeping congregation. I stood and listened from the kitchen when I heard the preaching stop after about five minutes. I cautiously peeped into the sitting room to see him looking directly at me. Feeling ashamed, I walked back to my seat and the sermon did continue for another 20 minutes! We had a little ‘*talanoa*’ after that about length of sermons during family devotions. However, my running away from a sermon and his long sermons as a child continues to be a family joke till today. Unfortunately, this practice of family devotion (*lotu*) carried out in the evenings is fast disappearing from Fijian society. It is also at these family devotions that teaching is done and knowledge is passed on to the next generation. The lack of time for teaching have been attributed to the pace and distractions of modernity (TV, radio, etc.) which has reduced family time in the evening. Interestingly, this is where the term “Fiji the way the world should be”, used in commercials for tourism purposes, originated. It describes how at seven ‘o clock every evening sweet singing of Christian hymns would be heard from various households in the villages all over Fiji. After the devotion, Thomson (1968, p. 346) describes what happens next, “Storytelling is the principle amusement during long evenings”. This is also when family discussions take place and cultural knowledge (especially TEK), norms and values are passed on to the next generation. Decisions at village council meetings are also related to the household members by the male head of the house. The lack of time for transference of knowledge has led to the loss of cultural values, practices and TEK in particular.

In response to my question at a *talanoa* session about how to reinforce respect (*veirokorokovi*) a participant (January, 2010), emphasised the importance of what is discussed during these family times in the evenings¹⁴⁴. He explains that the instruction

¹⁴⁴ For original Fijian version refer to Response 6.16 in Appendix.

of children depends on what parents decide to instruct the children in. Apart from instruction, the family should also be told about decisions from the village council concerning CBMC. Apart from the pace of modernity (TV, radio) mentioned above, *yaqona* drinking is also regularly done in the evenings, interfering with family time.

c) *Yaqona* drinking

Yaqona or kava drinking is a favorite past-time in Fiji, both in the village setting as well as in the urban area. However, excessive *yaqona* drinking (Tomlinson, 2004) also takes place with individuals drinking *yaqona* late into the night, waking up late the next morning and not being productive (Aporosa, 2008; Prosser, 2006; Tomlinson, 2004). Tomlinson (2004, p. 60) talks about the effects of excessive *yaqona* consumption making individuals ineffective actors: “they cannot function, whether that functioning involves gardening, sex, or church-going”.

In the villages, individuals may not become involved in CBMC work or may not be able to participate in community work or village work because of excessive *yaqona* drinking the night before. There are circumstances where moderate *yaqona* drinking may facilitate CBMC work such as the informal *yaqona* sessions in the evenings during CBMC workshops (refer to Section 4.3.2).

There are moves by the government and church to control *yaqona* drinking in Fiji. For the government *yaqona* drinking has been prohibited in the workplace while the Methodist church has set aside certain months when *yaqona* and alcohol consumption is prohibited. Incidentally the commencement of a *yaqona* free month coincided with one of my case study visits. It was an excuse for the villagers who drink *yaqona* to sit around the *yaqona* bowl for almost 12 hours until the midnight hour of the day the *yaqona* ban started. For provincial councils, I am only familiar with the Lomaiviti Provincial council putting aside certain months as *yaqona* free months. I personally witnessed the same situation of extra long hours besides the *yaqona* bowl waiting for a midnight deadline to approach. The general comment is that productivity has improved in the workplaces and there is less absentism from work. However, a study should be carried out to determine the changes brought about by *yaqona* bans.

d) *veiqati* (jealousy)

There are two different consequences of jealousy. One results in you working harder or doing better to be on par with whoever you are jealous of which is ‘good’ jealousy (*veiqati vinaka*) in line with the western concept of healthy competition. The other consequence is bad jealousy where one tries to pull the other person down to one’s level, or ensure that the other person does not receive any benefit (*veiqati ca*) or improve their station in life. An example of *veiqati ca* in CBMC was described by an interviewee (Community representative, January, 2010) at one of the case study sites. He explained that as the work for this (CBMC) initiative progressed, some of the members of the community were showing jealous behaviour by poaching from the *tabu* in order to jeopardize the work. This is because if the CBMC initiative is successful, the villagers who are advocates of the project will ‘look’ good in society.

In some cases it is because of pre-existing internal conflicts, as an interviewee (NGO worker, April, 2010) explained. He stated that within the village any new project provides the opportunity for old conflicts to come out when certain people or groups of people are especially advocating the project. There will be people in the village that will specifically go and violate the *tabu*, in order to show their unhappiness because of the existing conflicts and animosity between groups.

This situation can be avoided when some of these violators are chosen to be part of the initiative itself such as being committee members or even *qoliqoli* wardens. There was little evidence of *veiqati ca* at the CBMC sites where earnings from CBMC work were being used for scholarships funding for students from that particular district. The families were benefitting since the burden of paying school fees was removed from them. Another way, therefore, of removing *veiqati ca* from the CBMC work is to formulate strategies or projects (such as scholarship funds) for equitable distribution of earnings from CBMC.

Apart from jealousy, there are also cases of cheating others (*veivakaisini*) in the Fijian culture which are not conducive for CBMC work.

e) *veivakaisini* (cheating others).

There are some behaviours that border on abuse and cheating others. Hunt, (1843, p. 75) describes how a *vasu* may behave in his mothers' village :

There was practically no limit. He might ransack the houses, sweep the plantation bare, kill the pigs, and violate the women without a murmur. In this way villages are occasionally swept of everything of value.

The description by Hunt, (1843, p. 75) of how a *vasu* may behave in his mothers' village in the mid-19th century is still applicable today, but may take a different form. In CBMC one of the interviewees (Fijian academic, September, 2009) explained how a *vasu* took advantage of his status as the son of the chief's sister and came to ask to fish in the *tabu* to buy a boat. Sadly, he did not even bring a *kamunaga*¹⁴⁵, but he just came with a *yaqona*. The *vasu* also harvested bech-der-mer and trochus, but the villagers could not say anything because of respect for the chief. The interviewee pointed out that "tradition should not be mixed around with commercial ventures, but it does happen".

The above situation could be avoided by having the decision to break with the *tabu* delegated to the *Qoliqoli* committee. In that way, the situation in which the chief has to decline a request from the *vasu* is avoided. This is a case of outlining lines of authority and defining the boundaries of jurisdiction within CBMC. This will be covered in the next section.

6.2.8. Traditional Governance

At the village governance level, there is a need to clearly demarcate the lines of authority and jurisdiction with respect to the running of the CBMC¹⁴⁶ as expressed by an indigenous NGO worker:

What probably needs to be done [is] we have to have clear Terms of Reference; "This is where the chiefs have to make a decision, this is what the committee has to work on, where they [the committee] have jurisdiction... This is where their authority ends, this is to be referred to the District Council meeting.

¹⁴⁵ Whales' tooth (*tabua*).

¹⁴⁶ For original Fijian version refer to Response 6.17 in Appendix.

Some of the levels of both governance and actors within the CBMC work are village chief, *Vanua* chief, Provincial chief and the *Qoliqoli* committee. At times there is confusion when two different decisions are made at different levels about issues. For instance, in the case of opening the *tabu* both the Vanua chief and the *Qoliqoli* committee can make decisions at certain CBMC sites. Problems arise when the decisions differ. This is also a situation where a *talanoa* can take place to negotiate and agree upon lines and levels of authority. In Fijian society, the chiefs have always been the final, and most times, the only authority, because of their traditionally high status. However, Brison (2007, p. 31) describes another perspective of status in a Fijian community setting:

It was not uncommon for fellow villages to have different ideas about who was of high or low status depending upon whether they placed more importance on achieved ‘modern’ things such as wealth or ‘traditional’ criteria like ascribed position.

Each CBMC community has to sit down and decide in what way does the metaphorical crab adapt and evolve, with respect to the decision making process.

Thomson (1968, p. 64) comments that “The first blow at the power of the chiefs was struck unconsciously by the missionaries. Neither they nor the chiefs themselves realised how closely the government of the Fijian was bound up in their (Fijians’) religion”. Ravuvu (1987, p. 254) confirms this by explaining that Fijians believe the chief as a god incarnate, but this has been undermined by Christianity which preach a sovereign God in heaven. Two years ago, another blow to the power of and reverence for chiefs was delivered when Commodore Bainimarama¹⁴⁷ dissolved the Great Council of Chiefs (GCC), and commented that they should go and ‘drink homebrew¹⁴⁸ under a coconut tree’. Nowadays, commoners are speaking out against chiefs. The language used in blog sites is discourteous and even rude to describe chiefs. This is in contrast to Hunt’s (1843, p. 75) description of a Fijian sitting “without a murmur” and watching, as a *vasu* abuses his privileges (refer to Section 6.2.7 e.) in his mother’s village.

¹⁴⁷ Head of the current military government.

¹⁴⁸ A home-brewed alcoholic drink.

In CBMC, chiefs also need to lead with principles of transparency and sometimes need to explain to the community members the basis of some decisions. At one of the case study sites a community member (January, 2010) explained¹⁴⁹ that the chief was not fair in making the decision as to who is permitted to fish in the *tabu*. What happens is that when someone comes to ask to fish in the *tabu*, the request is granted while others are refused. The villagers believed that this inconsistency of decisions arises out of the chief's looking upon some members of the community more favourably compared to others.

Chiefs are born and trained by watching and learning from their parents. In the Fijian society, chiefs do not go through formal training for their chiefly role. However, FLMMA has taken a proactive stance to rectify these situations by providing training for chiefs:

We have also added another component of the work. We have workshops now for traditional leaders, the highest level chiefs down to the village chiefs. Just looking at different components of leadership and management, both traditional and some of the modern terms like 'transparency' and 'participation', and what they mean. And looking at case studies, there's no value attached: 'this is good' or 'this is bad'. We just look at case studies and see how some situations (or) some approaches work better (Fiji academic involved in NGO, April, 2010).

I believe that the idea of chiefs attending workshops to learn how to govern is a good initiative by FLMMA. Whether the training is effective can only be reliably determined by research; another possible future research topic. However, the proactive move by FLMMA to train and attendance by chiefs is a commendable move by both parties.

Fiji is divided into provinces (*yasana*) which are subdivided into districts (*tikina*). The villages (*koro*) make up the districts (refer to Figure 3.3). The approach of FLMMA takes traditional governance divisions and scientific monitoring into consideration as reflected in the following response:

¹⁴⁹ For original Fijian version refer to Response 6.18 in Appendix.

One of the features of the method we (FLMMA) use is to engage the *tikina* because the *tikina* owns the *qoliqoli*. The *tikina* is a big enough social unit to allow measurable monitoring of changes, as a result of community-based (conservation) initiatives. Working with villages is OK but villages often share *qoliqoli* (FLMMA committee member, September, 2009).

A lot of the decisions by the *qoliqoli* committee, therefore, are taken to the *Tikina* Council (refer to Figure 6.3).

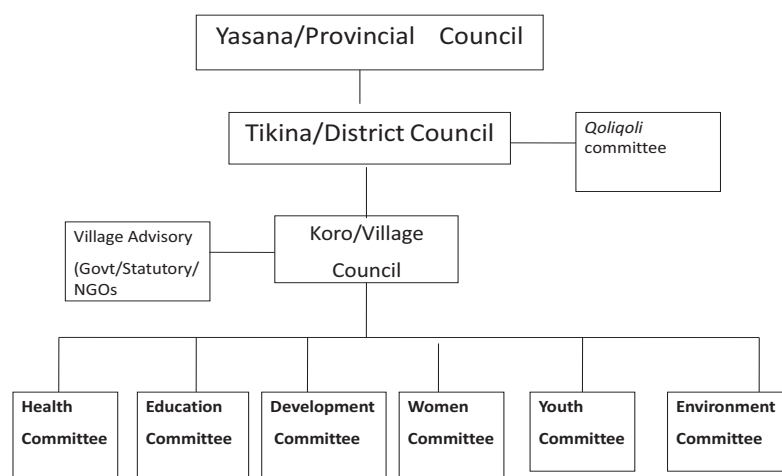


Figure 6.2: *Qoliqoli* Committee and the Councils

There is a need to legitimize the power of the *Vanua* over their *tabu* (refer to Section 3.2.4) or about having the legal authority to arrest the poachers. The *qoliqoli* guards have no legal power to confiscate the poachers' fishing equipment and in the past some *qoliqoli* guards have been prosecuted for doing so. As an interviewee reminded me (since it was front page news in the Fiji Times and reported on TV news), the paramount chief of a province was taken to the police station for trying to defend his customary *qoliqoli*. The interviewee suggests that there is a need for the government to legally empower some of these social arrangements. The current legislation empowers the *qoliqoli* wardens to confiscate the poachers' fishing equipment, and take the poacher and the equipment to the nearest police station. Some of the *qoliqoli* wardens

have illegally charged the poachers a fine for the return of fishing equipment, and thus, end up committing an illegal action. The interviewee suggested the *qoliqoli* wardens be empowered with more action rather than simply taking an offender to the nearest police station.

This section has looked at the traditional governance system in CBMC focusing on the *qoliqoli* committee and the chiefs as governing bodies. The key ideas that arose relate to legal issues, jurisdiction boundaries of governing bodies and some governance issues concerning chiefs. Westernisation has also affected the implementation of CBMC and this will be looked at in the next section.

6.2.9. Westernisation and other cultures in Fiji

In this section, I will discuss four influences that are largely external in origin which are also affecting the role of social capital and TEK in CBMC: individualism, money, human rights, and other cultures.

a) Individualism

Individualism has crept into the village and influenced the *bula vakavanua* in what most Fijians believe, is a negative manner. This is largely because one of the most important values in Fijian society is community-living and kinship. An effect of individualism on CBMC is described in the following comment:

The sad thing, or the challenge is because of the erosion of some of these [kinship] ties. Time has changed – some people have become very individualistic. Even at village level, people are saying, ‘Well, our *kanakana*¹⁵⁰ is from here to here, we don’t recognize anybody else as having the right over that area’. All these things take place now because of the times we’re in (Indigenous academic¹⁵¹, September, 2009).

As outlined in Chapter 3 there are various *kanakana* within a *qoliqoli*. However, in a village setting, nobody is stopped from venturing into another *kanakana*. At the *Navakavu* case study site, a 55 year old interviewee described the difference in

¹⁵⁰ This refers to the *qoliqoli*.

¹⁵¹ Name withheld for confidentiality

behaviour because of individualism, and not wanting to share. According to him, when he was a child, he remembers women coming back from fishing or from the plantations carrying a *ketekete* (basket weaved from coconut leaves) as a backpack on their backs. The *ketekete* will have fish or garden produce and will not be covered so everyone can see what is in the *ketekete*. Sometimes the woman will reach into the *ketekete* and give some of the produce to relatives in houses she passes on the way to her home. Nowadays, leaves are now used to cover the *ketekete*, concealing what is in the *ketekete*, and the whole basket is carried directly to one's house, there is no sharing. Worse still, environmentally unfriendly plastic bags are used instead of the *ketekete*.

Individualism and the community notion of the Fijian culture are probably at the opposite ends of a continuum. The Fijian child is brought up with the idea of community living where loving one another, sharing, caring for one another and 'relative ownership' (*kerekere*) are emphasised and carried out within a kinship network. The notion of individualism is in direct conflict with the Fijians' sense of community and kinship. The influence of individualism will continue to touch the individual Fijian life but it is for the Fijians as a community to adapt, and to come up with suitable rules of engagement when confronted with individualism and community values: this is the whole notion of the walk of the metaphorical crab.

b) Money Matters

How money and individualism have influenced the Fijian way of life is well captured in the response¹⁵² by an interviewee (January, 2010). According to him, different cultural lifestyles are moving into the village. He commented that urbanization and development have resulted in a money-oriented lifestyle and that before 'money arrived' the asset that mattered was kinship (*veiwakani*¹⁵³). Within this kinship, he explained, existed the various practices such as Fijian borrowing (*kerekere*¹⁵⁴), sharing (distributing the catch from fishing) and co-operation for ceremonial or traditional function (*solesolevaki*¹⁵⁵). He also pointed out that the money-oriented lifestyle goes against the Fijian traditional way of life (*bula vakavanua*).

¹⁵² For original Fijian version refer to Response 6.19 in Appendix.

¹⁵³ See Section 6.2.5.

¹⁵⁴ See Section 6.2.4 d).

¹⁵⁵ See Section 6.2.4 c).

Financial pressures on community members are due to a combination of lifestyle demands and traditional obligations. Farrelly (2009, p. 141), comments that financial pressures in the Fijian society range from bus-fares to meeting traditional obligations:

With the introduction of development projects in Fiji, the people have turned their attention to the trappings of modernity and they now desire more material wealth. This is not surprising, however, considering the rapidly-growing financial pressures of ceremonial and other reciprocal and obligatory expectations and expensive necessities including school fees and bus fare to school, plantations, to visit relatives and to attend to kin obligations.

These financial pressures on the community may bring about some changes in kinship as Arno (1993, p. 78) describes how a man expressed his thoughts on this during a village meeting:

He opened his mouth wide, showing his teeth, and pointed inside....
Because *dala* means both ‘dollar’ and ‘open’. The meaning of this, he said is “*sa kania na veiwekani na sedi*,” “the cent eats kinship”.

The effect money has on *kinship* is also reflected in a comment¹⁵⁶ by an interviewee saying (Indigenous Fijian government worker, January, 2010) that we Fijians do not value money, but we what value the most is our kinship (*veiwekani*), and that we have our traditional kinship obligations to fulfil. This interviewee also pointed out that some individuals of affluence, with money, are elevated in some parts of Fijian society since they can fund whatever they suggest during meetings¹⁵⁷, using the saying “money talks”. This is especially relevant when western commodities can also be used now, instead of traditional Fijian artefacts when carrying out traditional obligations. Thomson describes this aptly (1968, p. 287): “At Deuba, where the natives earn considerable incomes from growing bananas, the property given consisted exclusively of European commodities, such as kerosene, tins of biscuits and calico, purchased in Suva....”.

¹⁵⁶ For original Fijian version refer to Response 6.20 in Appendix.

¹⁵⁷ For original Fijian version refer to Response 6.21 in Appendix.

The quest for money has also dictated the time when the community is available for CBMC meetings and workshops as explained by an indigenous NGO worker (August, 2008). According to him, the scheduling of meetings for CBMC is sometimes difficult because other activities are also happening in the village. He uses the example of villages that have to sell their produce at the market. For these villages, he explains, the best days for meetings and workshops are either Monday or Tuesday, since any day after that, villages will be gathering their produce for selling at the market. Once the *tabu* has been decided, in a way the community has lost a source of livelihood. Other sources of money are tapped into such as planting rootcrops for the purpose of selling at the market (*Navakavu* case study site and *Namada* village in *Nadroga*), making Fijian handicrafts such as mats for sale (*Gau* Island in the *Lomaiviti* province) and selling locally made salt (*Lomawai* district in the *Nadroga* province).

Apart from money influencing the *bula vakavanua* and CBMC, human rights also affect CBMC implementation.

c) Human Rights

At two of the case study sites, individuals are claiming that traditional community responsibilities are no longer a legitimate claim on their individual decision-making; and that being ‘forced’ to fulfil community obligations is a breach of their ‘individual’ human rights. This ‘human rights’ stance results in individuals not taking part in various aspects of the CBMC, although these non-cooperative individuals may also be benefitting from the work of CBMC such as increased fish stocks and scholarship funds. A Fiji academic explains how human rights advocates are not appreciative of the notion that being responsible goes together with human rights:

A lot of people are latching on to human rights; “You can’t force me what to do. I have human rights”. So obviously it’s a time of change in the village, and those kinds of people, you know, they’ve learnt about rights. But the second part is that they perhaps, haven’t learnt about responsibilities. People going around, jumping up and down about their rights, but they don’t know that with these rights, also come responsibilities (Fiji academic, April, 2010).

A valid point raised above is that with human rights, come responsibilities and even consequences. A probable consequence and possible strategy to deal with such individuals is to withhold from them some benefits of the CBMC work such as access to the scholarship funds, as a form of ‘economic sanction’.

There were recommendations at two of the sites to bring back “native laws” to deal with individuals who refuse to do communal work because of their human rights. One interviewee (*turaga-ni-koro*, January, 2010) explained¹⁵⁸ that native laws that used to be enforced required that those who do not do their village duties are forcefully brought before the chief or punished. He explains that now people are just doing what happens in terms of human rights, saying: “I will just exercise my own rights”.

The native laws were enforced by the *Buli*¹⁵⁹ at the district level and now, once in a while there are talks at government level to reactivate it. Arno, (1993, p. 79) comments that “the abolishment of the *Buli* form of government, which had established a separate government, in effect, for Fijian villagers in earlier colonial days, was a step backwards. Things are less orderly now, and people ignore communal work”. I remember my mother telling me that her father (my grandfather) was the *Buli* for his district. There was a night curfew put in place and on Saturday nights, he would wait at the bridge in the village at eleven ‘o clock with a big stick. The bridge connects the town to the rest of the villages along the shores of the island. Anybody passing that way would get the stick. It was a joke that young men and women coming back from the dance in town, would rather swim past the bridge in the cold sea then ‘meet’ the stick. This beating was a traditional method of punishment to deal with offenders, or poachers as captured in the statement below with respect to dealing with poachers:

There’s other traditional ways – you beat somebody and that’s being used too in some cases. You know, it’s not something approved from the Western point of view. (But) it is often thought that some people in Fiji will not pay any attention until you whack them around a bit (Fiji Academic, April, 2010).

¹⁵⁸ For original Fijian version refer to Response 6.22 in Appendix.

¹⁵⁹ The *Buli* is appointed by the Fijian Affairs to look after the district and enforce native laws in the district.

From my findings and experience, some beatings are still happening but not necessarily associated with CBMC work.

d) Other cultures in Fiji

The statement below by one of the interviewees implies that because of the mingling of people in the Fiji society, all the cultures (including Fijian) are affected, with violations of protocols ¹⁶⁰:

The mixing of cultures is happening in every province or government, and is walking all over every other culture's protocols (Community member, January, 2010).

Becker (1995, p. 23) describes how "Fijian protocol organized around receiving and entertaining *vulagi*¹⁶¹ suggests a traditional predilection to engage and incorporate those from outside the immediate social sphere". With respect to the Indo-Fijian community, Fijians use the expression; "*O ira na wekada na Idia*", or, "*O ira na noda vasu*" especially during traditional ceremonial presentations. Translated respectively as "Our kins the Indians" or "Our *vasu*". *Vasu* refers to a sister's offspring and is actually a term of endearment since a *vasu* is traditionally held in high regard and have special privileges.

FLMMA (2010) reports that for the first time ever, after ten years of work with *qoliqoli* owners in Fiji, Indo-Fijians along one of the sites on Viti Levu, in the *Korolevu-i-wai* district, have become involved in the FLMMA network. This is to meet the objective of encouraging non-village residents to become active and collaborative participants in *qoliqoli* management. The Indo-Fijian community will also be represented in the *Korolevu-i-wai Qoliqoli* committee. More importantly, FLMMA reports that one of the key findings of a study at the FLMMA site that was carried out was that with respect to the *Korolevu-i-wai* Indo-Fijian community, approximately "88.6% harvest seafood from the *Korolevu-i-wai qoliqoli* and 11.4% buy fish from the market". FLMMA (2010) states that: "They are the missing link in the *qoliqoli* management plans as they are one of the key stakeholders".

¹⁶⁰ For original Fijian version refer to Response 6.23 in Appendix.

¹⁶¹ visitors

It is important to involve individuals from other non-indigenous Fijian cultures who are living within the vicinity of the *qoliqoli*. Their involvement becomes essential if they are also using the resources within the *qoliqoli*.

The influence and effect that these other communities and culture have on CBMC is another area of much needed future research.

6.2.10. Western governance system

Under the Western governance system I will concentrate on two aspects: how the national government affects the CBMC work through its legislation and the work of the NGOs, especially FLMMA in Fiji.

a) National Government.

As previously stated, in spite of the Environmental Management Act (EMA), the Department of Environment is too understaffed and underequipped to effectively implement the Act. Fortunately, conservation-focused NGOs have partnered with villages and other stakeholders to drive CBMC in the country.

Government has also given support in some areas on CBMC while it needs to put more effort in others. The support for marine conservation is shown in the acceptance of a cabinet paper for a Coastal Committee to be set up as stipulated in the EMA. According to a Fijian academic (April, 2010), the Coastal Committee is currently developing a Coastal Management Plan for Fiji.

The Fisheries Act stipulates that a Fishing License is given out by the Ministry of Fisheries. As explained in the following response by the Senior Fisheries Officer who also happens to be the Chairperson of FLMMA, the conditions of the license are also specified by the Fisheries regulations and the *qoliqoli* owners themselves. Now with the setting up of the *tabu* area in CBMC, *qoliqoli* owners are also giving their conditions that there should be no fishing in their *tabu* area¹⁶², no fishing on Sunday and specifications about mesh size.

¹⁶² For original Fijian version refer to Response 6.24 in Appendix

There is a misconception by the *qoliqoli* owners that as soon as they have drawn up a Management Plan their *qoliqoli* automatically becomes a “no fishing” area. A senior Fisheries officer, (January, 2010) stated that *qoliqoli* owners must also realize that government still has to issue fishing licenses since commercial fisherman also need to make a living¹⁶³. However, in the issuing of licenses, the *qoliqoli* owners can now give a ‘letter of consent’ to commercial fishermen, usually given by the head of the *yavusa* which outlines the conditions¹⁶⁴ of the *qoliqoli* owners:

It all depends on the ‘letter of consent’ given by the *qoliqoli* owners. This ‘letter of consent’ is given by the head of the *yavusa* or whoever is giving it, will specify in the letter as to where (fishing) is allowed. Some of these places are now using that consent letter, there is a template for that letter that *qoliqoli* owners can use. Or they can just write, ‘I hereby consent that so and so, can fish in our *qoliqoli* from so and so period of time. Fishing in the *tabu* area at so and so is prohibited’ (January, 2010).

This arrangement is fair to both commercial fisherman and the *qoliqoli* owners. The commercial fisherman still has access to the *qoliqoli* but not the *tabu*. The agendas of both parties are adequately met by this arrangement when the commercial fisherman abides by the conditions of the fishing license.

b) Roles of NGOs and FLMMA

The shortcomings and weaknesses in CBMC that have been identified throughout this thesis have to be dealt with by stakeholders involved in CBMC. Some of these shortcomings include the under-representation of women in aspects of CBMC and the non-legalisation of the powers of the *qoliqoli* wardens. NGOs and FLMMA have played an important role in providing a forum for *talanoa*.

In carrying out CBMC work it is important to use vernacular to get the information and ideas across. Some words when used in the vernacular hold special meanings which can motivate the community members in CBMC implementation. An example that I had discussed is the use of the terms *viritaka* (throw away) and *maroroya* (carefully put

¹⁶³ For original Fijian version refer to Response 6.25 in Appendix.

¹⁶⁴ For original Fijian version refer to Response 6.26 in Appendix.

away) the rubbish. The use of the second term can result in people being careful to responsibly dispose of rubbish since *maroroya* is a term used with taking care of or looking after precious assets such as children or money. In Fiji, apart from the language itself, the manner in which something is said is also important, as Nabobo-Baba (2006, p. 116) explains:

The manner in which something is said, the speakers deportment and tone is as important, if not more important, than what is said. A person is judged by their manner of speech, so knowledge of how to speak is essential. Knowledge of things Fijian.... is imparted using carefully selected words, and language use depends on customary relationships within a village and with other clans or *vanua*.

It would be an ideal situation if all presentations by NGOs and FLMMA in the community workshops and training be done in the vernacular¹⁶⁵, and all the materials translated into Fijian or Indo-Fijian. I am sure that communities will be happy to receive materials that are even written in their own dialects¹⁶⁶.

In my field work, some comments alluded to problems existing at some of the CBMC sites because of non-recognition and appreciation of *vanua* systems already in place (such as governance systems and TEK) by some partners verbalized below by a community member:

This is one of the critical things which partners or external bodies.... they seem to be overlooking. They are not recognizing this traditional way of living.

Traditional indigenous values and beliefs are deeply embedded in individuals in indigenous Fijians within a village community and even NGO and Government workers and academics. These indigenous values and beliefs have also been reinforced by Christian teachings (see Section 6.2.1). The words *yalomatua* and *sautu* were used a lot in ceremonial speeches either as a goal to aspire to or to praise the other party. Using them in Goals and Vision Statements in addition to the current biodiversity goals of the CBMC initiative would be advantageous since most of the indigenous Fijian community

¹⁶⁵ In the Fiji context, this is the Fijian, Hindi or any other language apart from English

¹⁶⁶ Different provinces speak different dialects.

still hold strongly to traditional beliefs and values. An example of beliefs influencing behaviour is the covering up of rubbish while working in the taro or cassava plantation because of the belief that the next harvest is stolen by the exposed rubbish (See section 5.2.2).

Partners (NGO's, Government departments) need to realize that any introduced initiatives should be integrated with existing systems and dynamics to increase their chance of success and sustainability. In some of the government implemented projects in Fiji, the initiative collapses as soon as the government pulls out.

This also includes the problem of imposing a western ecological approach, into a traditional Fijian setting in the village. He explains that when this does not work, other different approaches are experimented with to find the most appropriate one to use in the community. As expressed by an indigenous Fijian NGO worker:

Most partners have been getting across different kinds of approaches.... could be ecological based approaches, biodiversity approaches. There are lots of approaches that different partners introduce to different communities.

He goes further to suggest 'marrying' the two approaches of western and traditional Fijian approaches:

.... but I think they are missing out not trying to marry these approaches and see how it.... you know.... fits in well with the local governance and the leadership within the communities and, you know, merge them well to see where the two commonalities (are) and try to have that. I think that's the only way in we can have, you know, see the big change, great success, especially from community's engagement – the community's participation.

The donors and various NGO's in conservation might have different agendas as articulated by an interviewee that, within FLMMA there are groups that are focused on conservation and others that are community focused. All these NGOs 'live' under one roof (FLMMA), and all realize that doing one well will enhance the other since human well-being and ecological well-being are closely interlinked. He explains that some

NGOs emphasise bio-diversity conservation when applying for the funding but what they are really interested in is a healthy fishery and thus food security and benefits for the Fijians.

Cultural well-being and survival is then ultimately the responsibility of the community itself, and its willingness to engage in *talanoa* as dialogue about any changes that the culture has to undergo to adapt to the changing environment. In the FLMMA constitution, a seat in the executive committee is reserved for the Fijian Affairs Board (FAB). Unfortunately FABs' attendance and involvement is very poor, although the Provincial (*Yasana*) and District (*Tikina*) councils have been very active.

FLMMA also helps the *qoliqoli* committee with good governance as explained by an interviewee:

You know it's not just helping communities set up the *tabu*. That's just the start. It's working with the *qoliqoli* committee on good governance.... keeping records and making sure that the money is properly utilized. Generally we just have a workshop called 'roles and responsibilities' in this project, who is expected to do what so everyone is clear on that (FLMMA committee member, April, 2010).

Views were expressed that FLMMA provides a forum where underlying conflicts can be brought out into the open and discussed. According¹⁶⁷ to an interviewee (NGO worker, January, 2010), sometimes the forum is for clarification such as the difference between a *kanakana* and a *qoliqoli* while conflicts are simply based on misinformation about boundaries of the *qoliqoli*. When asked whether FLMMA contributes to resolving these issues, the response¹⁶⁸ was that there were mixed results:

Mixed results: some success (but) usually it's a matter of clarification. One of the main causes of conflict, you know, is that *qoliqoli* is owned by a district (*vanua*), with four or five villages. They are saying, "This is the boundary for our village, this is our *qoliqoli*" which is not the case ... this is their *kanakana* within the *qoliqoli*.

¹⁶⁷ For original Fijian version refer to Response 6.27 in Appendix.

¹⁶⁸ For original Fijian version refer to Response 6.28 in Appendix 6.

Forums facilitated by FLMMA and NGOs also provide opportunities to talk about things as explained by an NGO worker (April, 2010) that it is against Fijian culture to stand up and say, ‘We need a meeting about this’. If one stands up in this manner the implication is that one is putting oneself above other people. He said that one of the main roles of the partner agency (NGO) is to provide a focus and a venue to allow people to talk about their problems and resource management: *talanoa*.

From my experience and knowledge of the Fijian culture, and as also pointed out by Nabobo-Baba (2006), in a Fijian meeting or gathering only specific people are allowed to talk. A forum facilitated by an outside party and not necessarily ‘traditional’ in nature facilitates dialogue and allows members of the community such as youths and women who would not normally talk in a *Bose Vakoro* to participate. Thus, NGOs play an important role in CBMC by facilitating negotiation and dialogue which would not normally take place in a village setting. This is another example of the metaphorical crab growing and changing in order to adapt in order to survive.

6.3. Summary and Conclusion

Discussions and recommendations have been put forward under various sections above. The purpose of this section is to summarise the main implications of the influences of social capital, TEK and other factors in the environment on the walk of the metaphorical crab.

All creation, including humans, their governance systems, processes and social contexts are interconnected and I use the mud crab, *Brachyura spp* and its ecology as a metaphor to illustrate this interconnectedness in the Fijian society. The Fijian ancestral saying of the crab “*Nomu i qaiqai ga Qei, noqu i qaiqai*” literally means, “How you walk mother, that’s how I’ll walk” emphasises that the Fijian way of life (*bula vakavanua*) is passed down from one generation to the next: by looking, learning and imitating. The Fijian way of life within which CBMC is implemented, is influenced by external factors such as economical, social and environmental factors. For instance Batibasaga, Overton and Horsley (1999) state that the Vanua concept of the relationship between people and nature has been “challenged, weakened and lost because of western and religious influences due to colonization” (p. 103). From my fieldwork, a respondent commented (refer to Section 6.2.9) that urbanization and development have resulted in a money-

oriented lifestyle and that before ‘money arrived’ the asset that mattered was kinship (*veiwekani*¹⁶⁹). Within this kinship, he explained, existed various practices such as Fijian borrowing (*kerekere*¹⁷⁰), sharing (distributing the catch from fishing) and the life of co-operation for ceremonial or traditional function (*solesolevaki*¹⁷¹).

A society cannot be isolated from external influences, which would be similar to taking the crab out of the mangroves and mudflats. A crab has to evolve and adapt to any changes in the environment in order to survive. In the same way, external influences will continue to touch the individual Fijian life but it is for Fijians as a society to adapt. The Fijian society has to come up with suitable strategies (refer to recommendations under various sections above) to conserve their environment while at the same time preserving the cultural integrity of the Fijian people: this is the whole notion of the walk of the metaphorical crab.

6.3.1 Summary

This chapter has looked at how things are all connected in the Fijian way of life (*bula vakavanua*) when implementing CBMC in Fiji.

The following response from one of the pioneers of conservation work in Fiji beautifully captures the relationship between social capital, traditional leadership and a combination of non-indigenous knowledge and TEK in managing a *tabu*:

The bottom line is to manage your resources well and that involves, if you do have to open [the *tabu*], discuss it well and make sure everyone has agreed on the rules beforehand, and there’s strength there that will say, the chief or whoever, ‘OK, this is enough.... they impose the *tabu*. You may even keep a quarter of it closed and rotational opening [for] the other three-quarters. There’s a lot of different ways to do it. It’s not treated like a Western Park [where] you have to close it forever. The idea is helping people get more fish, really (Fiji Academic, April, 2010).

¹⁶⁹ See Section 6.2.5

¹⁷⁰ See Section 6.2.4 d)

¹⁷¹ See Section 6.2.4 c)

What was coming through in the *talanoa* with the community was how members of the community believed that the observance of the positive aspects of Fijian culture and TEK would help facilitate CBMC in Fiji. Castellano (2004, p. 100) explains what indigenous people mean when talking about reviving their cultures:

When Aboriginal Peoples speak about maintaining and revitalizing their cultures, they are not proposing to go back to igloos and tepee's and a hunter-gatherer lifestyle. They are talking about restoring order to daily living in conformity with ancient and enduring values that affirm life.

The next chapter is the final chapter. It will discuss three areas. Firstly, it will discuss the key findings that have emerged from the case study analysis and literature review of this research. Secondly, it will identify the limitations of this work, and finally, it will also suggest some areas for future research.

Chapter 7

Conclusion

Asking whether community-based conservation works is the wrong question. Sometimes it does, sometimes it does not. Rather, it is more important to learn about the conditions under which it does or does not work (Berkes, 2003, p. 624).

7.1 Introduction

The focus of this research was to develop and deepen understanding about how the Fijian way of life, *bula vakavanua*, affects the implementation of community-based marine conservation (CBMC), with a particular focus on social capital and traditional ecological knowledge (TEK). In using the term CBMC, I am referring to the conservation of Fijian marine flora and fauna, while at the same time also emphasising the conservation of the *bula vakavanua* that is associated with the marine environment. This conservation of the *bula vakavanua* (see Section 1.3) draws from Borrini-Feyerabend et al., (2004, p. 299) definition of co-management suggesting the securing of “identity, culture, livelihoods and the diversity of natural resources” as a consequence of co-management. This research demonstrates that there are no simple or clear cut answers about what is conducive for CBMC to work effectively. As Berkes (2003, p. 264) states above, ‘sometimes it is more important to learn about the conditions under which it [community-based conservation] does or does not work’.

The village systems in Fiji are based on traditional social lifestyles, governance, culture and religion. CBMC takes place at this village level and any external initiative brought into this village setting should fit into the existing system and dynamics to increase its chances of success and ensure the initiatives’ sustainability, bearing in mind that ‘village’ life is not static. There must be an ongoing dialectical flow and interaction between external initiatives brought into this village setting and local ‘village life’, which will invariably be shaped and reshaped by village reality. There is a complexity of relationships, dynamics, and politics in the *bula vakavanua*, within the Vanua community context. This is coupled with external factors which are also influencing existing traditional social lifestyle, governance, culture and religion.

There are three key findings distilled from my review of literature and analysis of case study and fieldwork regarding the influence social capital and TEK of the *bula vakavanua* on CBMC. The three key findings of this research are: the interconnectedness of all things in the *bula vakavanua*; *talanoa* as dialogue to facilitate adaptation of the *bula vakavanua* to external factors; and kinship (*veiwekani*) as the hub of TEK and social capital actions and behaviour, all of which I will outline below.

In presenting these findings, I am also privileged to give a voice to indigenous Fijians; women; and members of the fisher tribes raising some of their concerns regarding CBMC. The structure of this concluding chapter is portrayed in Figure 7.1.

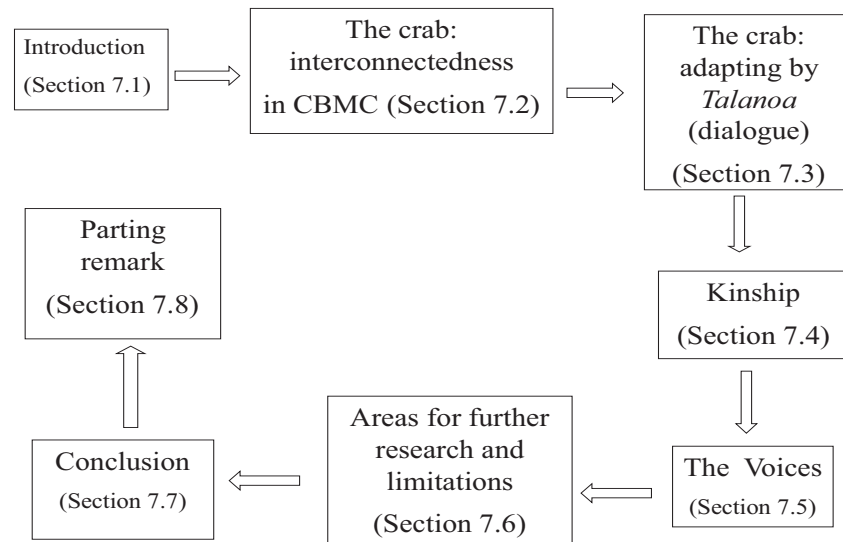


Figure 7.1: Summary of Chapter 7

7.2 The crab – social capital and TEK interconnected in CBMC

In this section, I will briefly outline the key research findings about the influence of social capital (see Section 7.2.1), TEK (see Section 7.2.2), and the interconnectedness of social capital and TEK in CBMC (see Section 7.2.3).

7.2.1 *Social capital influence on CBMC*

I have discussed in detail the effect of social capital on CBMC in Chapter 4. Kinship is recognized as a hub through which all social and cultural capital transactions take place in the *bula vakavanua* (see Figure 4.5).

There is a traditional hierarchical system within Fijian society which is based on kinship. Marriage may strengthen existing links or create new links within which social capital exists. Within this system is vested ownership of lands and *qoliqoli*. Tribes have totems and traditional roles are *mataqali* based. Indigenous Fijians usually address each other according to the way in which they are linked and only use first names as a second option. More importantly, the governance of the indigenous community, including CBMC, is facilitated by councils and communities from various levels within this system and this is based on *veiwekani*. The strengthening of community relationships starting from the nucleus family (*vuvale*) level will help to strengthen other associated structural system and links.

Kinship links may be due to bloodlines, marriage and *Vanua*, where members have taboo relationships, and cannot talk to each other (*veitabui*). Difficulties were experienced, for instance when members of the *qoliqoli* committee had taboo relationships with each other. These individuals will not speak to one another directly but use third parties to communicate between themselves (Arno, 1993). This also has implications for CBMC in that if two such individuals are present within the same vicinity the flow of information will be affected.

There are social behaviours which are practised in Fijian society that influence social capital. The culture of silence is practiced to show reverence or respect. Consequently, silence at meetings can easily be misunderstood since silence can lie within a continuum from complete agreement to total opposition to what is being discussed. The practice of Fijian borrowing (*kerekere*), can result in a traditional delegation from outside the site approaching the *vanua* for permission (*kerekere*) to fish in the taboo (*tabu*) area, which is normally granted. A Fijian's sense of obligation to unquestioningly carry out tasks (*qaravi i tavi*) is also advantageous for CBMC work, and individuals who display this trait may be used by the CBMC initiative as 'community champions'.

CBMC implementation and meetings are facilitated at various levels. ‘Being related’ (*veiwekani*) is an important aspect in an indigenous Fijian’s life and is the essence of connectedness and networks. *Veiwekani* involves many protocols, customary duties and reciprocations. These are traditional obligations that have to be carried out. A significant amount of money, material goods, time and energy is used to sustain *veiwekani* links as expressed by Brison (2007). In the Fijian society, *veiwekani* is the centre or hub of social capital (see Figure 7.1) the context within which connectedness and networks, trust, reciprocation and rules and sanctions are placed and enacted, consequently shaping CBMC implementation in Fiji. As Alifereti Tawake stated (pers comm., December, 2009) “I am using the word asset.... *veiwekani* is our biggest asset. It is also FLMMA’s asset. Building on the [practice of] *veiwekani*”.

7.2.2 TEK influence on CBMC

The role of TEK in CBMC is discussed in detail in Chapter 5. This research demonstrates that TEK and non-indigenous knowledge bodies of knowledge can complement each other and bridge gaps non-indigenous and indigenous knowledge (Foale, 2006).

In this research, I drew upon Berke’s knowledge-practice-belief complex (2006) and Houde’s six faces of TEK (2007) to explore TEK’s role in CBMC in the Fijian context under four components: values and beliefs; knowledge; practices and skills.

In indigenous Fijian society, environmental values are ethical statements and beliefs that guide resource use and strongly influence the behaviour of individuals and the community as a whole. In some cultures the observance of reciprocal relationships between humans and non-human animals involves customary rules and beliefs for showing respect, such as returning bones to the original environment (Sherry and Myers, 2002), which was also a belief at one of my case study sites. The practice of sacred ecology and totems is deeply entrenched within indigenous Fijians, such as the belief that punishment is inflicted upon those who do wrong, can be a more effective deterrent than legal instruments. Sacred ecology and totemic implications should be reflected in the various aspects of CBMC initiatives.

7.2.3 *Social capital and TEK interconnected in CBMC*

I use the common Fiji mud crab¹⁷² (*qari*) (see Figure 1.1) as a metaphor in this thesis to illustrate how aspects of the *bula vakavanua* (social capital and TEK) are interconnected in the implementation of CBMC in Fiji. For instance, Olsson et al., (2004) points out that knowledge and associated practices that are founded upon robust social networks are more likely to be effective and sustainable. Both TEK and social capital are embedded within the social network and institution of the *bula vakavanua*, and especially within the kinship network.

I will focus on two examples of interconnectedness. First, at one of my case study sites, the village elders informed me that if relationships in the Vanua are not good then the harvest from the sea will be poor, reflecting the belief of interconnectedness of the ecosystems (land and marine). Second, TEK is held at various kinship levels in the Fijian community, and there are also norms, rules and taboos (social capital) that are associated with the use of this TEK. For instance, when a chief wishes to eat turtle or a specific fish, he will approach the fisher tribe. The fisher tribe will then go through rituals of taboo and use their skills and knowledge of the weather, sea and habitat of fish to catch the fish. Once they return, the fish will be taken to the chief who will reciprocate with an appropriate gift. This can be a form of conservation since only the fisher tribe can catch specific fish such as turtles; and assumes that fishing does not deplete the fish stock or degrade associated habitat. Cultural practices are also performed and conserved in such relationships.

7.3. Other factors in the environment of the crab

Several other factors emerged as having a powerful influence, including, first, the Lotu worldview. Most of the biblical principles preached from the pulpit emphasise the Fijian values such as loving and forgiving one another and putting others first. With the arrival of some newer denominations, it is now a concern within CBMC work in Fiji that different interpretations of the bible are undermining traditional authority, and, contributing to the break down of social life. Bringing the various church leaders together in a *talanoa* as dialogue is especially important to clarify denominational views concerning resource use and also views on submission to chiefly authority.

¹⁷² *Brachyura species.*

Second, when considering Vanua worldview, Berkes asks a relevant question, “Are traditional worldviews relevant to present day resource stewardship?” (2008, p. 68). *Tui Nale*¹⁷³, the chief of the fisher tribe at one of my case study sites, explains that as long as his tribe survives there will always be turtles. This is an indigenous perspective that underscores the inter-dependence of people and turtles. This perspective can be considered problematical from a western scientific conservation perspective because indigenous Fijians may assume that turtles will survive regardless of human use and environmental change. Discussions and negotiations, as used in a collaborative approach of adaptive co-management, need to take place between community members and stakeholders (NGO, government departments etc.) to share perspectives and work out how to reconcile divergent worldviews.

Third, communication based on oral traditions can be difficult to sustain in the face of rapid societal change. For instance, CBMC information dissemination is done during village meetings in the village hall. Notification of meetings is carried out by the *mata-ni-vanua* standing at particular spots in the village and announcing the date, time and purpose of the meeting, which might not be heard by all village members. Oral tradition is still predominant during meetings and the adequate transfer of information to those unable to attend the meeting is questionable. Improvements can be made by dissemination of information using, for example, a village board placed at strategic locations such as outside the church, at the village bus stop or at the meeting house.

Fourth, *Yaqona* or kava drinking is a favorite past-time in Fiji, but excessive *yaqona* drinking also takes place with some individuals drinking *yaqona* late into the night, waking up late the next morning and not being productive (Tomlinson, 2004; Prosser, 2006). Individuals may not become involved in CBMC work because of excessive *yaqona* drinking the night before. However, there are circumstances where the informal *yaqona* sessions and *talanoa* in the evenings during CBMC workshops were helpful to ascertain what people really felt about certain issues in the workshop, but could not speak out of respect.

¹⁷³ A pseudonym has been used to protect the identity of the person.

Fifth, jealousy (*veiqati*) can be a significant issue in some villages. Any new project provides the opportunity for old conflicts to come out, especially when certain people or groups of people are advocating the project. There will be people in the village who will not co-operate because of the existing conflicts and the animosity between groups. This may stem from perceptions that if the CBMC initiative is successful, those who are project advocates will 'look' good in society.

Sixth, cheating (*veivakaisini*) has a detrimental impact on the *bula vakavanua*. A *vasu* took advantage of his status as the son of the chief's sister and came to ask to fish in the *tabu* to buy a boat. The *vasu* also harvested bech-der-mer and trochus, but the villagers could not say anything because of respect for the chief. This is similar to a situation in which an inland village approached their coastal village kin for permission to fish in the *tabu*.

Seventh, different levels of respect are accorded to different chiefs, a consequence of which is the varying degrees of compliance with the *tabu* at village level during CBMC work. A great advantage for the CBMC work in Fiji is the utilization of the existing Fijian traditional system of governance within which community life operates. Thomson (1968, p. 64) comments that "The first blow at the power of the chiefs was struck unconsciously by the missionaries, and Ravuvu (1987, p. 254) confirms this by explaining that Fijians believe the chief to be god incarnate, but this has been undermined by Christianity who preach a sovereign God in heaven. Two years ago, the power of and reverence for chiefs was again affected when Commodore Bainimarama¹⁷⁴ dissolved the Great Council of Chiefs (GCC), and commented that they should go and 'drink homebrew'¹⁷⁵ under a coconut tree'. Chiefs, to a certain extent, have had to learn to earn the respect of the people, because respect does not automatically come anymore with chiefly birth.

Lastly, western influences that are a cause of concern raised by community members include individualism and assertion of human rights at the expense of community interest. Individualism had a significant negative influence on the *bula vakavanua* according to many Fijians from my case study sites because it is seen to undermine one

¹⁷⁴ Head of the current military government

¹⁷⁵ A home-brewed alcoholic drink

of the most important values in the Fijian society, namely community living and kinship.

7.4 The crab – surviving and walking by adapting

In this co-management initiative, *bula vakavanua* (the crab) is adapting in order to survive in an environment with changing political, social, environmental and economic features. Borrini-Feyerabend et al., (2004, p. 299) states that “co-management is an effective way to build upon what people already have, know and do to secure their identity, culture, livelihoods and the diversity of natural resources on which they depend”. As the Fijian community attempts to secure its livelihood and culture, it has to continually and appropriately integrate these factors into their *bula vakavanua* so that the ‘crab’ survives and continues to ‘walk’ in a worthy manner. This is encompassed in the crab’s Fijian proverbial saying “I’ll walk how you walk, mother” (see Chapter 6).

In order for the ‘metaphorical crab’ to grow and survive, it must be able to adapt to the environment by using strategies such as integration. Integration involves processes such as negotiation which must take place at many levels. An example from my field work involves the conservation of totems during traditional visitations between kinship groups. One of my interviewees related how negotiations had to take place to convince a tribe to take other marine species since their totem (that they usually take) takes a longer time to reach adulthood and reproduce.

I draw on the ‘integration of different knowledge systems’ aspect of adaptive co-management definition by Armitage et al., (2007, p.5) (see Section 5.3). TEK and non-indigenous knowledge should be integrated as part of an adaptive co-management approach (see Figure 5.4) thereby drawing on the strengths of both knowledge systems. The notion of integration can help to overcome the tendency to have one form of knowledge being seemingly superior over the other, or that one can survive without the other in CBMC because both have important and complementary roles to play.

There are also problems associated with integrating TEK and non-indigenous knowledge such as the lack of respect for TEK by scientists (Reid et al., 2006), differences in language and cultural contexts (Casimiri, 2003), and TEK that is not applicable to current environmental problems (Berkes et al., 2000, p. 1252). TEK is not

made up only of observable data as is the usual case with non-indigenous knowledge, since the cultural context is based on cosmologies that are fundamentally different to western worldviews

7.5 The indigenous Fijian woman from the fisher tribes' voice

Conducting this research has enabled me and given me the privilege to give a voice to indigenous people, women and members of the traditional fisher tribes even though I did not set out purposefully to do this at the commencement of the research.

7.5.1 Indigenous voice

The government of Fiji owns the seabed and foreshore (land up to the high water mark), whereas the fishery belongs to the indigenous owners. As an indigenous person, I am voicing the concern of the *qoliqoli* owners about fishing licences being issued by the government's Fisheries department allowing commercial fisherman to have access into the *qoliqoli* that the Vanua and other CBMC stakeholders have agreed to set aside as *tabu*. At times, letters of consent (See Section 6.2.10) have been given by the *qoliqoli* committee or *Vanua* Chief, outlining the condition of the fishing licence from the CBMC stakeholders' point of view but ineffective monitoring makes the letter of consent seem like 'lip service'. There is ineffective monitoring and enforcement for two main reasons. Firstly the commercial fisherman often have faster boats than the *qoliqoli* wardens and they can thus make a quick escape when necessary. Secondly, the *qoliqoli* wardens appointed by the *qoliqoli* committee are not legally powered to arrest poachers or violators of the conditions set out in the letter of consent. There have been instances where *qoliqoli* wardens have been prosecuted for confiscating the poachers' fish catch and fishing gear. The worst case was when the paramount chief of one of the provinces in Fiji was hauled to court for trying to protect his *qoliqoli*. The review of legislation by the government in order to facilitate and empower CBMC activities will be advantageous in enabling communities to secure a sustainable livelihood.

The importance of Fijian values also influences the implementation of CBMC. A compelling example of when Fijian values clash with conservation agendas was when two of the provinces involved in CBMC harvested eighty turtles when the provinces were hosting an indigenous national meeting and for a chiefly installation. In this case the provinces were more obliged to host their visitors in an appropriately honorable

manner by providing the marine animal that is usually presented to chiefs: turtles. Clearly such divergent values and practices need to be discussed and where possible reconciled to ensure that CBMBC efforts are effective and sustain the *bula vakavanua*. (see Section 6.2.2 on *Vanua* worldviews).

There are no simple answers as to how to resolve such dilemmas except to develop a co-management strategy of *talanoa* as dialogue to allow stakeholder views to be presented, heard, and understood.

7.5.2 *Womens' voice*

Women are not usually part of meetings and workshops. One reason given by a gentleman was that older women with ecological knowledge have died. But so have older men! In an interview with a family (see Section 6.2.7 part a), I was informed that women were taking part in CBMC by preparing meals. For the meetings, women are usually busy catering: cooking, preparing and serving meals, then washing and cleaning up afterwards. In some cases women have been able to attend meetings only after a decision was made not to have too much food variety during meals, but for a single dish variety to be cooked, since more variety requires more time for food preparation. However, there are informal networks that women can and do use to get their voices heard and that is by expressing concerns or views through their familial relationships with men.

Womens' participation should be encouraged in CBMC work to realise the potential of the whole community. The other CBMC partners (such as NGOs and government departments) need to take measures to increase the participation of women in CBMC using a two-pronged approach. Firstly, the CBMC partners could specify the number of females that should be members of the *qoliqoli* committee or to attend training workshops. Secondly, men involved in key roles in CBMC initiatives (such as a chief or indigenous male graduate) could act as spokespersons or advocates on behalf of women and persuade other men to have more female representation and participation in CBMC at all levels (including Provincial and *tikina* councils).

7.5.3 Fisher tribes voice

Roth, in his book *The Fijian way of life* (1973, p. 63), talks about the fisherman's role of supplying fish from the sea and how fishermen were not usually land owners. A fisher tribe would have enough land for their village and just enough land for some subsistence farming, since their livelihood comes from the sea. Whereas all the other tribes have land to plant or harvest their taro for commercial trading, or receive royalties from their mahogany and pine plantation, fishermen are not as fortunate when the *qoliqoli* is placed under a *tabu*.

At two of my case study sites, the members of the fisher tribe had two main concerns: inequitable compensation for *qoliqoli* grounds lost to the *tabu*; and their opinions and concern of not being consulted when it came to the affairs of the *qoliqoli*, especially the placement of the *tabu*. The fishermen (my interviewees) had actually done calculations and showed me how the compensation did not adequately meet their, familial, Vanua and church obligations. This is the key reason explaining why poaching continues to occur despite CBMC initiatives: it was the need to meet financial demands in order to survive. The advice given to my dad when he set out to make a life for himself in the city over half a century ago makes full sense: "Go and be the best you can, live and survive in the city, there is not enough space in our village for everybody".

In order for the 'metaphorical crab' to survive, it must be able to adapt to the environment by using strategies such as integration using *talanoa* as dialogue. Community stakeholders (chief, fisher tribe, *qoliqoli* committee, NGO partner, etc) should meet, communicate and negotiate to a way forward to ensure that all members of the community experience the richness of the *bula vakavanua*. This is what collaborative CBMC action and the adaptation of the metaphorical crab is all about.

7.6 Limitations of this study and areas for further research

There were two main limitations affecting this research. Firstly, because of time and resource constraints, I could not increase my case study sites numbers to undertake provincial comparative analysis. Secondly, ethically I was the only one who could conduct my interviews or focus group in order to protect the identity of my respondents/participants, so I could not gather more data due to time constraint.

Social capital and TEK are only two aspects of the *bula vakavanua* that influence the implementation of CBMC in Fiji. Culture is being influenced by various forces such as modernisation and the evangelical church sects. Other aspects that would benefit from future research, therefore include the effects of church (*lotu*), individualism and traditional governance system on CBMC. For instance, according the Chairperson of FLMMA, the spiritual dimension was not emphasised when the FLMMA work started in the communities. FLMMA only worked with the TEK of the community and scientific knowledge. However, with time, the importance of *lotu* became one of the factors that is seen to exert a powerful influence on the implementation of CBMC. An example of this is the effect of *lotu* beliefs on compliance with the *tabu*, since *lotu* believes that all natural flora and fauna have been freely given by God for harvesting and use. The effect of distance to urban centres on *bula vakavanua* and CBMC is also an area for further research. An example of the influence of modernisation would be looking for evidence of erosion of trust, or loss of respect for traditional authority at CBMC sites closer to urban centres.

7.7 Impact of Findings

The impacts of this research are centred round the findings about *bula vakavanua*, *veiwekani* and *talanoa*. In CBMC, clearly there is interconnectedness of all things in the *bula vakavanua*; with kinship (*veiwekani*) as the hub through which TEK and social capital actions and behaviour are lived out, and *talanoa* as dialogue to facilitate adaptation of the *bula vakavanua* to external factors.

Some understandings have been gained about the reasons for recurring problems in marine conservation such as excessive harvests sanctioned by the Vanua and chiefs, poaching and premature opening of the *tabu* (see Section 1.2). Some of these understandings may not result in a singular simple reason, but a complex mix of reasons some of which will also be influenced by context and time. There is a complexity of relationships (*veiwekani*), dynamics, and politics in the *bula vakavanua*, within the Vanua community context, coupled with external factors which are also influencing existing traditional social lifestyle, governance, culture and religion. To understand the nature of these relationships, it must be appreciated that TEK values, beliefs, skills and practices are held in relationships (*veiwekani*) within the Fijian society. *Veiwekani* dictate norms and rules of engagement with others in the *bula vakavanua*. The

implication of this in CBMC work for instance is that two individuals who have a taboo relationship because of their blood, Vanua or marriage links will not be able to communicate with each other, and cannot effectively work together in the *qoliqoli* committee.

The starting point, I believe, is the appreciation by the indigenous Fijians that, just like the metaphorical crab, the *bula vakavanua* has to continually adapt to a changing environment through *talanoa*. In the same way if the *bula vakavanua* (or metaphorical crab) is not able to adapt, it cannot survive. These adaptations will require different degrees of change in cultural behaviour and norms of the *bula vakavanua*, in order to make it suitable and relevant for the current times. This is similar to cultural hybridisation that is occurring for instance in Fiji at the Bouma National Heritage Park (Farrelly, 2010). A good example of cultural behaviors and norms in CBMC work is the cultural practice of *kerekere* and the *vasu* coming to ask for the rights to fish in a part of the *qoliqoli* that has been declared a *tabu*. *Talanoa* would need to take place, preferably before the *kerekere* occurs, to set boundaries around which a *kerekere* can be facilitated within the CBMC work.

This research is not only relevant to Fiji, but to other Pacific Island sites, or any CBMC sites where indigenous knowledge and way of life exists. The *bula vakavanua* (or fa'a Samoa¹⁷⁶ or other indigenous way of life) must be appreciated and how it plays out in the CBMC work must be understood, and appropriately facilitated, to help ensure the sustainability and success of the work. In some CBMC work that have been undertaken in the past, the evidence of lack of full awareness of the indigenous community's traditional obligations, for instance is the absence of contingency plan in the management plan to cover for the obligations associated with the passing away of chiefs, and the subsequent installation of the chief's successor. On the other hand, a deep appreciation of the indigenous community's values would have avoided the partner organisations' surprise at the excessive harvest of turtles for two major traditional events in Fiji. The CBMC management plans will have to capture details of traditionally significant events, obligations and even artefacts and foods (especially marine species) required for the events.

¹⁷⁶ The Samoan way of life

As a result of this research, I see that NGOs can also play a more prominent role in facilitating *talanoa* sessions for unresolved issues in CBMC work, not only in Fiji, but in LMMA sites throughout the Pacific. Facilitating *talanoa* sessions by NGOs includes tasks such as helping to identify the relevant representatives of the various stakeholders that have to be present, choosing an appropriate ‘neutral’ venue, and even playing a moderating role during the *talanoa* sessions. Some of the unresolved issues include the fisher tribes’ plight, gender roles in CBMC, reaching understandings between *Lotu* beliefs and CBMC, and ownership of *qoliqoli* by the indigenous Fijians. For instance, in resolving the fisher tribes’ plight, some of the stakeholders that need to be are to be identified by the NGO and need to be present at the *talanoa* include representatives from the Ministry of Indigenous Affairs, the Provincial Council, Vanua, *qoliqoli* committee, and fisher tribe. *Talanoa* “for mutually agreed position” (Reid et al, 2006, p. 320) takes place so that the fisher tribe must be adequately compensated, and the *qoliqoli* committee is not over-compensating the fisher tribe.

The government of the day must realise that CBMC initiatives need to have formal government backing in order for the CBMC work to be completely effective, sustainable and successful. There are glaring issues that need governments political will and decisions. These include the complete ownership of the *qoliqoli* (not only the fishery) by the Vanua. This will ensure full responsibility and accountability for stewardship and conservation of the *qoliqoli* by the Vanua. The current authority for issuing fishing licenses needs to be delegated to the *qoliqoli* committee and less controlled by the relevant government agency. The procedures and legislation for legal recognition of MPAs and community-appointed *qoliqoli* wardens need to be in place as soon as possible. This, for instance, will give legal authority to these wardens to immediately confiscate poachers’ boats and fishing equipment, thus acting as a deterrent and helping reduce the frequency of poaching incidents.

Equally as important would be role for indigenous Fijian individuals in the partner organisations to provide a crucial a link between the organisation and the community. For instance, the indigenous Fijian can help identify possible scenarios that would jeopardise the CBMC work, bearing in mind that, values and beliefs will usually take precedence over conservation agendas, such as the excessive harvesting of turtles in an

important upcoming traditional indigenous Fijian event. These scenarios could then be discussed in *talanoa* as dialogue sessions.

This research has been a personally educative journey for me; there has been a shift in my outlook from being just a ‘science-educated conservationist’ and biologist, to one who is also more appreciative of the *bula vakavanua* implications on CBMC work. I have the opportunity to influence other science-educated conservationists, (especially indigenous ones), on the *bula vakavanua* perspectives, for it to be increasingly appreciated and embraced, and to enhance the level of participation by community.

7.8 Conclusion

This thesis was borne out of my concern as an indigenous Fijian woman from a fisher tribe, about recurring problems in CBMC implementation in Fiji. I used an indigenous Fijian methodology approach based on the Vanua Research Framework to develop and deepen understanding about how the Fijian way of life, *bula vakavanua*, affects the implementation of CBMC in Fiji. I focused on social capital and TEK, gathering data from three ‘instrumental’ case study sites in my ‘collective case study’ approach, and using *talanoa* methodology in my fieldwork. The common Fiji mud crab¹⁷⁷ (*qari*) is used as a metaphor in this thesis to illustrate how aspects of the *bula vakavanua* are interconnected in the implementation of CBMC in Fiji. Conducting this research enabled me to give voice to indigenous people, women and the traditional fishermen. The saying “*Na nomu i qaiqai ga Qei, na noqu i qaiqai*” (“I’ll walk how you walked, mother”) is important in my thesis since indigenous Fijian society, while living out the *bula vakavanua* and carrying out marine conservation, is affected by factors in the environment which affect how it ‘walks’. These factors have to be continually and appropriately integrated into the *bula vakavanua* so that the crab survives and continues to ‘walk’ in a worthy manner. Continuous and appropriate integration involves adaptive co-management through *Talanoa* as dialogue and negotiation to craft solutions that are agreeable to all stakeholders in the CBMC.

¹⁷⁷ *Brachyura* species.

7.8 Parting remark

My story is done. In the Fijian way, I (with the kind help of my older brother) have written a poem (Appendix 8) to briefly summarise what I have put in this thesis: the thesis of this thesis communicated poetically.

Every now and then, while writing this thesis, I have had to share parts of my life story, to situate myself in the context or scene, so that you, the reader, can understand my perspective, as an indigenous Fijian, and a woman from a fisher tribe. Telling my story, I am reminded of a tale often told among indigenous Fijians, about God creating the land and the people to inherit them in Fiji. God had finished creating all the people in all the provinces and He was so relieved to say, “I’m done!” One of His assistants said, “Lord, you have one province left to create people for, the Rewa¹⁷⁸ delta”. The Lord looked and saw this little corner of Viti Levu, full of mangroves, easily flooded and muddy. The Lord looked at His raw materials (clay, etc.) and only saw leftovers. However, the Lord still managed to create our Rewan ancestor, albeit not very good looking, since he was made from left-over materials. He said to our ancestor “Now go and inherit Rewa!” and sent our ancestor off. God felt sorry for our ancestor after he left, so He called the man back. When our ancestor reached God, He said “Open your mouth” and threw in some sugar. Then God said to our ancestor, “You might be ugly and not well put together, you might have inherited frequently-flooded mudflats, but I have given you the gift of the gab”.

I hope that you the reader have read this thesis and have been illuminated, and even inspired to build on it for the betterment of CBMC in Fiji and beyond.

¹⁷⁸ My province of origin

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Glossary and Pronunciation

<i>ba</i>	fish trap
<i>balolo</i>	seaworms
<i>bati</i>	protectors of the tribal borders, Fijian traditional warriors
<i>benu</i>	rubbish
<i>bete</i>	priest
<i>bole</i>	challenge
<i>bose vakoro</i>	village council or meeting
<i>bula vakavanua</i>	the traditional Fijian way of life
<i>Buli</i>	administrative head of a district
<i>bulubulu</i>	to present an offering and make a traditional apology
<i>buroburogo</i>	tight-fisted
<i>ca</i>	bad, evil
<i>cabe</i>	to come out of the water
<i>cakacaka vakoro</i>	working together in the village
<i>daunivucu</i>	dance master
<i>dairo</i>	a sandfish
<i>gasau</i>	reed or sedge
<i>gone</i>	child
<i>gonedau</i>	traditional fisherman
<i>ibole/ivosavosa</i>	Fijian idiom or saying
<i>icili</i>	a house where visitors are billeted
<i>ika</i>	fish
<i>ikanakana</i>	an eating place
<i>ilavo</i>	money
<i>i sevu</i>	first fruit, formally presented
<i>i taukei</i>	indigenous race, owner of the land
<i>iVakatawa</i>	Methodist church leader in the Vanua
<i>kaikoso</i>	a sea shellfish
<i>kakana dina</i>	edible root crops(e.g. taro, cassava, yams)
<i>kalougata</i>	blessing
<i>kamunaga</i>	whale's tooth or riches (traditional Fijian goods)
<i>kana cala</i>	eating something one is forbidden to eat (traditionally)
<i>kana veicurumaki</i>	sharing plantations and <i>qoliqolis</i>
<i>kau mata ni gone</i>	when the eldest child (and siblings) is traditionally taken to the mothers' village
<i>kemuni</i>	(cardinal pronoun) second person plural, used as a term of respect when addressing a person of rank
<i>kerekere</i>	borrowing
<i>ketekete</i>	a basket for women, made of coconut leaves, plated, to be suspended on the back.
<i>kocokoco</i>	greedy
<i>koro</i>	village
<i>loloma</i>	the act of showing love and kindness to all
<i>lotu</i>	religion or religious acts
<i>mana</i>	supernatural power
<i>maroroya</i>	carefully look after
<i>mataisau</i>	traditional carpenter/craftsman

<i>mataki</i>	the name an indigenous Fijian calls a member of his/her
<i>matanigasau</i>	<i>matanikatuba</i> family
<i>matanikatuba</i>	the traditional Fijian apology done by presenting <i>yaqona</i> or <i>tabua</i> to the wronged party
<i>matanitu iTaukei</i>	doorway/in the Fijian context it is the symbolic door through which an indigenous Fijian enters a village
<i>mata ni peni</i>	traditional Fijian governance system
<i>matanivanua</i>	pen nib
<i>mataqali</i>	spokesperson (lit. eye or face of the land)
<i>meke</i>	a sub-clan; subdivision of a <i>yavusa</i>
<i>qaravi itavi</i>	a Fijian native dance
<i>qoliqoli</i>	unquestionable duty and service
<i>Ratu</i>	traditional fishing ground
<i>rau</i>	title prefixed to the name of a man of rank
<i>Roko Tui</i>	a rope of twisted vines and coconut fronds for fishing
<i>Rokola</i>	chiefly title, administrative head of a province
<i>sautu</i>	ancestral god of the carpenter (<i>mataisau</i>) clan
<i>sere</i>	peace and plenty, a state of wellbeing/prosperity
<i>serekali</i>	song
<i>sevu</i>	poem
<i>sevusevu</i>	offering of first crop to God (done in church) or to the chief
<i>solesolevaki</i>	a <i>yaqona</i> presentation made when something is requested
<i>tabu</i>	the act of working together for a public traditional duty or ceremony
<i>tabua</i>	holy, forbidden, prohibited, holy
<i>talatala</i>	whale's tooth used in traditional Fijian ceremonies
<i>talanoa</i>	a minister of religion
<i>tavale</i>	to tell/a tale or story/dialogue/a research methodology
<i>tikina</i>	cross-cousin
<i>tokatoka</i>	district
<i>Tui</i>	the enlarged family unit
<i>tukuna</i>	a King or sovereign
<i>tukuni</i>	to say
<i>turaga-ni-koro</i>	Fijian myth or legend
<i>tuva kawa</i>	village headman
<i>vakadreti</i>	to arrange the family tree
<i>vakaillesilesi</i>	to verbally emphasise
<i>vakamisinari</i>	a person appointed to a post ; usually government workers
<i>vakanomodi</i>	a collection taken in a Methodist church to pay for the "service"
<i>vakarokoroko</i>	silence
<i>vakarorogo</i>	reverence, honour
<i>vakasabusabu</i>	to listen, obey
<i>vakasokumuni tukutuku</i>	wasteful
<i>vakatawa</i>	gathering data/fieldwork
<i>vakavakarau</i>	to keep watch over, to guard
<i>vakavinavinaka</i>	preparation
<i>vakaviti</i>	the act of thanking
	in the Fijian fashion

<i>vanua</i>	land/people
<i>vasu</i>	the relationship of a person with his/her mother's clan
<i>veidokai</i>	respect
<i>veidolei</i>	exchange
<i>veikauwaitaki</i>	to care about one another
<i>veilomani</i>	to love one another
<i>veimaroroi</i>	protectiveness
<i>veiqati</i>	to envy, be jealous of
<i>veirogorogoci</i>	mutual listening
<i>veirokorokovi</i>	mutual respect
<i>veisiko</i>	to visit others taking gifts
<i>veitabui</i>	people forbidden to have dealings with each other because of taboo relationships
<i>veivakabauti</i>	trust
<i>veivakaisini</i>	to deceive
<i>veivakaliuci</i>	treat the other as higher than one self
<i>veivakarokorokotaki</i>	respect one another
<i>veivakatorocaketaki</i>	enhancement/development
<i>veiwekani</i>	kinship
<i>vinaka</i>	good, thank you
<i>viritaka</i>	throw away
<i>vosota</i>	patience
<i>vucu</i>	Fijian chant
<i>vula i gasau</i>	month of reeds
<i>vula i kelikeli</i>	month of digging
<i>vulagi</i>	visitor, guest
<i>yalo ca</i>	bad spirited
<i>yalo malua</i>	humble, meek
<i>yaqona</i>	also known as <i>kava</i> . A drink infused from the root of a pepper plant, <i>Piper methysticum</i>
<i>yasana</i>	province
<i>yavusa</i>	the widest Fijian patrilineal kinship unit. Its primary subdivisions are the <i>mataqali</i> .
<i>Yavirau</i>	to fish with a <i>rau</i>
<i>yavu(tu)</i>	house site in a village

Fijian spelling and pronunciation :

b is pronounced mb as in timber

c is pronounced th as in thy

d is pronounced nd as in handy

g is pronounced ng as in singer

b is pronounced ngg as in finger

Appendices

Appendix 1: for Chapter 1

Appendix 1.1 Principles of Vanua Research Framework

Appendix 1.2 List of Questions

Appendix 1.3 Nine Primary Philosophical Principles of Indigenous Knowledge a Methodology for Ethical Research

Appendix 2: for Chapter 2

Original Fijian Transcripts of Respondents Answers – Chapter 2

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Community Handout for PhD Research

Appendix 4: for Chapter 4

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Appendix 5: for Chapter 5

Appendix 5.1 Original Fijian Transcripts of Respondents Answers – Chapter 5

Appendix 5.2 Verata Calender in Fijian

Appendix 5.3 Bua Chant

Appendix 6: for Chapter 6

Original Fijian Transcripts of Respondents Answers – Chapter 6

Appendix 7

List of Plants and Animals

Appendix 8

Poem for CBMC

Appendix 1: for Chapter 1

Appendix 1.1 Principles of Vanua Research Framework (Nabobo-Baba, 2007)

The use of Vanua Research Framework incorporates these principles:

- i) Research that is done on Fijians need to benefit people, especially the researched community.
- ii) It should focus on indigenous peoples' needs and must take into account indigenous cultural values, protocols, knowledge processes and philosophies, especially those related to knowledge access, legitimization, processes of ethics, indigenous Fijian sanctions, clan 'limits or boundary', that influence knowledge and related issues.
- iii) Researcher Fluency in the Fijian Language and or dialect of the researched community. This recognises the importance of language in understanding, critiquing and verifying indigenous concepts, and in documenting aspects of their lives appropriately.
- iv) The use of indigenous persons in team as principal researcher(s) in team research situations. On the role of insider native-indigenous researchers I concur with Swisher (1996:93) when he argued that they should be given the principal role in researches which focus on native peoples and their issues, and points out that 'insider' views enhance passion and commitment, as well as ask new and different questions. This is in line with Smith (1999) who suggested that "*Kaupapa* Maori research needs Maori researchers who regard themselves and their research as fitting within a *Kaupapa* Maori Framework" (p. 184)
- v) Respect and reciprocity: researchers need to acknowledge and affirm existing elders and Vanua structures and protocols. In terms of reciprocity, researchers must ensure there is sufficient means to show appreciation to people so that people's love, support, time, resources and knowledge freely given are duly reciprocated. Fijian gifting is appropriate here.
- vi) Researchers need to ensure as far as possible that local people in the research setting are co-opted as members of the research team. This is a means of

building local capacity and ensures benefits in multiple ways to the research community.

- vii) Researchers need to build into their research, procedures for accountability through meaningful reporting and meaningful feedback to the relevant people and community.
- viii) Vanua chiefs as well as village chiefs and elders at all levels, must give permission to all researches done in the Vanua.

Appendix 1.2 List of questions

1. Do you enjoy getting involved in the project? Why or why not?
2. What part do you personally play in the project?
3. Can you outline some aspects of the Fijian way of life, *bula vakavanua*, displayed during this project? (watch out for trust, reciprocation, norms/rule/sanctions and bonding sc)
4. What are some barriers that prevent *bula vakavanua* from enhancing/adding value to the project?
5. What do you think can be done to enhance the role of *bula vakavanua* in the implementation of project?
6. Can you describe a situation in your experience during the project in which trust was
 - a. built up
 - b. broken down
7. Can you describe a situation in your experience during the project in which reciprocity and exchange was displayed?
8. Which other action or behavior by others or yourself would build up or break down trust while being involved in the project?
9. What are some common rules and norms practiced in the project?
10. What sanctions/punishments are given to those who break the rules?
11. What new networks/relationship have you (on a personal level) formed OR strengthened as a result of this project? On *Tokatoka*, *Mataqali*, or *Yavusa* levels? Village level?
12. In your opinion, what other linkages/networks need to be strengthened AND why, in terms of:
 - i. Traditional
 - ii. Institutional (with government, NGO or academic institution)
13. What are some TEK that you are familiar with?
14. What TEK are being directly used in the project **and** how have they been effectively (or not effectively) used?
15. Are there other TEK that are relevant but not being used? Why not?
16. Why do you think TEK is (or is not) important **or** relevant in the implementation of the project?
17. What do you suggest be done to maximize the use of TEK in general in projects?
18. Is there any other comment you wish to add?

Fijian Translation:

1. O taleitaka na nomu vakaitavitaki tiko ena ituvatuva qo? Baleta na cava o taleitaka (se sega) kina?
2. Na cava e nomu itavi ena ituvatuva e vakayacori tiko qo?
3. Rawa ni vakamacalataka mada na bibi kei na yaga ni itovo ni bula vakavanua ni kawa iTaukei ena kena vakayagataki ena i tuvatuva oqo? (* me vakanamata

tiko na veivakadilo ena veidinati, lawa vakavanua, isema vakaveiwekani raraba) Vei ira oqori na kena cava soti e a vakavotui mai ena kena vakayacori tiko na i tuvatuva (project)?

4. Na ituvatuva vakavanua cava soti ena vakalatilati ena kena na vakavinakataki/vukei na i tuvatuva qo?
5. E dua beka na nomu vakatutu me na rawa ni vukea na itavi ni itovo ni vakavanua ena vakayacori ni tuvatuva qo?
6. E a bau vakilai beka ena gauna e vakayacori tiko kina na i tuvatuva ni veidinati/veivakabauti e a
 - a. tarai/vakavinakataki/laveti cake
 - b. vakaleqai/vakacacani/vakanadukui
7. Na ivukivuki se itovo cava beka era vakayacora na vo ni ilawalawa se o iko ka vuna na kena vakatoroicaketaki se vakaleqai na i tuvatuva ?
8. O bau vakila beka li ena gauna a vakayacori tiko kina na i tuvatuva e vakavotui kina na veidinadinati kei na veiwasei/veisoli?
9. Na ivakaro kei na ivakarau taurivaki dei cava so e a vakayacori ena i tuvatuva?
10. Na veiyalani/totogi cava soti e dau tau vei ira na basu lawa?
11. E a bau bucini beka e dua na sala ni veimaliwai/veiwekani se a vaqacotaki sara beka ena vuku ni i tuvatuva ka qaravi?
12. Na sala se isema ni veitaratara cava sara mada o nanuma me vaqacotaki me baleta na:
 - i. Vanua
 - ii. Veitabacakacaka ni vei qaravi (vakamatanitu, sega ni vakamatanitu se veitabana ni vuli ena kena ivakatagedegede cecere sara)
13. Vakamacalataka mada eso na kila vakaiTaukei e matata vinaka vei iko?
14. Na kila vakaiTaukei cava e a taurivaki ena i tuvatuva kei na kena vakilai (se sega) ena kena vakayagataki?
15. E tiko tale beka eso na kila vakaiTaukei e ganita/se rawa ni a taurivaki ena i tuvatuva (project) a qai sega ni vakayagataki? Na cava e a sega ni taurivaki kina?
16. Na mawe/veivakauqeti cava e vakayacora na vakaiTaukei ena i tuvatuva? E a yaga beka li ka salavata kei na vakasama ni i tuvatuva (se sega) na kena taurivaki na kila vakaiTaukei?
17. Na cava o na via vakatututaka me na dau vakayacori ena kena na vakayagataki vakalevu na kila vakaiTaukei ena vei i tuvatuva (project) sa tu me qaravi?
18. E tiko tale beka e dua na ka o ni gadreva me vakaikuritaki kina na ulutaga ni veitalanoa daru sa qai mai vakayacora oti toka?

Appendix 1.3

Nine Primary Philosophical Principles of Indigenous Knowledge

A Methodology for Ethical Research

Cosmology

Language

Integrity/Honesty

Respect

Reciprocity

Quality of life

Protection

Acknowledgement of Traditional Protocols

Intent

1) Cosmology

“For Indigenous Peoples, a nation’s cosmology is more than the study of the stars and planets. It is an understanding of the foundation from which their creation stems. It is inclusive of not only the stars, moon and sun, but also the plants and animals and all beings that contain a spirit and are animated. Cosmology is understood as a related whole, rather than in parts.”

2) Language

“[O]ur sounds [language] are a powerful consciousness which conveys the legacy of our knowledge.”

3) Integrity/Honesty

“Our people participate in just... good research.... that holds these values. These values are truthfulness, integrity, honesty, compassion, acknowledging life as a gift, acknowledging cultural survival must be central, as well as spirituality.”

4) Respect

“[T]here is the element of earning the right to knowledge which is embedded in respect. You must earn the right to the knowledge in the community, and then you demonstrate by respecting the wishes or the agenda of the community.... you want your people, or the people in the community, to be treated fairly and decently. All of the things like privacy and confidentiality are going to be honoured and respected.”

5) Reciprocity

“People working with Indigenous peoples should start articulating an understanding of how they’re going to reciprocate with them in the community – not defined by them but defined by the community.” Training on Participatory Research Methods

6) Quality of Life

“After centuries of colonialism that resulted in the loss of our cosmological environment and relationships, the content of research must be integral to our people’s restoration, health and well being. All research must reflect those ethics. We acknowledge our own participation in our health and well-being.”

7) Protection

“The ‘protection of IK, [is] the protection of spirituality and ceremonies,’ and this principle is non-negotiable.”

8) Acknowledgment of Traditional Protocols

“There must be respect for the observation of traditional protocols. Research is about gathering knowledge and in order to participate within a community, you should observe the traditional protocols. Find out what they are!”

9) Intent

“Research must benefit the community.... it must abide by our philosophical statement and it must be done within this value system.... the outcomes of the research have to include the physical, mental, emotional and spiritual.”

Appendix 2: for Chapter 2

Original Fijian Transcripts of Respondents Answers – Chapter 2

Response 2.1.1

Me'u tukuna rawa toka vei iko- ni'o na taroga tiko eso na qoli tiko i baravi... nodra ika tiko e loma ni koro qo. Au sa tukuna rawa de mani lakolako 'o taro tu yani...me vaka na dairo, kaikoso. Keitou va tiko ya. Ni'o na taro yani vaqo, eso e na rawa ni vaka me madua na tukuna yani. Ni 'o na tukuna vakatani ga, 'o sa na totogitaki. Me'u na tukuna rawa tiko mo na kila.

Response 2.1.2

“So na gauna da tabu saraga ni veivosaki na tagane na yalewa. Gauna qo, sega, sa lako ga yani vavereverea....i liu sa bau dredre, veivosaki madaga, ira na qase e liu, e? Qai yaco mai na gauna qo, e sega. So vei ratou na nodatou Turaga qo sa vawati bati, sa ra lai veiwatini tale o ira na tabu, sa veisau na gauna e? Ira ga na bati ra dodomo mai e Ratu Tavale?

Appendix 3: for Chapter 3

Community Handout for PhD Research

Exploring the role of the *bula vakavanua* in implementing CBEM in Fiji: a focus on social capital and traditional ecological knowledge:

Na vei vakarau, veimaliwai kei na kila vaka-Verata (vakavanua) esa vakayagataki tiko ena Cakacaka ni mamaroroi ni yaubula.

Winifereti Nainoca (Mrs)

Vakamacala taumada:

Eda sa marau ka matalau ni sa levu sara na veiqoliqoli e sa taqomaki tiko ena cakacaka ni kena maroroi na iyaubula. Na vakadidike e dau vakayacori me rawa ni tabea se tara cake e dua na I tuvatuva me vaka na cakacaka ni maroroi ni I yau bula. E da sa kalougata sara ni na vakadidike e sa vakayacori tiko oqo me baleta na iqoliqoli me vaka beka na levu kei na veimataqali sasalu ni waitui esa rawati tiko mai na kena maroroi tiko na i qoliqoli.

Na vakadidike oqo

Na noqu vakadidike e baleta tiko na veika vakavanua e vakayagataki tiko ena cakacaka ni maroroi ni yaubula. Na vakadidike oqo e sa vakayacori tiko ena vei yasa I vuravura tale eso me vaka ni sa lesu tale tiko na maroroi ni I yaubula (me vaka na iqoliqoli, veikauloa, uciwai) vei ira ga na kena I taukei vakavanua. Esa ka bibi gona kina me ra **kila ka doka** na bibi ni **kila kei na itovo** vakavanua ko ira na veivuke/vakaitavi tiko (partners, government depts.) ena kena maroroi na I yaubula.

E rua na tikina se ulutaga e vakabibitaki tiko kina ena vakadidike oqo:

- 1) na kena bibi (importance) **kei** na itavi (role) ni bula vakaVerata/ vakaviti/ vakavanua ena mataqali cakacaka vakaoqo – na veiwekani (vakadra, vakavanua), i tovo (veidokadokai, veirogorogoci, veikauwaitaki)
- 2) na **kila** vakaVerata/ vakaviti/ vakavanua

Na i naki ni vakadidike

Nai naki se usutu ni vakadidike oqo oya me ra na kila ka doka o ira na veivuke/vakaitavi tiko (partners, government depts., etc) na bibi ni **kila kei na itovo** vakavanua ena kena maroroi na i yaubula. Era na rawa talega ni na veitauriligataka o ira na veivuke (partners) kei ira na itaukei ni iyaubula ena kena vakasamataki kei na vakasaqarai ni veigaunisala me vakayagataki kina na rua na ka bibi oqo, na i tovo kei na kila vakavanua, me tabea se vukea cake kina na cakacaka vakaoqo.

Vinaka Vakalevu Sara!

Appendix 4: for Chapter 4

Original Fijian Transcripts of Respondents Answers – Chapter 4

Response 4.1

Sega saraga ni dua na ka keimami vakaitavi yani kina o keimami na tiko qo baleta ni na sasaga qo era cakava sara ga na tiko maina koro. Era veivakadonui saraga kina, era tekivutaka, era cicivaka na kena cakacaka taucoko ni kena qaravi nai qoliqoli.

Response 4. 2

Na icolacola vakailavo ni matavuvale, qaravi vuli, na lotu, matanitu, kena qaravi na vuli toro cake, ya, e rawa ga mai wai ya, na sasalu ga ni waituiIa na koro ke lako mada ga i qoli me dua na macawa, e na rawa e \$,x000 E 25 na matavuvale e tu qo Na ilavo (e soli mai) e rawa ni bula kina na koro ena rua se tolu na macawa.

Response 4. 3

E levu na veikorokoro e(ra) ya vica tu na udolu na eka na vanua ni teitei, musu nodra kau tu na qele ni tei yaqona ... ko e rawa tiko mai kina nodra vurevure ni ilavo Sa lako cake na neitou kerekere ke rawa ni doka tiko na Bose Vanua na galala ni koro qo, baleta ni o koya e vakararavi vakatabaki dua tiko i na sasalu ni waitui me i vurevure ni nona bula e veisiga Ni sa ra via gunu ti vakasuka na gone, keitou san a sega ni rawa ni wawa, na cauravou sa ran a siro sobu i wai.

Response 4. 4

Keitou sega mada ni kilai iko me vaka ni'o sega ni laurai mo mai colata tiko na oga vakavanua.

Response 4.5

Ovisa ni qoliqoli vesuka nai yaya kei ira na dau qoli, kauti ira i vanua. Sa ratou qai lai solia tale na turaga qo (ovisa ni qoliqoli) na nodratou (na qoli butako) i sevusevu, ratou lai boka. Sa ratou qai vakadaberi, ratou qai vosataki. Vosataki saraga me ratou sa tagi. Vosataki, sa ratou tagi vinaka saraga, sa qai solia tale o gone qo (ovisa ni qoliqoli) dua nodratou i soro, nodratou matanigasau, nodratou bulubulu. Keda vulica vinaka na lawa ni ovisa ni qoliqoli, ka da sega ni vinakata me kau ena lawa, eda na cakava na gaunisala malumu – me mosi talega vi ira. Oti ya era sa qai vakadaberi mai cake, ra

vasalusalutaki, ra vapautataki, ratou sa qai soqovi, vakani. Sa qai soli tale veiratou (na)nodratou ika, soli nodratou masini, ... ratou ya va na qaloni na benisini me ratou lesu tale i nodratou koro. Kila na ka ratou qai tukuna? “Na ka caka qo vei keitou mai Dravuvalu, vinaka cake me keitou kau i na siteseni ni ovisa”. Ratou madua!.

Appendix 5: for Chapter 5

Appendix 5.1

Original Fijian transcripts of respondents answers

Response 5.1.1

Kevaka era taura na veata i Namalata, kevaka e sele ga, kau na kena gacagaca, biu na qana, ya na sini laurai i Namalata. Sa na lai tiko mai Tavua i Koro – sa na dro. Kevaka e caka talega va ya i Tavua ena yali talega mai Tavua – tiko mai Namalata.

Response 5.1.2

Na i vakaraitaki ni benu ni cakacaka, na i vakaraitaki ni lauqa

Response 5.1.3

E tiko talega o ira na bati, ira qo era taqomaka na vanua. Ira tale ga qo era liganiqele, liganiwau, liganisau, ira na dauniteitei..... Magiti era tea tale ga na Bati. Ira qo ko dau levu duadua tiko na kedra qele ena dua na i tikotiko. Ni o ira qo era teivaka tu na vanua, nodra cakacaka ga na teitei. Gauna sa cegu kina na ivalu, tabaka sara na teitei.

Response 5.1.4

Na ba qo ra vakatoka na qase me ba-kalou. Ta mai na gasau, mai tali, sa qai lai kelei na baNa gauna mai ni ua, na gauna sa na lako yani kina na ika, sa na cumuta na gasau.... Sa na vakamuria ... sa na lai curu na matai ni katuba, vakatokai tiko na 'vakalomaniwai'. Lai curu ya, lai curu ena i karua ni katuba ; 'naivakavura'. Lai curu ena i ka otioti ni katuba, sa lai curu ena 'lomanimalevu'. Na gauna sa tiko kina i keya, sa sega ni rawa ni lesu tale mai na ika .

Appendix 5.2**Verata Calender in Fijian**

January -Nuqa -Deke na Lairi -Matua na kaikoso (vakarau kaburaki yaloka) -Vakaluvani na qari -levu na sici, yaga, golea	July -levu na kuita -levu na ta -se na vaivai ni valagi -se na drala -cukicuki, tei na uvi taumada -vakaluvani na kawakawa
February -vua ka dreu na wi -vua na ivi -levu na moli	August -levu duadua kina na kuita -vua na tiri (tolu na mataqali)
March (vulai sevu – vakamuria na lotu) -kelikeli me tei na uvi -se na gasau -matua na qari, kuka -ubi na ika ke sigani de bona	September -se na maqo -vakadataki na uvi sa tadre -vakaluvani na kawakawa
April -levu na salala (tugadra) - se na kaudamu	October -se na makosoi - se na dabi -vua na vesi
May - se na doi -levu na vavai, mumu -tei na dalo ni siga ni sucu -levu na salala -matua na uvi leka -tekivu kune mai na kuita -tekivu uro mai na ta	November -dreu na painapiu -dreu na kavika -momona na qari -levu na walu -gauna vinaka ni vakasavu ba
June -levu na kuita -uro, vakaluvani na ta -levu qai vakaluvani talega na matu -levu na cebe -gauna ni daniva -vua na dakua salusalu -werewere me tei na uvi	December -vidi na sinu -qio bulubulu -levu na nuqa (lelevu, lalai) – rawarawa na mokuta na nuqa ni bibi na ketena -se na sekoula -vakaluvani na saqa -matua na lairo
All year crops/fish: -pineapple -dalo, breadfruit -kawago, saqa, doko ni vudi, damu -kaikoso -dairo	

Appendix 5.3

Navatu Village, Kubulau, Bua Chant

1. Ni vakarorogo saka na turaga (Listen honourable gentlemen)

 Au via tukuna noqu yasayasa (I want to talk about my area)
 Bari ni vatu a veidelana (Rock faces and hills)
 Davo koto era na kui ni vuaka (The 'vuaka' current flowing below)
 Ra bini kina na ika dau kata (It's full of fish that bite)
 Liutaka tu o Masiyarayara
 Qio vula qai bati gaga

2. Vanua oqo da sa kilaya

 Nodra gaunisala tu a waqa (This is the highway for boats)
 Lakova ga ni draki vinaka (Travelling only during fine weather)
 Ke sa cudru e maqa ni rawa (If it's angry you cannot travel)
 Kena bai tiko a bai varasa

3. Noqu baravi au tukuna mada

 Isa ko Nakura kei Vatuwaqa
 Mai Waibona kei Qalicava
 O Nukubalavu a kena i yala
 A nodra vanua kece a marama

4. Isa wailei au sereka mada

 [Beating of lali starts at this point of the chant]

 Domo ni lali e wamasamasa
 Qiria o dau ni yavayava
 Vakatauvu ki Namalata
 Lomai suetabu e ovaca
 Cabeta a vanua mamaca

Appendix 6: for Chapter 6

Original Fijian Transcripts of Respondents Answers – Chapter 6

Response 6.1

Ko ira na mata lotu vou qo era vakatara na tabu. Vu ni kena yavu tikoga ni nodra rai, ni qo mai vua na Kalou, mai na veimatalotu vou. E rua ko e kau mai na yacadrau i na bose vakoro, e rau lewe ni soqosoqo lotu vou ... rau basuka na lawa. Rau kacivi mai nai tikotiko vakaturaga me rau vosataki, rau sega ni lako mai

Response 6.2

Ia, sa levu talega na vanua e vei qaravi kina na FLMMA e lako mai kina na concern ya - na vakavakadewa ni veimatalotu ra tiko – that's why we wanted to tap into the 'faith' conservation area. Tou sa vinakata me tou sa involve-taka talega mai o ira na qase ni lotu, me ra mai buta toka na spiritual dimension.

Response 6.3

Na taro ga meda taroga tiko ni whether that belief is from heaven or from our ancestors.... because we are related to these organisms, eh ? I normally see myself as au relate-taki au vei ira na ika. Koya beka ya ko e tukuni tiko vaqo ni tu na noda kau, e tu na keda ika.... kena i balebale na noda relationship e tiko i keya.... kena balebale ni yaco gona e dua na ka va qo, dina ga ni u sa Christian, ia ni yaco na ka ya, au na taroga "What have I done to my relations?" Maybe noqu relations e sega walega ni o ira na wekaqu vakayalo, maybe e dua na ka au a cakava i noqu qoliqoli, au a qoli butako beka kina se'u a voroka beka na ka qo. So my belief, baleta ni'u veiwekani kei ira qo, ni'u cakava e dua na ka me vakamavoa-taki kina na vei wekani qo and na lai affect-taki au i ke, kevaka au qai sega ni vakadodonu taki au vua na kena i Taukei ko a solia mai. To me, na vanua ya e rau sema vata toka kina na traditional belief kei na spiritual belief.

Response 6.4

.... (au) qai taroga vei Tui Nale me baleta na ikabula. Ia na gauna vata ya e lako tiko mai kina na pressure mai vuravura mai na IUCN ni sa lailai na vonu. Au qai taroga

kina vua na turaga na Tui Nale 'Sa kaya tiko mai na vuravura vata kei na science ni sa lailai na vonu, ia o kemuni e nomuni na ika bula. A cava na nomuni rai? Qai tukuna o koya "Me yacova sara ga ni oti na vuravura na ika bula ena tu ga". Ya na perspective mai vua, as a custodian of (na i qoliqoli). Vakabauta mada ga o ratou, ni ratou ke dua e mate, e laki incarnate-taki koya tale (mai) as a turtle .

Response 6.5

"Ni ra soqo va qo, o ratou na kai Verata kedratou na kakana mai wai. O ratou na kaiwai, kedratou na vuaka. Na noratou vakabauta, kevaka e kana cala, ena lai vakayalia se vakalailaitaka na kaikoso se na kakana mai wai.

Response 6.6

Me ra lesu tale mada ki na gauna vinaka kei Vakula. Ni da lesu mai na qoli, kau rawa mada na ika (ki vua) ko dodonu me kena. Koya talega cakava mai na nona (i yau). Dau vakani (o) ira na vulagi, na vakaillesilesi. Gauna qo, ya dua na yavu ni dravu ko sa tiko noda vanua ni kua, baleta ni sa sega tiko ni caka na kena i tovo vakavanua.

Response 6.7

E tiko na kila ya ni kua. Era cakacaka tikoga mai (kina) na qase, (yaco) vei keitou ni kua. Keimami muria tiko ga mai na kila vata ga 'o ya. Ko na kila (vakavanua) ya, na gauna keimami vakayagataka vinaka kina, e kauta lesu mai na Kalou levu qo vei keimami, na keimami.

Response 6.8

Ia, dua talega na yasana ko datou raica tale tiko ga, ko a nanumi ni rawa ni vinaka vei kedatou na solev taka na cakacaka.... na solesolevaki. Baleta ni da dau cakava valevu vata na ka, da solesolevakitaka na ka. Nanuma gona na FLMMA ni yadua na contributing factors saraga kina success ni FLMMA.

Response 6.9

Kenai vakaraitaki (qo). Matai ni Miss Vavila a caka mai Vavila, oti sara tu ga na kena liwa na cagilaba 'o ABC. Kakaseresere tu na veivale mai Vavila. Tikini siga me a caka kina na soqo, biu tu yani na kabasu, na kasere, nomu veikorokoro. 'O lako mai ena

vuku ni nodratou lewa vakaturaga 'o Vavila, me kumuni kina na i lavo.... e rawa kina e dua na wase ni lavo levu.

Response 6.10

Dua talega na yasana ko nanuma na FLMMA na matai saraga ni gauna ya ni a positive sara ga kina na cakacaka qo na kena a sa tu ga na noda culture na vakasama qo ni tabu. Kila ga ni da dau raica ni dau bale e dua na Turaga Bale tabu tu na vanua se tabu na wai for certain periods.... so 100 nights, so 3 months so 1 year sara. Ia na kena qai curu mai na vakasama ni MPA se na Science sa qai vaka me vakadeitaka wale toka ga na kena sa tiko oti na traditonal way of management ya.

Response 6.11

I think that (relationship) is a strength that is often unmentioned.... the *veiwekani sa tiko rawa e na veikorokoro*. That is a big bonus to FLMMA's work. *Dua na kena i vakaraitaki qo; kacivi dua na vuli se na bese ni FLMMA o ira na digitaki; digitaki mai e dua mai na mataqali se dua na i tokatoka*, so they are coming representing their *mataqali* or *tokatoka*.... their kinship, so he/she can speak on behalf of the *mataqali* or *tokatoka*. If you take away *veiwekani ya*, no, he will be himself.... he will be talking on his (own) behalf .

Response 6.12

Mai Raselatu ya e ratou vakatokai tu na kaiwai. Na veisiga ni sucu se veisiga e ra vakayacani, ka ra dau cakava o ira me ra sa qai dau kau vasua me ra vulagitaka ena veikoro e ra vulagi kina. Io, sa ra qai dau kauta me vaka na 'barter system', me ra kau vasua yani, me ra qai dau lai kau dalo mai. For a long time e ra dau cakava tiko. Keitou sa qai veitalanoa kei iratou na turaga ni vanua; "Vakacava mo dou veisautaka mada me ika? "Na gauna ya na vasua sa lailai sara. We explained the biology to them – it takes longer for them to grow to that size.... We presented to them scenarios. "If you keep doing this, qo na ka e rawa ni yaco.... E rawa talega me ra susu vuaka, me vulagitaki na vuaka. They decided on mixture – so na soqo bibi, then they'll take the vasua, ke kau matanigone ra kau ika ga. Ia, na ka madaga dau caka tu ena veiyabaki me veikorokoro kece ra veiwekani kina me kau vasua, sa yaco mada mai qo, au sa sega ni raica vakalevu.... so now, OK, rua ga na vasua, kena vo na ika.

Response 6.13

Q: *Na gauna dau caka tiko kina na maroroi ni qoliqoli, dau mai caka na bose, kemuni dau dabe talega ena bose?*

A: *Sega* [two voices in unison]. *Ira ga na turaga.*

Q: *Kemuni via dabe ena bose?*

A: [Laughter from the daughters. Mother had a smile on her face]. *Ia, e dodonu talega, e? Baleta qo ni noda kece, e? Dodonu talega meda mai dabe talega....*

A:[Father cuts in while the daughter was still talking]: *Ia, ke dau mai caka na vakadidike, ra dau vakaitavi o ira ena kena waraka, ra dau tarogi talega.*

Q: *Baleta nodra kila, e?*

A:[32 year old daughter cutting in] *Ia, na kena dau caka ga na bose, koya e sega.*

[Loud single cough from the father, daughter continues:] *Ra dau dabe ga o ira na turaga.*[Two loud dragging coughs from the father]

Q [directed to the cougher]: *Kemuni, na nomuni raica, o ira talega na marama era rawa talega ni dabe talega ena loma ni bose?*

[Long pause, I waited patiently].

A: *Io, ira na marama era rawa ni dabe, ia sa sega saraga na marama matua e vo. Ko na i taba ga qo* [indicating daughters with the movement of the head].... *qo sa sega.* [nervous laughter from the daughters].

The father then changed the subject.

Response 6.14

So vei ira na matua se ra tiko qo. Era kila tu ga. E dau veitalanoataki, e sega ga ni caka vakaivola na ka baleti keimami.... Na tamata sa sega ni vakabibitaki tiko vua na nona totem, na kena bibi, na cava na kena i balebale. Sa tukuni tu ga kaikoso.... Sa sega ni vakadewataki na cava e biu kina na kaikoso. A ratou kila tiko beka na qase, keimami sega sara. Keimami qai kila ga ni keimami cavuti tiko ya na kaikoso. Se sega sara ni dua na veitalanoa, se me ra tukuna vei keimami qo na vuna. Dua na ka e leqa tiko vei keda nai Taukei qo na kena vakadewataki tiko na i tukutuku, nai balebale ni ka da taukena.

Response 6.15

Eso na vanua e va ya, ni ra a sega ni vakayacora o ira nai taukei ni qoliqoli ko ra vakatatabutaki ya, na approach ya - me ra lako kina nodra koro ni veiwekani, ka lai tukuni kina. E vaka e vakacalakataki na nodra lako mai (qoli). Na noda gaunisala vakaitaukei.... na veivosaki.... O keda me da kerekere ni da kana veicurumaki, e? Na nomu qoliqoli era kana kina o ira na wekamu.

Response 6.16

Na ka ya sa na vakatau saraga ena loma ni vuvale.... kena vakaraitaki tiko vei ira na gone. Me na lai lewai mai ena Bose Vakoro; “koya qo me na vakaraitaki tiko vakawasoma ena noda veivuvale”. Keda sa lotu vakavuvale, vakaraitaki tiko kina dua na tiki ni tu qo, na maroroi ni yaubula. Me tikitiki ni noda vei talanoa e na loma ni noda vuvale sara ga, na noda itovo, noda ivakarau.... koya sara ga e ra rawa ni (ra) kila tiko mai kina na gone. Bera ni ra curu mai tuba me ra lai cakava dua na ka ra kila tiko o ira na ka(qo). Kevaka ga sa na slack na noda tukuna tiko vei ira na gone, sa na sega sara ga ni matata.

Response 6.17

What probably needs to be done (is) we have to have clear terms of Reference; ‘Qo na veika era dau vakatulewa kina na Turaga, qo na veika me cakacakataka na komiti, qo na i yalayala ni ka ni lewa eratou rawa ni vakatulewa kina vakairatou. Na vanua qo eratou yaco kina o ratou, qo me na refer-taki i na Bose vanua.

Response 6.18

Ni o ratou na turaga, o ratou dua ga lai kerekere yani, ratou dolava (na tabu). Eso tale me lako yani me lai kerekere, vaka e ratou raica vakatani tale na turaga, sega ni via solia tale. Vaka me sa yaco tale i kea me ratou digitaka tale na turaga na tamata cava me soli vua na dodonu me lai qoli. So ra lako yani e tuba me ra lai kerekere, soli vei ira. Ra kerekere na lewe ni koro, sega ni soli .

Response 6.19

Well, what may not be working well na noda bula au kila ni so na veikorokoro qo sa toso yani kina e so na veimataqali varau ni bula, kila sa toso mai na urbanization. Sa vaka e lako yani na bula ni veivakatorocaketaki. Bula beka vakailavo. Au kila ni era na

ilavo na gauna sara i liu sa tu ga na bula ga ni veiwekani. Taura ga mai solia.... kerekere, dua ga mai kerea, lako. Ni o lako mada ga mai qoli o na solia wavoki ga. Ia ni sa lako mai na bula ni lewe dua ni vaqara ilavo sa via waicala beka (na vosa me da kaya) na vakasama ni solesolevaki sa lako mai koya na individualism. So it's that pull of bula vakailavo vata kei noda vinakata meda rawati keda. Ya rawa ni dua na ka e rawa ni lai veicoqacoqa toka kei na bula vakavanua. Levu na vanua ko tou veiqaravi kina na FLMMA ya e dua na ka dau basika tiko mai kina – na nodra dau kauta cake tiko mai o ira, na bula vakailavo versus the traditional tabu.

Response 6.20

Au kaya mada ni o keda na i Taukei e sega ni noda value tu qo na, lavo. Keda na noda value ga o keda na veiwekani ga. That's what we value most. Mai na veiwekani ya qai lako tale mai kina dua na vosavosa ya, "Our blood is thicker than money". So that's what we value most, noda veiwekani o keda. Ia na value gona ya e tiko kina dua na noda i tavi o keda.

Response 6.21

Sa vosa na i lavo, "Money talks" ena kena vosa vakavavalagi. Oqo e dua walega na kena i vakaraitaki matai lelevu ni sa mai sota na noda i tovo kei nai tovo ni bula vakailavo.

Response 6.22

Me vaka na lawa ni Taukei ka caka tu i liu, ko sega ni cakacaka vakoro, kau mai vua na Turaga se totogitaki. Na tamata sa na cakava tu ga na ka sa caka tu ena human rights; "au sa na cakava tu ga na noqu dodonu vakataki au". Qo sa lako sara tiko ga mai na koro qo na mataqali vakasama ya. Sa vo ga o ratou na turaga me ratou bulia e dua na lawa ni koro.

Response 6.23

Na veicurumaki ni itovo sa teteva na dui yasana se matanitu, ka kalawaca talega na itovo ni veimataqali kawa tamata.

Response 6.24

So there's been some concerns and issues from the customary fishing rights owners. O ira na taukei ni qoligoli eh?.... na kena laki qolivi tiko an nodra vanua tabu. Ia na ka ga

e tiko na kena dau soli na laiseni, dau soli tale tiko ga e dua na ka vakatokai tiko an condition ni laiseni. Ya na veika e vakatabui mo vakayagataka na laiseni vaka beka na qoli ni Siga Tabu- ya sa normal tu ga, na vei walewale ni qoli – na lawa matai lalai, vakayagataki ni duva. Koya qai ka vou tiko beka mai na gauna qo vei keda na i Taukei na kena sa qai okati tiko yani na vanua vakatatabu. Sa dau biu tiko yani na condition ni laiseni – au kila ni o ratou mai yasayasa vaka-Ra ratou sa vakayagataka tiko. So tale ga na veivanua e Viti sa ra okata tiko – mai Vanua Levu, Macuata. Sa ra biuta tiko vaka me nodra condition ni soli na laiseni na kena dau vakatabui na qoli na qoliva na tabu ya na kena soli na laiseni.

Response 6.25

Vakamatatataki ki vei ira na lewe ni vanua, vakabibi vei ira na vanua e ra sa vaka-Management Plan tiko i Viti, ni sa ra nanuma tiko beka ni sa tiko ga na i tuvatuva ya na Management Plan, sa na laki tarova sara kina vakadua na nodra tiko o ira na commercial fisherman. E sega, na matanitu e na raica tiko yani na yasana ruarua, me ra bula talega na via bula, kei na kena maroroi na qoli. Koya beka ya na ka me ra kila tiko. Me na matata tiko ga vei ira na noda koya ra sa maroroya tiko na nodra i qoligoli na yasana e rua: a yasana me na maroroi vata kei na yasana ni veivakatorocake taki. Na yasana ni veivakatorocaketaki ko soli tiko yani kina na laiseni. Ya ko ira era via rawata na nodra bula mai na qoli.

Response 6.26

E na vakatau na i vola ni veivakadonuiko solia mai o taukei ni qoligoli – na “letter of consent”. Na “letter of consent” ko na solia mai o Turaga ni Yavusa, se o cei ga e na solia mai, e na koto sara ga mai na nona i vola na vanua cava, na condition. Koya ko’u kaya tiko e so vei ira na veiyasana qo e ra sa vakayagataka tiko e so na i vola ni consent ya, sa tiko ga na template me ra vakadonuya mai kina na taukei ni qoligoli. Rawa ni biuta toka mai va qo’; “Au vakadonuya me qoli ko ka, ka, ka ena noqu qoligoli mai ka, ka, ka. Vakavo ga na vanua tabu ko ka. Sa vakakoto mai ya na kena biubiu. Ia, ena vakatau sara tiko ga ena i vola mai vei Taukei Qoligoli.

Response 6.27

The only time it creates problems when it comes to ownership.... like, FLMMA makes it more visible. So na underground conflicts se tu mai liu, vaka na o cei na i taukei ni

qoliqoli. It's been there but just because the issue is there to discuss, at the FLMMA meeting, it's brought up.

Response 6.28

Mixed results – some success (but) usually it's a matter of clarification. *E dua na ka levu e ra dau veibataki qo, kila, e so nai qoliqoli me taukeni vakavanua, va se lima na koro. O ira sa (kaya tiko); “Qo nai yalayala ni neitou koro, qo neitou i qoliqoli”* which is not the case, *a nodratou i kanakana qo, within the qoliqoli*. I think no more than 200 villages I visited with FLMMA, I think more than 70% *nanuma tiko ni nodra i kankana ga sa nodra i qoliqoli talega*, that is when the problem arises. In most cases it is just a matter of clarification. Even in some cases, the qoliqoli is broken down *me yaco sara e so na mataqali*, *“qo na yalayala ni neitou qele qo na yalayala ni neitou qoliqoli”*. They're making it down to the *mataqali* level. This is not the case for the *qoliqoli*. That is one of the main causes of conflict; it is just misinformation.

Appendix 7

LIST OF PLANTS	LIST OF ANIMALS
Dabi: tree <i>Xylocarpus granatum</i>	Balolo: sea worms <i>Eunice viridis</i>
Dakua sasalu: kauri family, <i>Agathis vitiensis</i>	Ceva: Purple rockcod <i>Epinephelus hoedti</i>
Doi: buckthorn variety <i>alphitonia zizyphoides</i>	Dairo: sandfish <i>Metriatyla scabra</i>
Drala: tree <i>Erythrina spp</i>	Damu: <i>Lutjanus spp</i>
Gasau: reed family, <i>Amaranthus viridis</i>	Daniva: Goldspot herring
Ivi: native chestnut, <i>Inocarpus fagigerus</i>	Doko ni vudi: long nosed emperor <i>Lethrinus elongatus</i>
Kaudamu: tree <i>Myristica Castanaefolia</i>	Gaka (Busa): Barred garfish
Kavika	Golea: Stromb <i>Strombus gibberulus</i>
Makosoi: tree, <i>Cananga odorata</i>	Kaikoso: arkshell, <i>Anadara antiquate</i>
Mumu;species of taro with green flesh	Kawago: sea bream, <i>Lethrinus ramak</i>
Sekoula: flame tree	Kawakawa: Rockcod
Sinu: tree <i>Phaleria spp</i>	Kuita: octopus
Uvi: yam	Kuka: small red and black mangrove crab
Vaivai	Lairo: land crab
Vavai: species of taro with green flesh	Mana: mud lobster, <i>Thalassina anomala</i>
Vesi: tree <i>Intisia bijuj</i> , <i>Leguminosae spp</i>	Matu: silver biddy, <i>Gerres spp</i>
Wi: tree <i>spondias dulcis</i>	Nuqa: rabbitfish, <i>Siganus spp</i>
	Qari:mangrove crab, <i>Brachyura spp</i>
	Salala: mackerel, <i>Rastrelliger kanagurta</i>
	Saqa: trevally <i>Caranx spp</i>
	Sici: Trochus <i>trochus niloticus</i>
	Ta: long-snouted unicorn, <i>Naso unicornis</i>
	Tugadra: big-eye scad
	Veata: green seahare <i>Dolabella spp</i>
	Walu: Spanish mackerel
	Yaga: variety of shell fish

Appendix 8

Serekali ni maroroi ni qoliqoli (Poem for CBMC)

(by Winifereti Nainoca and Waisea Makutu)

Ni bula vinaka saka na veiwekani	(Respectful greetings to all)
Maroroi ni iqoliqoli me'u serelaka yani	(I want to tell the CBMC story)
Lewenivanua ra qarava na inaki	(Community members are carrying it out)
Veivuke na FLMMA ena qaravi ni itavi	(FLMMA is helping in the initiative)
Nodra kila na tubuda me taurivaki	(TEK should be used)
Gonedau ra wilika na matanicagi	(Fishertribe read the wind for knowledge)
Marama ra vivili e matasawa	(The women glean upon the seashore)
Yalava ni iqoliqoli ni nodra ikanakana	(Within their <i>kanakana</i> inside the <i>qoliqoli</i>)
Bula vakavanua e rui lagilagi	(<i>Bula vakavanua</i> is magnificent)
Qaravi itavi kei na solesolevaki	(<i>Qaravi itavi</i> and <i>solesolevaki</i>)
Veidolei, veidokai, kana veicurumaki	(<i>Veidolei, veidokai, kana veicurumaki</i>)
Veikauwaitaki na isema ni veiwekani	(Caring for each other holds kinship together)
Bula vakaveiwekani de sa na veisau	(Life within the kinship is changing)
Dui nanumi kaya, vakatulewa na iyau	(Individualism, Money talks)
Dodonu vakayadua era dui boletaka	(Individual rights are proclaimed)
Kusima kei na leqa voroki kina na lawa	(Greed and hardship cause breaking of rules)
Na dredre ena sega ni levei rawa.....	(Difficulties cannot be avoided)
Vakasama vovou eda na sota kaya vata	(We will meet new ideas/ways)
Me da veitalanoa ena yalo vinaka	(We should <i>talanoa</i> with a good heart)
Wali na duidui ka da bula duavata.....	(Differences will be overcome and unity results)
Na noda iqoliqoli me da mareqeta mada	(Let's preserve our <i>qoliqoli</i>)
iVakaro ni Lotu ra tokona na Turaga	(Its biblical and Chief sanctioned)
Na kena cuqeni me da tutaka sara	(Let's stand together and co-operate)
Vukudra noda kawa ena siga ni mataka	(For the sake of our descendants in the future)