

Master's thesis



# The Fiji Locally-Managed Marine Area Network: Structure, Strengths and Scope for Future Developments

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## **Declaration**

I hereby confirm that I am the sole author of this thesis and it is a product of my own academic research.

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Student's name



# Abstract

The Fiji Locally-Managed Marine Area Network (FLMMA) is internationally known for its expertise in the community-based management of coastal resources. Based on 26 semi-structured interviews with FLMMA members and associates, this study examines the strengths and weaknesses of FLMMA in empowering the coastal communities in managing their marine resources efficiently, from 2001 to 2015, and identifies future pathways to contribute to the successful management of nearshore fisheries in Fiji.

The study finds that (1) by linking Western science with Fijian traditional knowledge and involving relevant partner institutions, coastal communities have demonstrated their exceptional ability to manage their fishing grounds. In cooperation with FLMMA, communities take the responsibility to plan, implement, monitor and adapt resource management plans. FLMMA's best practices on participatory co-management are valuable for other regions globally. (2) However, after 15 years of existence, FLMMA is faced with donor institutions changing their priorities, which impacts commitment from partner organizations within the Network, bringing to light shortcomings in FLMMA's organizational and strategic setup. (3) The study concludes that FLMMA should address its internal challenges by undergoing a process of organizational strengthening. While keeping the *community at heart*, it could become a substantial partner for the Fijian Government. By transforming commitments on international and regional conservation treaties into tangible initiatives, FLMMA could contribute meaningfully, fighting overexploitation of coastal resources in Fiji, and supporting climate change adaptation.

This study describes how a community-based scheme evolves into a partnership between the local, provincial and national levels in co-managing coastal resources in Fiji.



*For Steffi and Frank Berthold*



# Table of Contents

|  |           |
|--|-----------|
| List of Figures .....  | xi        |
| List of Tables.....  | xii       |
| Abbreviations.....   | xiii      |
| Acknowledgements .....   | xv        |
| <b>1 Introduction.....</b>   | <b>1</b>  |
| 1.1 Context and Purpose of the Study .....                                 | 1         |
| <b>2 Overview of Theory, Background and Context .....</b>                  | <b>5</b>  |
| 2.1 Fisheries Overview.....  | 5         |
| 2.1.1 Nearshore Habitat in Fiji.....                                       | 5         |
| 2.1.2 The Fisheries Sector in Fiji.....                                    | 7         |
| 2.1.3 Small-Scale Fisheries in Fiji .....                                  | 7         |
| 2.1.4 Fiji’s Nearshore Fisheries Production.....                           | 9         |
| 2.2 Fiji’s Nearshore Fisheries Management.....                             | 11        |
| 2.2.1 The Dual System.....   | 11        |
| 2.2.2 Co-management .....  | 13        |
| 2.2.3 Local Fishery Management in Fiji: Locally-Managed Marine Areas ..... | 14        |
| 2.2.4 The History of FLMMA .....   | 17        |
| 2.2.5 The Structure and Government System of FLMMA .....                   | 23        |
| 2.2.6 Influencing Policies .....   | 25        |
| 2.3 Topic Relevance .....  | 27        |
| 2.4 Research Context.....  | 28        |
| 2.5 Limitations of Study.....  | 29        |
| <b>3 Methods.....</b>  | <b>31</b> |
| 3.1 Data Collection.....   | 31        |
| 3.2 Analysis of Collected Data.....  | 32        |
| 3.2.1 Transcribing .....   | 32        |
| 3.2.2 Coding.....  | 32        |
| 3.2.3 Interview Partners .....   | 33        |
| 3.2.4 Ethical Considerations .....   | 34        |
| <b>4 Results .....</b>   | <b>37</b> |
| 4.1 Defining the Meaning of Codes .....                                    | 40        |
| 4.2 Results concerning the Research Questions .....                        | 45        |
| <b>5 Discussion .....</b>  | <b>47</b> |
| 5.1 FLMMA’s Strengths .....  | 47        |

|          |  |            |
|----------|--|------------|
| 5.2      | FLMMA’s Weaknesses.....                                | 50         |
| 5.3      | FLMMA in the Future.....                               | 55         |
| 5.3.1    | FLMMA as an Institution .....                          | 57         |
| 5.3.2    | FLMMA as a Partner to Communities .....                | 60         |
| 5.3.3    | FLMMA supporting the Government in Policy-Making ..... | 62         |
| 5.4      | Future Research.....                                   | 65         |
| <b>6</b> | <b>Conclusion .....</b>                                | <b>67</b>  |
|          | <b>References .....</b>                                | <b>71</b>  |
|          | <b>Appendix A: FLMMA Network Partners.....</b>         | <b>79</b>  |
|          | <b>Appendix B: Endorsement of the Study.....</b>       | <b>80</b>  |
|          | <b>Appendix C: FLMMA Scenarios in Future .....</b>     | <b>81</b>  |
|          | <b>Appendix D: List of Interview Partners.....</b>     | <b>83</b>  |
|          | <b>Appendix E: Questionnaire .....</b>                 | <b>84</b>  |
|          | <b>Appendix F: Coding Dictionary .....</b>             | <b>86</b>  |
|          | <b>Appendix G: Draft Report FLMMA .....</b>            | <b>105</b> |

## List of Figures

|   |    |
|---|----|
| Figure 1 Map of the Republic of Fiji.....                                   | 2  |
| Figure 2 The Community-Based Adaptive Management Cycle. ....                | 16 |
| Figure 3 Map of traditional fishing grounds and LMMAs.....                  | 22 |
| Figure 4 Operational Structure of FLMMA. ....                               | 23 |
| Figure 5 Interviewee Representation based on Type of Institution.....       | 34 |
| Figure 6 Identified Codes displayed according to Frequency (1 to 21) .....  | 37 |
| Figure 7 Identified Codes displayed according to Frequency (22 to 42). .... | 38 |
| Figure 8 Network of identified Codes. ....                                  | 39 |
| Figure 9 The Triangle of Co-Management.....                                 | 61 |

# List of Tables

Table 1 Overview Fisheries Sector Fiji..... 7

Table 2 CPUE per Gear in Fiji ..... 10

Table 3 Meaning of Emerged Codes from Interviews by Category ..... 40

Table 4 Categorized Codes Emerged from Interviews ..... 45

Table 5 FLMMA Scenarios in the Future. .... 81

Table 6 List of Interview Partners..... 83

Table 7 Coding Dictionary..... 86

# Abbreviations

|        |   |
|--------|---|
| AGM    | Annual General Meeting  |
| BCN    | Biodiversity Conservation Network   |
| CBAM   | Community-based Adaptive Management   |
| CBD    | Convention on Biological Diversity  |
| CCIF   | Conservation and Community Investment Forum                                     |
| CIFE   | Convention on International Trade in Endangered Species of Wild Flora and Fauna |
| CMT    | Customary Marine Tenure   |
| CPUE   | Catch per unit effort   |
| DMP    | Decision-making processes   |
| DoF    | Department of Fisheries   |
| FAO    | Food and Agriculture Organization   |
| FLMMA  | Fiji Locally-Managed Marine Area  |
| FNBSAP | Fiji National Biodiversity Strategy and Action Plan                             |
| FSPI   | Foundation for the People of the South Pacific International                    |
| GDP    | Gross Domestic Product  |
| GIZ    | Gesellschaft für Internationale Zusammenarbeit                                  |
| ICM    | Integrated Coastal Management   |
| IAS    | Institute for Applied Science   |
| IUCN   | International Union for Conservation of Nature                                  |
| LMMA   | Locally-Managed Marine Area Network   |
| LLI    | Lessons Learned Initiative  |

|         |  |
|---------|--|
| MACBIO  | Marine and Coastal Biodiversity Management in Pacific Island Countries |
| MPA     | Marine Protected Area  |
| NGO     | Non-governmental Organization  |
| PICT    | Pacific Island Countries and Territories                               |
| RM      | Resource Management  |
| SDG     | Sustainability Development Goals                                       |
| SIDS    | Small Island Developing States   |
| SPC     | Secretariat of the Pacific Community                                   |
| SPREP   | Secretariat of the Pacific Regional Environment Programme              |
| SSF     | Small-Scale Fishery  |
| TLTB    | iTaukei Land Trust Board   |
| UN DESA | United Nations Department of Economic and Social Affairs               |
| UNDP    | United Nations Development Programme                                   |
| UNEP    | United Nations Environment Programme                                   |
| USP     | University South Pacific   |
| WCPA    | World Commission on Protected Areas                                    |
| WCS     | Wildlife Conservation Society  |
| WWF     | World Wide Fund for Nature   |
| YMST    | Yaubula Management Support Team  |

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# 1 Introduction

## 1.1 Context and Purpose of the Study

*I think it's very easy to be negative and it's easy to criticize. I also think it's easy to trumpet FLMMA as a massive success. Not every FLMMA site is a massive success but what we've achieved over the last 15 years is remarkable. Even if the sites aren't always the most effective, the awareness that has been raised by them and the consciousness now in many communities' minds is the marine resources you can't just take [from] forever and you have to manage the same way as you farm. ... If you've got that into the national consciousness then I think that's a success. That's what I hope.* (Study Interviewee, 2015)

At a time when Western scientists and decision-makers believed resources in the sea were inexhaustible, people in other parts of world had understood the importance of managing their marine and coastal resources for generations (Huxley, 1883).

For centuries, the inhabitants of Melanesia<sup>1</sup>, a sub-region of Oceania, have been living in harmony with the sea. The customary marine tenure system used by these people were passed down from one generation to the next and evolved successfully over hundreds of years (Caillaud et al., 2004). Customary management is defined as "... local practices that [are] designed to regulate the use, access, and transfer of resources" (Cinner & Aswani 2007). These management practices have remained valid until today in one of the most biologically diverse ecosystems in the Southwest Pacific (Johannes, 1978, 2002; Green & Mous, 2008, Roberts et al., 2002).

---

<sup>1</sup> Melanesia consists of the small island developing states (SIDS) Fiji, Solomon Island, Papua New Guinea (PNG), Vanuatu and the French overseas territory, New Caledonia.



To improve experience exchange and increase the positive impact of these actions, a network was created in 2000, which was supported by stakeholders involved in marine resource management (Govan, Aalbersberg, Tawake & Parks, 2008). Since then, an association called the Locally-Managed Marine Area (LMMA) Network has arguably proven to be a successful management tool in Fiji and other neighboring countries. In 2001, the Fiji Locally-Managed Marine Area Network (FLMMA) was created as a national sub-structure of the regional entity. Today, it has established over 400 locally-managed marine areas sites in Fiji. As a consequence of extensive growth, FLMMA faces opportunities and challenges which it has to address to be a strong supporter in the management of Fiji's nearshore fisheries. To do so, the Network is currently undergoing an internal Lessons Learned Initiative which is being piloted in Fiji.

The goal of this Lessons Learned Initiative (LLI) is

*...to understand and disseminate how to better support sustainable livelihoods in islands and coastal areas by learning what interventions are important for community-based marine conservation projects* (LMMA, 2013)

The results presented in this thesis should be viewed as a complementary project to LLI. While the LLI focuses on evaluating the impact of FLMMA by surveying at a local level, this study tries to capture the view of FLMMA members and key resource personnel through interviews at a provincial and national level.

In light of the Lessons Learned Initiative, this study examines (1) FLMMA' strengths over time, (2) the weaknesses faced by the Network today, and (3) how FLMMA can continue to support efficient nearshore fisheries management in Fiji.

This led to the following research questions:

- (1) According to selected representatives of the FLMMA Network and key informants, what were the strengths and weaknesses of the Fiji Locally-Managed Marine Area Network in empowering the coastal communities in managing their marine resources efficiently from 2001 to 2015? and
- (2) How can FLMMA continue to contribute to the successful co-management of nearshore fisheries in Fiji between the local, provincial and national level?

This research project was encouraged by a regional program called Marine and Coastal Biodiversity Management in Pacific Island Countries (MACBIO), who supports the Lessons Learned Initiative financially and technically in Fiji. The study's final results benefit the FLMMA Network and, hopefully, will lead to an increase in efficiency which, in the long run, will improve the support of LMMA sites and the management of coastal resources in Fiji. In this regard, the study has more a practical than a theoretical focus with a pre-defined, relatively succinct scope.

The data collection was done during a four-month stay in Fiji from July to November 2015. A qualitative research approach was chosen and 26 FLMMA members and associates were interviewed by the researcher and a Fijian colleague. Both were employed by MACBIO during that point of time. The data collection was complemented by a desk study. The interviews were audio-recorded, transcribed, and then coded using the software Atlas.Ti.

According to the thesis' structure, the introduction is followed by an overview of relevant theories, background, and context of the study. Particular attention is given to Fiji's fisheries sector and to the customary marine tenure in Fiji, leading up to the history and functioning of FLMMA. This first section concludes showing the relevance of the topic embedded in the research context, and points out the inherent limitations of the study. The next section describes the methods used for the data collection and analysis of this qualitative research in detail. Results are presented in the form of codes identified, their co-occurrence and their meanings. In the context of the Research Questions, the codes are organized in three groups: strengths, weaknesses, and future of FLMMA. This structure continues in the discussion where the codes are put into context based on the demographic categories of the interviewees. The discussion section closes with an outlook of future research, which is followed by the conclusion.

## **2 Overview of Theory, Background and Context**

### **2.1 Fisheries Overview**

#### **2.1.1 Nearshore Habitat in Fiji**

Fiji is an archipelago consisting of 300 volcanic islands that formed approximately 150 million years ago and are situated on the Indo-Pacific Plate (Morris & Mackay, 2008). The most highly-populated islands are Viti Levu and Vanua Levu with some smaller islands being located on the comparatively shallow Fijian Platform (Morris & Mackay, 2008). Surrounded by fringing reef, the platform is approximately 15 to 20 km in length (Morris & Mackay, 2008). Along the South coast of Viti Levu lies the country's longest fringing reef structure which stretches approximately 100 km along the coast (Morris & Mackay, 2008). To the East of Viti Levu, the Suva Barrier Reef, named after the Fijian capital, lies along Fiji's shelf until it reaches the island of Ovalao (Morris & Mackay, 2008). Fringing and barrier reefs surrounding the different islands are comprised of 10,000 km<sup>2</sup> of diverse habitat which is separated by deeper channels (Singh, 2005; Morris & Mackay, 2008). The 400 LMMA sites are distributed throughout the different islands' nearshore communities that utilize the diverse reef habitat.

The geological features set the stage for a unique ecoregion rich in biodiversity. In addition to the reef habitat, there are many intact mangrove forests, functioning estuaries, and other ecologically important marine habitats. Although comprehensive monitoring in Fiji's marine environment is lacking, scientists and large conservation NGOs have recognized that Fijian waters are of high ecological significance (Teh, Teh, Starkhouse & Sumaila, 2009; Singh, 2005).

In 1993, the Fiji Fisheries Division, in close cooperation with the South Pacific Forum Fisheries Agency, collaborated on an extensive overview of Fiji's fisheries and marine resources. Special attention was given to species identified as valuable to small-scale and

industrial fishing (Richards, 1994). The results of the quantitative survey are outdated; however, they still serve as a guiding paper to the present day. In 2011, the University of the South Pacific published the *Natural Resource Inventory Report of the Fiji Islands 2010. Volume 2: Marine Resources Inventory of the Fiji Islands*. The study was led by the Faculty of Business and Economics and specifies the current knowledge of Fiji's aquatic flora and fauna. The inventory synthesized a variety of basic studies which identified the different taxa living in Fiji's marine habitats. These data give a generic overview, but should be viewed with caution since they are based on specific geographic regions. The composition of the ecosystem can fluctuate heavily within one area as described by Jennings and Polunin in 1996 depending on the fishing intensity:

*The fish communities in the least intensively fished qoliqoli [fishing grounds in Fiji] were significantly different from fish communities elsewhere. The significance of these differences was attributable to the greater biomass of invertebrate feeding and piscivorous fishes in the least intensively fished qoliqoli. (Jennings & Polunin, 1996, 400)*

Although local knowledge of the marine environment is profound, Fijian waters continue to surprise scientists and locals, who only recently found, for example, that migrating bull and hammerhead sharks are spawning in some of Fiji's freshwater rivers (USP, 2015). The people of Fiji have sustained their lives and nourished their families by understanding the diverse habitat on which they rely. Nevertheless, it is important to comprehend the reality of small-scale fishers in Fiji today.

### 2.1.2 The Fisheries Sector in Fiji

The following figure shows five different categories of Fiji's fisheries sector and the associated production from 2007:

Table 1: Overview Fisheries Sector Fiji, adapted from Gillet (2009).

|                                      | <b>Coastal<br/>Commer-<br/>cial</b> | <b>Coastal<br/>Subsistence</b> | <b>Offshore<br/>locally-<br/>based</b> | <b>Offshore<br/>foreign-<br/>based</b> | <b>Fresh-<br/>water</b> |
|--------------------------------------|-------------------------------------|--------------------------------|--|--|-------------------------|
| <b>Volume of<br/>production (t)</b>  | 9,500                               | 17,400                         | 13,744                                 | 492                                    | 4,146                   |
| <b>Value of<br/>production (USD)</b> | 33,750,000                          | 33,812,500                     | 29,293,750                             | 527,500                                | 4,287,500               |

The offshore fisheries target tuna through longlining, which makes up approximately 80% of the total catch, while the remaining 20% consists of bycatch. As Table 1 shows, the locally-based offshore fishery is bigger than the foreign-based one, which comprises all vessels that are registered outside of Fiji (Gillet, 2011). The majority of this locally-based catch is exported (Gillet, 2009). Usually, offshore fishing is undertaken by industrial-scale fishing vessels in Pacific Islands.<sup>4</sup> However, in Fiji, the locally-based offshore vessels troll for tuna just outside the reef, using fish aggregation devices (Gillet, 2005). The locally-based offshore fisheries in combination with coastal<sup>5</sup> and freshwater fisheries form the small-scale fishery sector in Fiji (Gillet, 2011).

### 2.1.3 Small-Scale Fisheries in Fiji

The Small-Scale Fishery (SSF) sector is comprised of both, artisanal and subsistence fisheries. While subsistence fishery contributes mainly to the fisher's food requirements, artisanal fishers sell their products in local markets. In Fiji, the SSF sector becomes more and more monetized on the main islands; subsistence fisheries are more prevalent on the smaller and more remote islands of the country (Gillet, 2014). Both fisheries take place amongst the inshore waters, such as rivers, mangroves, estuaries and around the far reaching reef systems of Fiji (Singh, 2005).

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<sup>4</sup> For this study, an industrial fishing vessel is defined by a length of more than 15 meters (FAO, 2011).

<sup>5</sup> The term coastal fisheries is used interchangeably in this study with nearshore and inshore fisheries.

Since the crucial fishing habitats are located close to the reef, small-scale fisheries mainly use little canoes and dinghies that are non-powered or have an outboard engine (Teh et al., 2009). Small-scale fishers in Fiji primarily fish with gill and seine nets, hook and line, hand-lines when fishing off the boat or using spear guns while freediving (Cakacaka, Jupiter, Egli & Moy, 2010; Teh et al., 2009). Also, some trolling activities take place at the edge of the fringing reef (Teh et al., 2009; Gillet, 2011). Illegal and by-catch rich fishing techniques such as poison and dynamite fishing have been banned, but may occasionally occur (Teh et al., 2009).

The SSF sector in Fiji is interconnected with the traditional chieftain system in rural communities. Every village or district has a Chief, who is of high social standing. In general, decisions are made by the Chiefs of a village who are regarded as “the guardian[s] of its land, resources and people” (Muehlig-Hofmann, 2007, 35). Chiefs traditionally make decisions concerning the local management of marine resources of the adjacent *qoliqolis*.<sup>6</sup> These patriarchal systems marginalize young men, women, and migrants.<sup>7</sup> However, numerous studies found that the Chief’s role has turned into a more ritualistic one (Ravuvu, 1988; Ruddle, 1995; Muehlig-Hofmann, 2007).

Contrary to matrilineal societies in Micronesia, women do not possess decision-making power in the Fijian traditional system. Nevertheless, women play a crucial role within the small-scale fisheries in Fiji, where they are responsible for harvesting invertebrates, such as sea cucumber, clams or crabs, or small reef fish close to shore, mainly through reef gleaning. By collecting seafood for consumption in the household or sale at the local market, they contribute considerably to the well-being of the family and the community. They possess a very profound understanding of the inshore marine resources and play a crucial role within the SSF sector (UNDP, 2012).

While fisherwomen mainly target invertebrates, small-scale fishers target various coral reef fish species. Catch composition varies by region (Teh et al., 2009). According to Jennings and Polunin (1996), 68% of the landings were piscivorous fish such as groupers

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<sup>6</sup> Customary fishing areas that are generally located from the outer edge of the reef to the shore—there are 410 *qoliqoli* in Fiji (Hand, 2015).

<sup>7</sup> Migrants are mainly refugees from other islands like Kiribati or people from other villages who happen to live in the village, e.g. because it is the village of the mother. Usually, they have no voice in the decisions making process in the village (pers. comm.).

(Serranidae) and emperors (Lethrinidae). Other targeted reef fish are snappers (Lutjanidae), parrotfish (Scaridae), mullets (Mugilidae), surgeonfish (Acanthuridae), and jacks (Carangidae) (Dalzell, Sharma & Nath, 1992). Over time, several traditional target species have become illegal to fish. For example, fishing the Humphead wrasse has become illegal due to its serious decrease in numbers and size (Teh et al., 2009). Similarly, stocks of all four species of sea turtles found in Fiji have declined tremendously. Valued as customary food for special occasions, sea turtles have been targeted by small-scale fishers for cultural reasons. Currently, an on-going ban on harvesting sea turtles is in place in Fiji (Teh et al., 2009). The Green turtle, traditionally the most valuable for Fijians, is on the IUCN list of endangered species (IUCN, 2016). Among others, endangered or vulnerable species are the Bigeye tuna, Orange-spotted grouper, Brown-marbled grouper, Queensland grouper and the Malabar grouper, the Camouflage grouper and the Black saddle grouper (Teh et al., 2009).

Although Fiji's economy is strong compared to neighboring Pacific island countries, its population continues to rely heavily on a healthy state of the fishery.

#### **2.1.4 Fiji's Nearshore Fisheries Production**

Nearshore fisheries are a crucial source of income and nutrition for Fijian communities. According to Gillet (2014), the nearshore fisheries production contributes about F\$73 million (F\$1= US\$0.48 as of April 2016) towards Fiji's GDP, which is eight times more than that contributed by offshore fisheries. Recent estimates based on all available data places Fiji's coastal fishery production at 26.900 tons (t) annually with subsistence fishing producing nearly double the volume compared to artisanal fishing (17.400t to 9.500t); a proportion that is similar to neighboring Pacific Island Countries (Gillet, 2011).

However, it has to be noted that estimates of the nearshore fisheries production vary widely depending on the literature source. As an example, the Department of Fisheries, as the governmental structure in charge, bases its coastal commercial fishing estimates on an incomplete statistical system when reporting towards the FAO. The production of annual

subsistence fishing is based on questionable figures from a survey from 1979 which took place only on Viti Levu (Gillet, 2011).

Different scientists have looked into the catch per unit effort of different fishing gear to calculate estimates (Jennings & Polunin, 1996; Teh et al., 2009). Lydia Teh et al. in 2009, who published an overview of the numerous studies conducted on Fiji's nearshore fisheries, found that the CPUE varies greatly depending on the type of gear: Table 2 shows a high CPUE for gillnet fishing with 18.9kg set<sup>-1</sup> for *Lethrinidae* while spear gun fishing for the same species only achieves a CPUE of 1.51kg man<sup>-1</sup>. The table gives a detailed overview of the CPUE per gear in Fiji. The CPUE in Fiji is relatively high compared to other countries (Teh et al., 2009).

*Table 2: CPUE per gear in Fiji, adapted from Teh et al. (2009).*

| <b>Fishery</b>     | <b>Main Target Families</b>   | <b>Mean</b>  | <b>Range</b>   |
|--------------------|---|--|--|
| Invertebrates      | Holothuroidea   | 16 pieces h <sup>-1</sup>  | 12-20 pieces h <sup>-1</sup>   |
| Handline           | Lethrinidae, Lutjanidae, Serranidae, Carangidae   | 2.27kg line <sup>-1</sup> h <sup>-1</sup>  | 0.14-12.12kg line <sup>-1</sup> h <sup>-1</sup>  |
| Handline and spear | Unspecified reef fish   | 1.25kg h <sup>-1</sup>   | 1.20-1.29kg h <sup>-1</sup>  |
| Spear              | Serranidae, Acanthuridae, Lutjanidae, Carangidae, Lethrinidae, Lutjanidae, Serranidae, Scombridae | 1.20kg man <sup>-1</sup> h <sup>-1</sup><br>1.51kg man <sup>-1</sup> h <sup>-1</sup> | 0.81-1.6kg man <sup>-1</sup> h <sup>-1</sup><br>0.12-5.7kg man <sup>-1</sup> h <sup>-1</sup> |
| Gillnet            | Lethrinidae<br>Lutjanidae, Mugilidae, Holocentridae   | 18.9kg set <sup>-1</sup><br>31.8kg set <sup>-1</sup>                                 | 15-26kg set <sup>-1</sup><br>10-60kg set <sup>-1</sup>                                       |

Teh et al. also showed a decrease in CPUE with regards to hand lining during this time in Fiji. Her findings are similar to that of a study conducted by the World Bank in 1998/1999, which revealed that 90% of the local fishers stated that the CPUE in general has been decreasing since the early 90's (Singh, 2005).

Overall, 70 of the 400 traditional fishing grounds are over-exploited, and 250 are considered fully developed (Cakacaka et al., 2010). Recent studies have also shown that the stocks of reef fish are declining. The decline can be attributed to several factors including overfishing, unsustainable fishing practices and land-based pollution (Singh, 2005). In comparison with more remote coastal communities, the impact on fisheries around urban centers was much higher (Teh et al., 2009). This can most likely be attributed to artisanal fishing due to proximity to local fish markets (FAO, 2015).

Preliminary results of a nationwide survey of village-based fisheries indicated that 50% of the fish caught are smaller than the minimum legal size and have not achieved sexual maturity (IAS, 2009).

Fisheries globally, and in Fiji, are under enormous pressure through overexploitation and habitat destruction. It is crucial to understand the management of fisheries resources in Fiji to show a complete picture.

## **2.2 Fiji's Nearshore Fisheries Management**

### **2.2.1 The Dual System**

For generations, Fijians have been an integrated part of the natural environment. Like other Melanesian communities, they developed management practices to ensure the longevity of their coastal and marine resources. Many of these practices show a deep knowledge and understanding of natural processes.

In *A Review of Near Shore Fisheries Law and Governance in Fiji*, the authors Sloan and Chand conclude their discussion of the current state of these fisheries by supporting strongly the idea of bringing local communities, government agencies and other relevant stakeholder together. They argue that local communities will be the day-to-day implementer of any initiative concerning the nearshore fisheries sector and, therefore, are crucial to the success of effective nearshore fisheries management (Sloan & Chand, 2015).

Customary management can be defined as "...local practices that are designed to regulate the use, access, and transfer of resources" (Cinner & Aswani, 2007). These practices have been developed over many centuries by the people and are an integral part of their identity (Caillaud et al., 2004). Typically, the management practices include seasonal bans and temporary closures of the *qoliqoli*, e.g. 100-day closure on the fishing ground when the chief of the village had passed away (Johannes, 1978; Aalbersberg et al., 2005). Additional measures may involve limiting the number of allowed fishers, restrictions on certain

fishing practices, or the imposition of a tabu on a specific species. Many of these practices are part of the tool set of modern fisheries management globally today.

The Fijian customary society separates four levels of entities: the family (*tokatoka*), the clan (*mataqali*), the tribe (*yavusa*) and the district (*vanua*). Since 1880, the land is owned by the *mataqali* which were registered under British occupation (Caillaud et al., 2004). As a result, until today about 88% of the land is owned by *mataqali* which is recognized by the Constitution. This land, commonly referred to as *iTaukei* land, is managed by the *iTaukei* Lands Trust Board, which is part of the Ministry of *iTaukei* Affairs (Sloan & Chand 2015).

However, these *iTaukei* land rights are not applicable to the traditional fishing grounds, the *qoliqoli*. Although the *iTaukei* people have harvesting rights and are protected under the Constitution to manage and access the *qoliqoli*, the grounds are not owned by the *iTaukei*. The *qoliqoli* right to fish is based on the *yavusa*, not the *mataqali*. According to the State's Land Act, which was inspired by English Common Law, the nearshore waters are owned by the State. Coastal communities have been taking advantage of their harvesting right, and they perceive the *qoliqoli* to be their traditionally-owned fishing grounds. Disputed ownership of the *qoliqoli* has resulted in controversy.

There are Fijians who have voiced their frustration over the legal structure. Their arguments can be divided into two opposing lines of thought: While one camp argues for a full ownership for the *iTaukei* people - not *only* the right to fish – the second camp sees the need to integrate non-*iTaukei* Fijians who currently have no chance to obtain ownership over fishing grounds. According to the last census conducted in 2007, the latter population group adds up to about 45% of the total population of Fiji (Fiji Bureau of Statistics, 2007).

From a governmental point of view, the Department of Fisheries (DoF), as a substructure of the Ministry of Forestry and Fisheries, is formally mandated to implement the Fisheries Act from 1942, which is the primary legislation regulating the nearshore fisheries in Fiji (Sloan & Chand, 2015). The DoF works in 6 areas of expertise on a national and a divisional level:

- 1) General Administration
- 2) Offshore Fisheries Management

- 3) Research and Development
- 4) Aquaculture
- 5) Extension and Advisory Services
- 6) Fleet and Technical Services

Interestingly, the Department of Fisheries has a Division for Offshore Fisheries Management but no division for the nearshore fisheries sector: However, this sector is crucial for communities' income and nutrition while contributing approximately eight times as much to Fiji's GDP than offshore fishing (Gillet, 2014). This is a substantial shortcoming in the governance practices surrounding the way in which small-scale fisheries are managed, and will be discussed more in detail later.

Fiji is administered in four divisions which are split up into 14 provinces. Each province has a Provincial Council with extension officers of the different Ministries. In the context of this study, three types of extension officers are relevant: The Environment Officer (Department of Environment), the Fisheries Officer (Department of Fisheries) and since recently, the Conservation Officer (Ministry of *iTaukei* Affairs). The extension officers are poorly trained, resourced and supervised, which make their efficiency questionable. At the moment, coastal communities act as guardians of the nearshore area, embedded in a chiefly system (CCIF, 2013).

The complexity of the issues and major shortcomings of financial, technical and human resources within the Fijian Government make it unlikely that the status quo will change anytime soon. To fight threats such as overfishing and poaching, rural Fijian communities have to act as co-managers in the process of nearshore fisheries management.

*If we can regard the communities as government implementers, it may reduce the perceived conflict between law and traditional governance systems of near shore fisheries.* (Sloan & Chand 2015, 3)

### **2.2.2 Co-management**

Contrary to the principle of the tragedy of the commons, which suggests that without interference of the State, local communities would deplete natural resources (Hardin,

1968), Fijians have been managing their resources through their marine tenure system prior to British colonization in 1874. The Chiefs of a village used to perform as a State on local scale. As a result, the Fijian coastal population acts to date as an unofficial implementer of governmental policies. The marine natural resources are co-managed between the traditional resource owners and the Government (Ostrom & Cox, 2010).

*Central to co-management is the idea that the responsibilities for allocating and using resources are shared among multiple parties.* (Plummer & Armitage, 2007, 1)

Jennings describes the explicit cooperation of local and national structures as co-management (Jennings & Kaiser, 2009). For instance, fishers need to obtain a fishing license from the Department of Fisheries, the mandated governmental structure, and the permission of the respective chief of the *qoliqoli*. The license will not be given if the village disapproves (Teh et al., 2009). However, it is questionable that this procedure is enforced on a regular basis due to a lack of capacity on a governmental level - shortcomings that non-governmental organizations and practitioners have assisted to absorb temporarily. Nevertheless, communities in Fiji and other Island Countries in the Pacific have proven their capacities in community-based management of marine areas, for which they have been globally recognized for the past 15 years only.

### **2.2.3 Local Fishery Management in Fiji: Locally-Managed Marine Areas**

To ensure food security, the villages have set up management practices including seasonal bans and temporary closures of the adjacent *qoliqoli*. These traditions are common throughout the Pacific Island countries, where communities conserve areas. These so-called community conservation areas or locally-managed marine areas are remarkable since they are managed, planned, implemented and enforced at the local level based on customary tenure (Govan et al., 2009). After Fiji gained independence in 1970, communities started to re-gain ownership of their fishing grounds. In 1998, Veitayaki described how coastal Fijian communities are responding to the ecological and socioeconomic changes in their realm (Veitayaki, 1998). Since then, the numbers of LMMAs have increased tremendously and reached over 400 by 2015 in Fiji alone where they are called locally-managed marine areas (LMMAs). Usually, these areas have a size

of less than 1km<sup>2</sup> and typically lie within the fishing ground of the adjacent village or community. Often, they include a tabu area which is closed, with a total ban on extraction which can be temporary or permanent. In the latter case, occasional harvests are generally allowed (Govan et al., 2008). According to the LMMA Network, LMMA sites are defined as “the area where an LMMA is physically located and includes the habitats and resources present in the area and the community or communities that own and manage its resources” (LMMA, 2005, 11). Research indicates that LMMAs see rapid increases in some species and have mostly positive impacts on biodiversity (Govan et al., 2009a; Aalbersberg et al., 2005).

Most of these areas benefit from the support of practitioners, government agencies, researchers and civil society. In Fiji, these stakeholders are members of a network which coordinates this cooperation. The Fiji Locally-Managed Marine Area Network (FLMMA) is part of the regional structure called the Locally-Managed Marine Area Network which extends to several countries in the Pacific and beyond (LMMA, 2011).

If a community is seeking support from the Network, it contacts the Network directly. In a first step, participatory planning meetings are held for identifying resource rules and appointing members of a *qoliqoli* committee. The committee is responsible of coordinating all relevant LMMA work, and to represent the community to other entities. The decision-making power and the ownership over the resources stay with the community at all times. The Network organizes workshops in the villages to help identify root causes of the acknowledged problem (e.g. smaller size of catch or fish in general). During these workshops, representatives of different partner organizations are present to answer questions by the villagers. One of the partner organizations takes the lead within the Network, depending on available resources and its focus. There are sites led by e.g. WWF, WCS, the University of the South Pacific (USP) through its Institute of Applied Science (IAS), or the Government of Fiji through the Department of Fisheries.

The underlying principle of the LMMA work is Community-Based Adaptive Management (CBAM) which can be defined as

...the integration of design, management and monitoring in order to learn and improve management responses...and refers to a process through which LMMAs can be established and sustained. (Govan et al., 2008, 4)

While the term *community-based* indicates the central role played by the local level, *adaptive management* suggests an on-going cycle of checking and modifying the management plan in the context of the results. The process of CBAM comprises the steps of

1. Making a plan
2. Implementing a plan
3. Verifying if the results match the desired outcomes and
4. Revising the plan in light of the desired outcomes (see Figure 2).

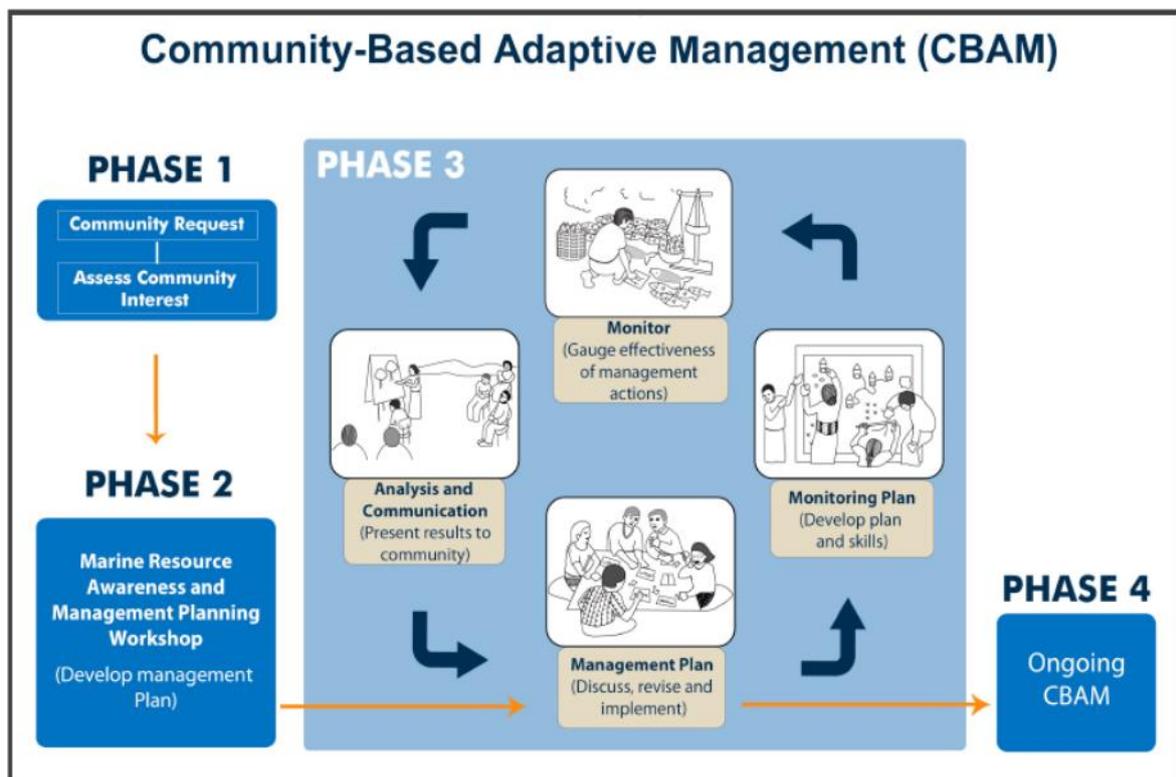


Figure 2: The Community-Based Adaptive Management Cycle. Retrieved from LMMA Guide Book 2008 (Govan et al., 2008).

Thus, this process is an on-going cycle (Govan et al., 2008). During the entire process, the communities are usually supported by local governmental agencies, academic entities and different non-governmental organizations and focus on creating a *learning network* with

other LMMA-communities to identify lessons learned (LMMA, 2003). The participatory approach employed by the LMMA Network has a strong focus on capacity development for the communities, which is central to their support. Ideally, communities are enabled to link their traditional knowledge with Western conservation science to efficiently manage their nearshore resources to ensure food security in the future.

Over time, FLMMA's emphasis moved away from focusing exclusively on the *qoliqoli* management towards promoting a *ridge to reef* management, from the mountain to the sea. This international initiative involves the entire coastal area and recognizes the impact of inland activities on the marine environment with particular attention to the watershed management (FLMMA, 2014; IUCN, 2014).

#### **2.2.4 The History of FLMMA**

Fijians, like other Pacific island people, have a long history of managing their marine and coastal resources. In 1978, Johannes showed that a Western research understanding has replaced traditional marine resource management since the middle of the 20<sup>th</sup> Century. Similar to other countries, Fiji's traditional resource management practices were replaced by applying conventional Western management concepts (Caillaud et al., 2004). This development was amplified by Fiji's cession to Britain at the end of the 19<sup>th</sup> Century. The end of the centuries-old praxis of communities managing their marine resources seemed close. As Johannes put it in his paper called *Traditional marine conservation management methods in Oceania and their demise* which was

*...an account for the rise and decline of a millennia-old system of controlled exploitation of marine resources that incorporates a wisdom Westerners are only now beginning to appreciate after having brought about its widespread decay.*

(Johannes, 1978, 349)

Luckily, his pessimistic view of the future of customary marine tenure wasn't realized, which is best illustrated by the title of a paper, published 24 years later by Johannes: *The*

*renaissance of community-based marine resource management in Oceania* (Johannes, 2002).

It is crucial to understand what had happened during these 24 years. Toloa et al. described the situation at the beginning of the 90's in Tokelau, an island group in the Southwest Pacific:

*The people of Tokelau feel that the traditional conservation system has served them well over the centuries. They are also aware, however, of the need for modification of the system to reflect recent changes...Although the output [from marine scientific research] has been utilized to some extent, a mechanism should be established so that the results more fully incorporated into the Council of Elder's management plans.* (Toloa, Gillet & Pelasio, 1991,8)

Different studies indicate that the situation in Fiji was similar (Ruddle, Hviding & Johannes, 1992; Veitayaki, Aalbersberg, Tawake, Rupeni & Tabunakawai, 2003; Govan et al., 2008; Gillet, 2014; Jupiter, Cohen, Weeks, Tawake & Govan, 2014). Among others, three key developments enabled this change.

First, researchers slowly started to acknowledge the value of traditional practices within the system of Customary Marine Tenure (CMT). They saw a potential for a fisheries' management system that combined traditional ecological knowledge with Western scientific research, evolving into an adaptive resource management practice (Ruddle et al., 1992). As one key difference to the *Western* approach, the adaptive resource management moved away from concentrating fisheries management at the governmental level - Govan et al. in 2008 described this as a top-down approach – and towards a bottom-up approach starting at the community level.

Second, the imprecise legal framework was described by Veitayaki et al. in 2003 as a “...major drawback, as there were no resource guidelines to follow.” (Veitayaki et al., 2003, 1). The lack of national legislation allowed for a change from a top-down to a bottom-up approach in regards to the management of coastal and marine resources.

And third, a severe decline in fish species and stocks amongst Pacific island habitats (Jupiter & Egli, 2010) resulted in declining catches, which led to an increased level of poverty amongst rural populations which depended on healthy nearshore habitat. The loss

of food security and income forced communities to return to their traditional management practices (Govan et al., 2009a; 2009b). However, at this stage, the change was now supported by science (Govan et al., 2008).

Three villages started community-based marine conservation and management work around the year 1997 (Govan & Meo, 2011). Ucunivanua, a village Northeast of Suva in the Verata district, is heavily dependent on its clam fishery. From a lack of management resulting in overfishing, Ucunivanua suffered from both a decrease in clam populations and a decrease in catch size. As a result, it sought out for help from the University of the South Pacific. In Cuvu, a village on the Coral Coast in the South of Viti Levu, the Foundation for the People of the South Pacific International (FSPI), in partnership with a local hotel resort, supported the community in identifying techniques for setting aside and restoring degraded coral reefs. The third village of Ono, which is located on the Kadavu island group South of Fiji's main island of Viti Levu, was aided by the World Wide Fund for Nature Conservation (WWF). WWF helped by finding ways in which the village could protect and manage areas adjacent to the reefs. According to the Operation's Guide of FLMMA, "each of these projects was testing variations of the basic LMMA strategy to see if it could contribute to conservation and local livelihoods under differing conditions" (Govan & Meo, 2011, 8).

Although they differed in their approach, the projects showed significant effects in a short amount of time. As a result of their success and a growing international interest in traditional management practices, these projects attracted international attention to Fiji's community-based approaches. The increased attention was partly because Ucunivanua had successfully implemented a no-take zone, and was able to monitor the recovery of target fish species. During this same time period, there was a shift from scientific-based conservation work to a more collaborative approach involving local knowledge (Tawake et al., 2001). To improve the sharing of information and lessons learned, the Network, with the support of funding organizations such as the David and Lucile Packard Foundation and the John D. and Catherine T. MacArthur Foundation, was able to officially start its work in bringing together communities, government agencies, and non-governmental institutions.

Parallel to this increased interest, funding became available for research projects in this field. The Biodiversity Conservation Network (BCN) funded 20 projects in the Indo-

Pacific region – one of them being the project in Ucuivanua - over seven years with a total of \$20 million USD. BCN studied the conditions under which an enterprise-based strategy could assist local communities to take conservation measures (Salafsky, Cordes, Parks & Hochman, 1999). The results of the study strongly influenced future funding and indirectly led to the establishment of the regionally oriented Locally-Managed Marine Area Network in 2000, as well as the nationally oriented Fiji Locally-Managed Marine Area Network, abbreviated as FLMMA, one year later in 2001.

Both institutions focus on participatory approaches starting at the community level. During a regional gathering of Pacific Island communities, members and practitioners chose its name and description. Together, they decided that *LMMA* would be the most descriptive title for the type of marine resource management that they wished to implement in the region.

*An area of nearshore waters and coastal resources that is largely or wholly managed at a local level by the coastal communities, land-owning groups, partner organizations, and/or collaborative government representatives who reside or are based in the immediate area.* (Govan et al., 2009a, 28)

Interestingly, the definition of LMMA intentionally used the terms *local* over *community*. Govan et al. explained this as recognition of co-management arrangements involving communities that are cooperating with different institutions such as government agencies or non-government organizations (NGOs) (2009a). FLMMA is a network of various organizations and practitioners. Its member organizations are Fijian Government agencies, NGOs, the University of the South Pacific, private sector companies and the communities (see Appendix A for a complete list).

These developments have been of high interests for researchers and international natural resource organizations. Primary research interest concerned the ability of local communities to establish, maintain and monitor locally-managed marine areas across the Pacific region, for which FLMMA was able to become exemplary (Tawake et al., 2001). In a second step, several FLMMA members put effort into collecting their lessons learned from different FLMMA sites, and analyzed and presented them in a way indicating their broader applicability. Consequently, the Network published a comprehensive document called *The Learning Framework* in 2003 (LMMA, 2003) in addition to annually written

reports. In 2002, the FLMMA won the Equator Prize, an initiative by the United Nations Development Program for resilient communities (UNDP, 2012). The prestigious prize increased the international attention for the community-based initiative taking place in Fiji and six other Pacific Island countries and territories.

Existing traditional knowledge and local awareness of the need for action are combined and strengthened through participatory approaches. FLMMA brings together the relevant stakeholders to assist local communities in the efficient management of their coastal resources. It combines traditional knowledge with Western science knowledge. Within short periods of time, communities who worked with FLMMA could see the benefits of their management practices, e.g. an increase in fish stocks inside closed areas. This led to communities trusting FLMMA (Jupiter et al., 2014): “We are promoting the move from mere lip service about involving communities to making them central to resource management” (LMMA Network, 2005, 7).

FLMMA’s three common goals have been:

1. Implement more effective projects;
2. Systematically identify under what conditions a strategy is successful; and
3. Improve the capacity for adaptive management by practitioners (Parks & Salafsky, 2001).

FLMMA agreed upon the following mission statement: "Everlasting Fish for our Future Generations" (Govan & Meo, 2011).

Since 1997, the number of LMMAs in Fiji increased from 1 to over 100 with a total area of over 10,000 km<sup>2</sup> of Fijian coast by 2009 (Govan et al., 2009a; Mills, Jupiter, Adams, Ban & Pressey, 2011). In 2014, FLMMA claimed the establishment of 466 no-take (tabu) zones in 135 *qoliqoli* (FLMMA, 2014). The following map shows the *qoliqolis* with FLMMA tabu zones in 2009.



## 2.2.5 The Structure and Government System of FLMMA

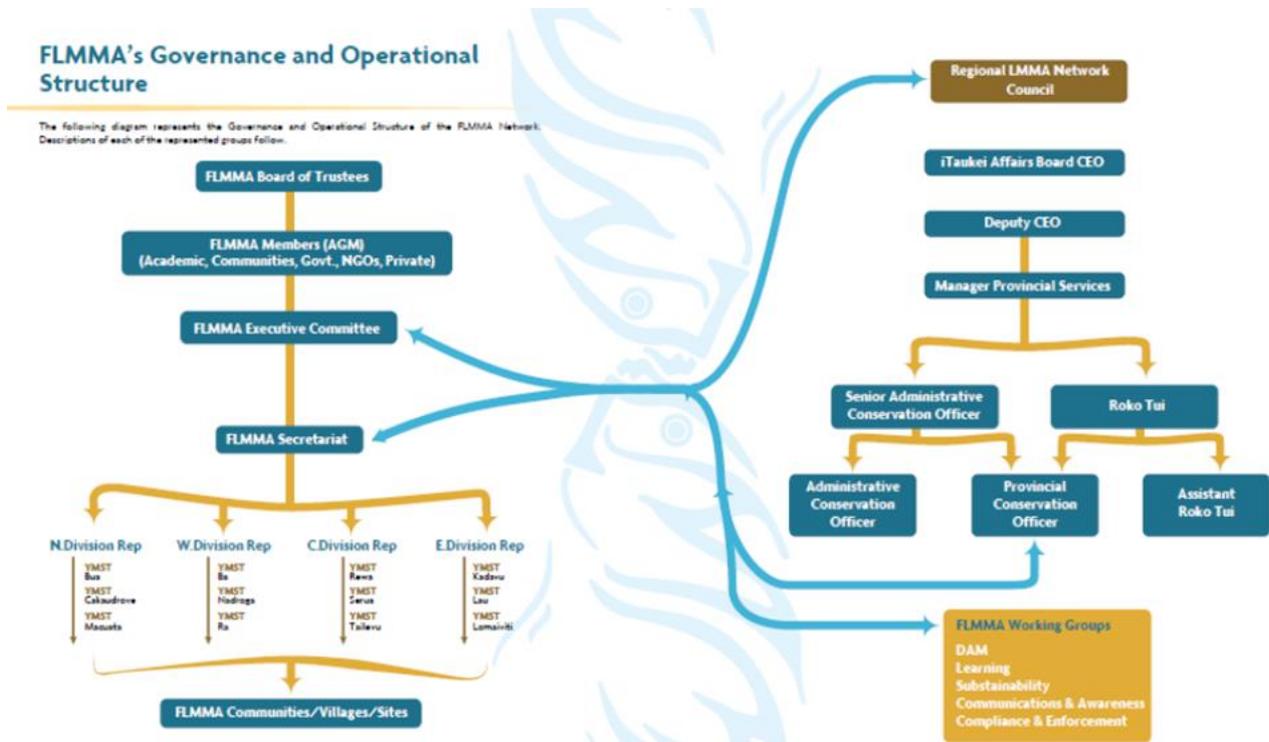


Figure 4: Governance and Operational Structure of FLMMA Network, retrieved from FLMMA Strategic Plan 2014-2018

The governance system of FLMMA has evolved over time into a complex structure, of which the FLMMA's Strategic Plan 2014-2018 gives an overview (see Figure 4).

The Board of Trustees oversees FLMMA activities. Its three members are responsible for chairing the Annual General Meeting. They also ensure FLMMA's compliance with the Charitable Trust Act. The Trustees are appointed by the Executive Committee, which consists of 17 member organizations (FLMMA, 2014).

FLMMA members are non-governmental organizations, academic institutions, government agencies and private sector organizations who are involved in community-based nearshore resource management in Fiji. Villages and provinces, as well as individuals, can equally join FLMMA as long as they uphold FLMMA's objectives. Typically, an FLMMA member takes the lead on a particular FLMMA site. However, there are also FLMMA

members without any specific sites who assist FLMMA as a whole; e.g. the NGO Seaweb as a communication's expert.

Out of 17 FLMMA members, 16 possess voting rights at the Executive Committee, which meets quarterly. At least 50% of the members have to be present to meet the quorum. The Executive Committee Meeting has various tasks; e.g. developing and monitoring joint FLMMA work plans; approving staff appointments. Ideally, decisions are made by consensus; otherwise by majority vote. The Executive Committee annually elects one of its members a Chair. In 2015, the Deputy of the Permanent Secretary of the Ministry of *iTaukei* Affairs took over the presidency from the Department of Fisheries. The meetings are arranged, prepared and documented by the FLMMA Coordinator.

The principal decision-making body is the Annual General Meeting (AGM) which usually takes place in November or December each year, chaired by a FLMMA trustee. The AGM is characterized by a high number of community representatives who get the opportunity to exchange experiences and lessons learned.

Also, several FLMMA working groups are supposed to meet regularly and assist the FLMMA Coordinator in urgent matters between Executive Committee meetings. However, they are not functional at the present time (pers. comm., 2015).

The FLMMA Secretariat consists currently of a Project Manager, who supports the FLMMA Coordinator, and an IT specialist. The purpose of the Secretariat is to coordinate all administrative and financial issues. The Secretariat is also responsible for implementing and communicating FLMMA's governance decisions at the local level while informing the Executive Committee about developments on the ground. This is mainly done by four divisional representatives who also attend Executive Committee meetings. Furthermore, FLMMA has about 20 provincial representatives, close liaison with the 8 existing Conservation Officers<sup>8</sup>, and several *Yaubula* Management Support Teams, all of which are intended to be strengthened, so they can meet the needs of FLMMA sites (FLMMA, 2014).

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<sup>8</sup> Conservation Officers are officially hired by the Ministry of *iTaukei* Affairs Board but their funding comes from non-governmental sources. Their positions were created hoping to improve the natural resource management throughout Fiji linking the provincial offices and NGO efforts (IUCN, 2014).

## 2.2.6 Influencing Policies

The islands of Fiji are under enormous pressure from human-induced activities such as overfishing and pollution. In addition to these threats, climate change also presents severe impacts on the Fijian population, fauna, and flora (CBD, n.d.).

To avoid higher negative impact regarding economic, social and environmental costs, Fiji ratified the United Nations Convention on the Law of the Sea in 1982 (UNCLOS, 2013) and signed the Convention on Biological Diversity (CBD) in 1992. The Fiji Government is therefore obliged to

- 1) Develop and implement national strategies to conserve and use the components of biological diversity sustainably,
- 2) Integrate biodiversity policy into relevant sectoral plans, programs and plans, and
- 3) Monitor and report regularly on the status of biodiversity in the environment (Department of Environment, 2007).

In 1999, the Fiji National Biodiversity Strategy and Action Plan (FNBSAP) was completed and endorsed by Cabinet in 2003. Four years later, the paper was revised and formally published in September 2007. The NBSAP was updated in 2012 and complemented by an Implementation Framework. In 1997, FLMMA joined *The Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES, 2013). Furthermore, Fiji committed to other elements of the CBD Treaty; in particular, to the Strategic Plan under Decision X/2, which is commonly known as the Aichi Targets. The Aichi Target 11 is of particular significance. Fiji formally agreed to effectively conserve 17% of terrestrial and 10% of marine areas by 2020 (CBD, n.d.).

The Secretariat of the Pacific Community (SPC) supports Pacific Island Countries and Territories regionally in marine and coastal resource management. The Vava'u Declaration of 2007 calls for effective management of coastal fisheries to support food security and sustainable livelihoods. The declaration was complemented only one year later by the Apia Policy, which focuses on the benefits of coastal fisheries.

Other important papers include the Joint Forum Fisheries Agency/Secretariat of the Pacific Community (SPC) report *The Future of Pacific Island Fisheries* and the strategic plan of

SPC's Fisheries, Aquaculture, and Marine Ecosystems Division. The Melanesian Spearhead Group published a *Roadmap for Inshore Fisheries Management and Sustainable Development 2014–2023*. Last year, the so-called Noumea Strategy, titled *A new song for coastal fisheries pathways to change*, was published by SPC (SPC, 2015). It was dedicated to the future of nearshore fisheries management and summarizes these regional frameworks by saying

*These documents collectively call on PICTs [Pacific Island Countries and Territories] to implement integrated coastal resource management arrangements, drawing on the strengths and traditions of community, district, provincial and national levels of government to achieve sustainable island life.* (SPC, 2015, 2)

Fiji committed itself internationally and regionally to efficient natural resource management. On the national level, the *Green Growth Framework* – an add-on to the National Development Plan – is the first policy paper regarding sustainable development. The Green Growth Initiative was inspired by the United Nations Conference on Sustainable Development in Brazil in 2012. The Framework has as objective to mainstream green growth into national development projects in a cross-sectoral way. In this context, the Global Environment Facility granted US\$ 7.3 million funding for a Ridge-to-Reef project in January 2015, with the Department of Environment being the National Executive Agency (Ministry of Strategic Planning, National Developments and Statistics, 2014). These initiatives are strongly supported by the United Nations technically and financially.

After committing to all these policies, frameworks and action plans for decades, how is it possible that Fiji still has “...no inshore fisheries policy or clear institutional strategy for inshore fisheries management support”? (Govan, Kinch & Brojosniovsch, 2013). For example, the management of *qoliqolis* and the establishment of no-take marine protected areas are complex issues to which the current legislative framework does not respond (Govan et al., 2009b). According to the Constitution, the National Government of Fiji has ultimate authority regarding nearshore fisheries governance (Sloan & Chand, 2015). The lack of explicit policies hinders an efficient management of nearshore resources. One possible reason is the absence of a government division dedicated to nearshore fisheries within the Department of Fisheries as there is for offshore fisheries (Gillet, 2014).

However, with increasing pressure on coastal ecosystems, population growth, habitat degradation, and overexploitation will aggravate the pressure on coastal fisheries and ultimately reduce their extensive benefits (Gillet, 2014). FLMMA as an expert in the community-based management of nearshore fisheries could and should play a crucial role in helping the Fijian Government to develop and implement efficient inshore fisheries management in Fiji.

## **2.3 Topic Relevance**

When FLMMA started, a high number of papers on the FLMMA approach and its evolution were published along with FLMMA reports and manuals (Gillet, 1999; Tawake et al., 2001; Johannes, 2002; Veitayaki et al., 2003; Aalbersberg et al., 2005, Tawake, 2007; Govan et al., 2008; Govan et al., 2009a; 2009b; Jupiter & Egli, 2010). The international attention amplified when, in 2002, FLMMA won the prestigious Equator Prize. This international award which recognizes local efforts to reduce poverty through the conservation and sustainable use of biodiversity is granted by the United Nations Development Programme (UNDP, 2012). However, international research interest seems to have decreased in the past five years: Fewer scientific papers about FLMMA and its community-based approach have been published, mainly by Hugh Govan or Stacy Jupiter (Govan, Jupiter & Comley, 2012; Govan et al., 2013; Jupiter et al., 2014).

Today, research interest has turned towards a stronger focus on the implementation and management of Marine Protected Areas. For Pacific Islanders who developed their system of marine managed areas, the crucial question is how far the traditional terminology of MPA embraces Pacific Island approaches to conservation (Govan et al., 2009b; Mills et al., 2011; Govan et al., 2012; Govan & Jupiter, 2013). With the support of FLMMA, communities have shown that they can manage marine areas locally (Johannes, 2002; Mills et al., 2011). The Network shares its experiences in participatory resource management approaches with other regions in the world, like Madagascar, that are applying a similar approach (Harris, 2011; Benbow et al., 2014).

Consequently, the LMMA Network launched a Lessons Learned Initiative, which has the objective to activate international research interest by showing the impacts of its actions after 15 years of existence (LMMA, 2013). The Fiji Locally-Managed Marine Area Network volunteered as the pilot country. The initiative is supposed to be conducted in the remaining LMMA member states later on (LMMA, 2013).

The study presented in this thesis is an integrated part of this LLI. While the LLI focuses on evaluating the impact of FLMMA by conducting surveys at the local level, this study is based on interviews of FLMMA members and key resource personnel.

In light of the Lessons Learned Initiative, this research examines the following questions:

- (1) According to selected representatives of the FLMMA Network and key informants, what were the strengths and weaknesses of the Fiji Locally-Managed Marine Area Network in empowering the coastal communities in managing their marine resources efficiently from 2001 to 2015? and
- (2) How can FLMMA continue to contribute to the successful co-management of nearshore fisheries in Fiji between the local, provincial and national level?

## **2.4 Research Context**

This study was supported by the Marine and Coastal Biodiversity Management in Pacific Island Countries (MACBIO), which is cooperating with the FLMMA Network. MACBIO's objective is to "increase management capacity to conserve marine and coastal biodiversity in five Pacific Island Countries"; namely Fiji, Solomon Islands, Vanuatu, Tonga and Kiribati (MACBIO, 2016).

MACBIO focuses its approach in three interconnected areas of intervention:

- Integrating economic assessment of marine and coastal ecosystems in development and conservation planning
- Seascape level planning and adaptation of MPA networks

- Effective approaches to site management (Locally-Managed Marine Areas and MPAs)

All project activities are in line with international conservation agreements such as the Convention on Biological Diversity, to which MACBIO's cooperation countries have committed.

This regional program is funded by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety of the Federal Republic of Germany and implemented by the Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ). The Secretariat of the Pacific Regional Environment Programme (SPREP) acts as a regional partner, and the International Union for Conservation of Nature (IUCN) supports the program as a technical partner.

## **2.5 Limitations of Study**

The research project was limited by the time available for the field study, especially when taking the cultural context in Fiji into account. Furthermore, the interviews were conducted by a female foreigner of Western descent and comparatively high education. A Fijian colleague, who supported the researcher, helped her interact respectfully in regards to cultural subtleties. She was present at all interviews and assisted the researcher during the first part of the data analysis.

The researcher and her colleague were both employed by MACBIO during the time of the field study, which might have influenced some answers. The interviews were conducted in the English language. During three of the 26 interviews, a Fijian interpreter was present. One interview was conducted in Fijian and was translated simultaneously by the interpreter.



## 3 Methods

### 3.1 Data Collection

The data collection for this research study is based on site-based literature research and primary qualitative research conducted using semi-structured interviews during a four-month period in Suva (Fiji) from July to November 2015. In total, 26 semi-structured interviews were held with representatives of the FLMMA Network and key informants. This type of interview is characterized by key questions being asked in the same way by the interviewer throughout the study period (see Questionnaire in Appendix E). Probing questions are used to retrieve further information (Ritchie, Lewis, Nicholls & Ormston, 2003). According to Huntington (2000), “the strength of the semi-directive interview method lies in providing an opportunity for [unanticipated] information to be discussed while still providing enough structure that other useful information is not missed” (Huntington 2000, 2). Consequently, the interviewer avoids leading questions, which then limit potential interviewer bias.

During the first six weeks of the field study, from July to September 2015, contacts were made and information collected by attending official conferences, workshops, and formal and informal bilateral meetings. This primary data gathering was complemented by the analysis of secondary literature sources.

These first weeks were crucial for a better understanding of the sector and to establish personal relationships necessary to conduct the research. On September 3<sup>rd</sup>, 2015, the research project was presented and endorsed at the Executive Committee Meeting of the Fiji Locally-Managed Marine Area Network, which allowed the researcher to formally starting the data collection in the form of interviews. The interviews were conducted over a seven week period from 17 September to 2 November 2015 with representatives of FLMMA members and key resource personnel. Interviewees were chosen based on cooperation with the Lessons Learned Team and the FLMMA Coordinator. These interviews were audio-recorded and transcribed for analysis.

## **3.2 Analysis of Collected Data**

The data analysis as an inherent part of this study started with the first interview and was on-going throughout the whole data collecting process. This was simplified by the presence of a Fijian colleague with whom the researcher could exchange impressions and, if necessary, clarify cultural expressions to ensure a better understanding.

### **3.2.1 Transcribing**

All 26 interviews were audio-recorded and then transcribed by the researcher and her colleague.

### **3.2.2 Coding**

The content analysis was done by coding the keywords within the transcripts. The term *Coding* describes the analytic processes through which data are fractured, conceptualized, and integrated to form theory (Strauss & Corbin, 1990). The identification of keywords, categories, themes and concepts are a crucial step in the analysis of qualitative data (Ritchie et al., 2003). First, relevant words, phrases, opinion and other pertinent parts of the transcripts are labeled and coded with the support of the software Atlas.Ti. Each code represents a phenomenon (Miles & Huberman, 1994). The codes are then grouped into categories based on the research questions and re-assessed. For this study, generic codes were broken down into sub-codes with clear positive or negative connotations to identify strengths and weaknesses of FLMMA (Research Question 1). Furthermore, the codes were analyzed on a temporal scale concerning Research Question 2 which is linked to FLMMA's future.

During the coding process, more than one code was attributed to the majority of identified relevant parts. The relationship between codes is shown graphically in a network by linking them to the code that co-occurred most. As part of the process, a table, explaining

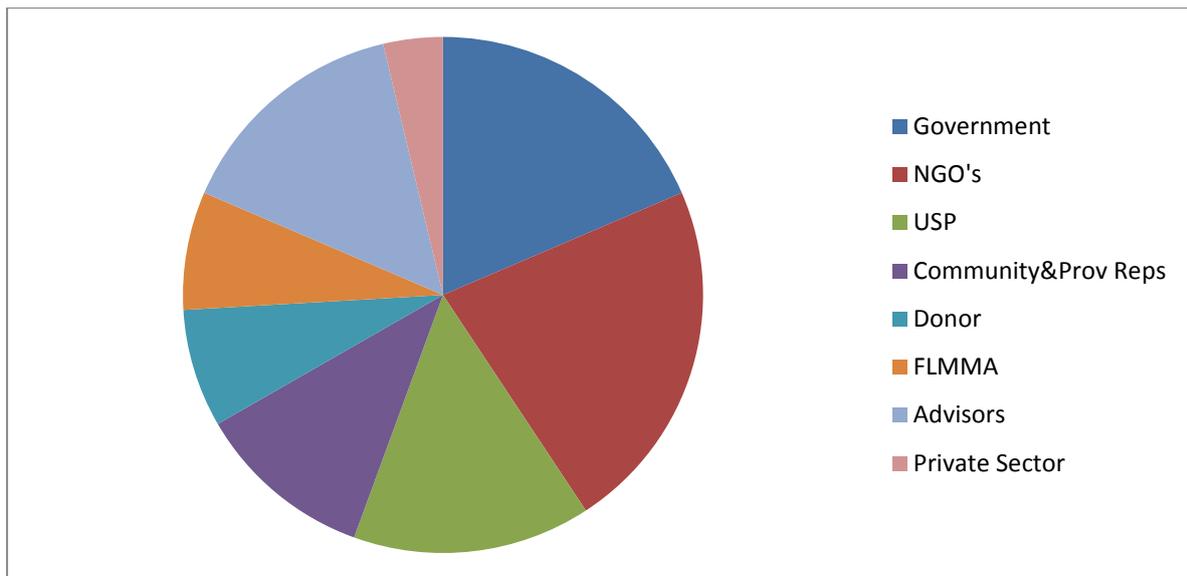
the meaning of all codes, and coding dictionary were developed (see section 4.1. and Appendix F), to document the process for possible future replication.

### **3.2.3 Interview Partners**

A total of 26 interviews were conducted. The interview length fluctuated from 45 minutes to 120 minutes. The initial list of 17 interviewees was established in cooperation with the FLMMA Secretariat and was then extended by snowballing, also called chain sampling, identifying nine more interviewees. By applying this approach, the interviewer asked the respondent at the end of the interview to suggest other people he or she judged important to be included in the study (Ritchie et al., 2003). The interviewees were chosen to ensure balanced representation of different categories, which were:

- FLMMA Membership (Y/N)
- Years of involvement with FLMMA regarding FLMMA's beginnings (around 2001), FLMMA's growth (2005-2011) and FLMMA today (2012 till today)
- Type of Institution (Government, NGO, Academics, Donor, Community, Private Sector)
- Nationality (Fijian or other)
- Sex (F/M)

Out of 26, 19 interviewees called themselves FLMMA members. 14 respondents had been actively involved in founding FLMMA or observant of FLMMA's beginnings before 2002. 20 respondents are informed about current developments with FLMMA. In total, five interviewees worked for Government agencies, six interviewees represented non-governmental organizations and one interviewee was working in the private sector. Four respondents were part of the University of the South Pacific, and three respondents represented the communities or provincial structures. Furthermore, two interview partners represented FLMMA and two interviewees were working for donor organizations in the region. Five respondents were interviewed in their function as advisors or consultants (see figure 5). Eight respondents were female, and 17 interviewees have Fijian nationality, 15 of them being *iTaukei*. The complete list of interviewees can be found in Appendix D.



*Figure 5: Interviewee representation based on type of institution*

Using the software Atlas.Ti, the transcriptions were then distributed to families according to the categories presented here. The software allows filtering codes within families to identify common thoughts.

For the purpose of the study, a demographic section of the interviewee was placed at the beginning of every interview, detailing the organization, the position, and gender of the respondent.

### **3.2.4 Ethical Considerations**

In qualitative research, unanticipated issues might arise more easily compared to other types of research (Ritchie et al., 2003). In this study, several precautionary measures were included in the research project described here.

- a) The endorsement of the study by the Executive Committee of the Fiji Locally-Managed Marine Area Network

During the 3<sup>rd</sup> Executive Committee Meeting of FLMMA in 2015, the planned study was presented to the FLMMA members attending. FLMMA members had the chance to answer questions or suggest changes during the Executive Committee meeting and via email

afterward. The PowerPoint presentation and a concept note were distributed via email to all FLMMA members by the FLMMA Coordinator after the meeting. The study was then formally endorsed September 15th, 2015 (see Appendix B).

b) The Consent of interviewee at the beginning of each interview

At the beginning of each interview, the researcher obtained the informed consent of the respondent by providing information about:

- The purpose of the study,
- The researcher and the funding partner,
- The data analysis (meaning recording and subsequent transcription of interview),
- The expected interview length and
- His or her right to refuse to answer particular questions or to participate.

Each interviewee was asked for his or her consent to be interviewed before the interview started.

c) Reporting back to FLMMA

Preliminary results were presented to FLMMA during the Executive Committee Meeting on 19 November 2015. Additionally, the researcher met with the FLMMA Coordinator and the Technical Advisor in charge of the LLI. During these two meetings, the findings of the study were discussed in more depth as well as next steps.

The researcher and her colleague created a 90 seconds long whiteboard animation video to explain the study and the LLI. The video is available in English and Fijian and was mainly intended for the community representatives present at the AGM 2015 in Kadavu. Since January 2016, both videos are accessible on the FLMMA Facebook website.

A draft report called *Institutional Study on the Fiji Locally-Managed Marine Area Network* was sent to MACBIO and the FLMMA Coordinator on 21 December 2015 (see Appendix F).

#### d) Confidentiality

The interviewees were informed of the confidentiality of their statements. According to Ritchie et al. (2003), “Confidentiality means avoiding the attribution of comments, in reports of presentation, to identified participants” (Ritchie et al., 2003, p.67). This is not to be confounded with anonymity which means that the identity of the interview partners is only known to the research team (Ritchie et al., 2003).

## 4 Results

The results of the study are presented in the form of 42 codes which were identified using the software Atlas.Ti. The following two figures show the codes according to their frequency.

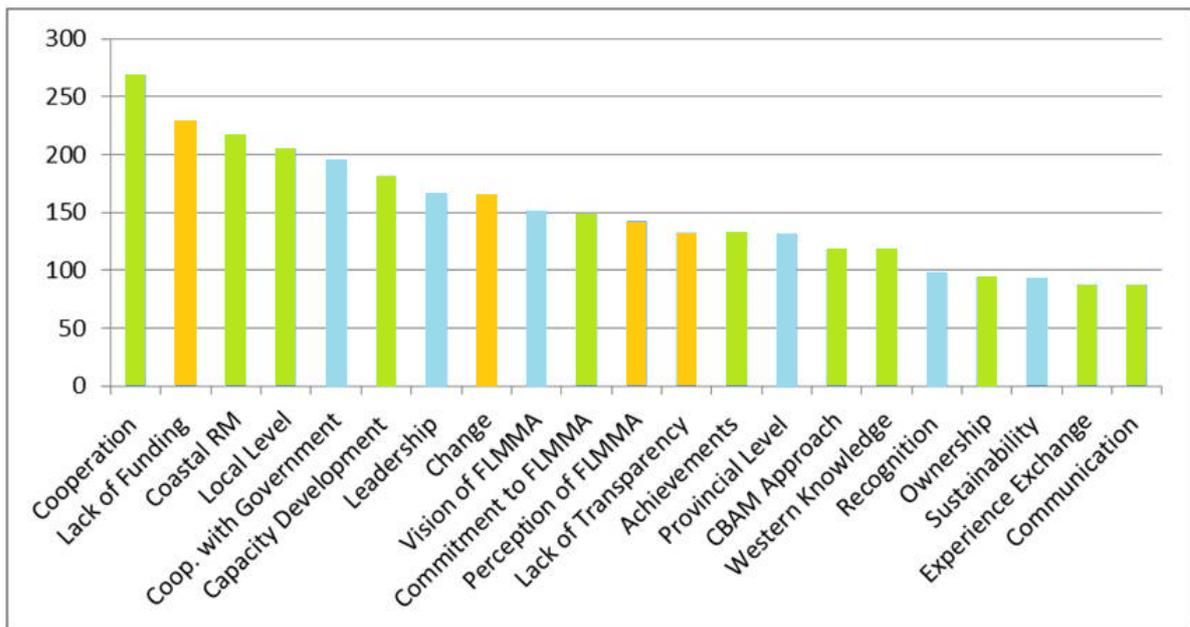


Figure 6: Identified codes displayed according to frequency (1 to 21). Colors indicate category of code: green = strength, orange = weakness, blue = future.

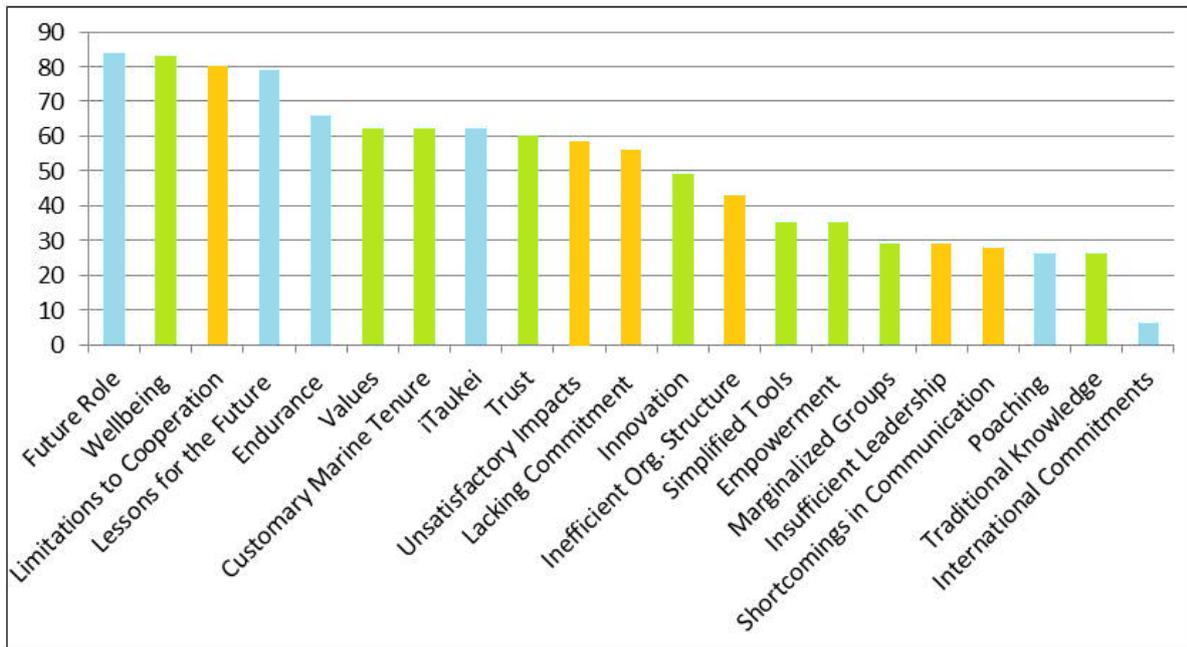


Figure 7: Identified codes displayed according to frequency (22 to 42). Colors indicate category of code: green = strength, orange = weakness, blue = future.

In the following, the codes are displayed in relation to each other based on co-occurrence. One-sided arrowheads display the code and its most frequently co-occurring code. If 2 codes co-occurred most frequently with each other, the two-sided arrowhead was used. When several codes co-occurred at the same maximum frequency, all codes were displayed (see Figure 7).



## 4.1 Defining the Meaning of Codes

The following table 3 offers an explanation on the meaning of the codes. For this, the table is organized in three sections based on the research questions. First, codes with positive connotations are explained. The second section lists all codes with a negative connotation. The last section shows all codes relevant to FLMMA’s future. For more clarity, the codes are grouped in categories (first column).

Table 3: Meaning of emerged codes from interviews by category.

| Category   | Codes   | Meaning   |
|--|---|---|
| <b>Positive Connotation</b>                            |   |   |
| Concept of combining traditional and Western knowledge | Customary Marine Tenure, Traditional Knowledge, | The interviews showed that FLMMA is considered a Network that successfully demonstrated how to link traditional practices, <i>customary marine tenure</i> and Western knowledge for an effective community-based Coastal Resource Management. This achievement is honored as one of FLMMA’s major accomplishments throughout the interviews.  |
|  | Western Knowledge,                              | Statements in the context of academic and scientific methodologies and monitoring practices were coded as <i>Western Knowledge</i> .  |
|  | Coastal Resource Management, Communication      | <i>Coastal Resource Management</i> includes management practices applied to sustainable resource management in coastal areas.<br>For the code <i>Communication</i> , statements concerning FLMMA’s internal and external communication are collected.   |
| Sector-wide Teamwork                                   | Cooperation,                                    | <i>Cooperation</i> is the most frequently identified code. It embraces the dimensions of cooperating between FLMMA members in the Network and between FLMMA and the local level. This code was identified within all categories of interviewees, including NGOs, the local and provincial level as well as governmental entities and donor institutions. The data would suggest that this code describes FLMMA’s <i>raison d’être</i> . |
|  | Experience Exchange,                            | <i>Experience exchange</i> between FLMMA members, FLMMA sites and stakeholders was regularly mentioned by the interviewees. The code includes regular (institutionalized) lessons learned activities within FLMMA like the Annual General Meetings as well as non-formalized experience exchanges between local communities.  |
|  | Commitment to FLMMA                             | All respondents agree that the Network’s success depends on the <i>commitment</i> of its participants. This code describes the commitment of FLMMA members and includes statements concerning communities and their commitment to managing their resources.   |

|               |  |  |
|---------------|--|--|
| Target Groups | Local Level,<br><br>Provincial Level,<br><br>Marginalized Groups   | <p>The <i>Local Level</i> has been coded at a high frequency, describing activities involving the communities in coastal areas of Fiji, which are the target group of FLMMA. Closely linked to this, the code <i>Provincial Level</i> includes structures of governmental, semi-governmental, FLMMA and ICM structures. Namely, the Provincial Officers, the Conservation Officers, <i>Yaubula</i> Management Support Team and the Divisional reps as well as the ICM Council.</p> <p>Within communities, FLMMA focuses more specifically on <i>marginalized groups</i>. The interviewees counted the following population groups as marginalized based on either a lack of decision-making power or a lack of coverage by the <i>iTaukei</i> legislation in fishing rights: Women, Indian community (as non-<i>iTaukei</i> Fijians), and the youth and migrant communities.</p>   |
| Core Values   | CBAM approach,<br><br>Wellbeing,<br><br>Capacity Development Empowerment, Ownership,<br><br>Values,<br><br>Trust,<br><br>Endurance | <p>The <i>CBAM approach</i> is the core concept of (F)LMMA, describing its methodology. It is closely associated with other listed codes, here grouped as Core Values.</p> <p><i>Wellbeing</i> stands for the wellbeing of the local community and includes elements such as livelihood and food security. The wellbeing of the communities is FLMMA's primary objective.</p> <p><i>Capacity Development, Empowerment and Ownership</i> are key pillars in the functioning of the FLMMA Network. They are interlinked. Ownership describes the <i>qoliqoli</i> fisheries management in Fiji, in which adjacent coastal communities have fishing and harvesting rights and therefore, the decision-making power. Capacity Development is part of the more frequently identified codes and describes statements linked to training, learning and awareness rising activities. Empowerment focuses on the local communities as well as provincial level and governmental departments that are FLMMA members (in particular the Department of Fisheries), so they can fulfill their responsibilities.</p> <p>Especially long-time FLMMA members and associates identify strongly with FLMMA's <i>values</i> as a Gentlemen's agreement. Furthermore, <i>trust</i> as a code was repeatedly identified when communities exchanged information with each other or with a community representative about FLMMA's approach and support.</p> <p><i>Endurance</i> describes the longevity of the interventions and the challenges linked to sustainability and</p> |

|           |                               |   |
|-----------|-------------------------------|---|
|           |                               | independence of the communities after the interventions.  |
| Successes | Achievements,                 | The code <i>Achievements</i> includes all statements linked tangible impacts of FLMMA (successes). It co-occurs most with the code <i>Local Level</i> .   |
|           | Innovation,                   | Another code that reflects the success of FLMMA is <i>Innovation</i> . FLMMA is described as innovative, as a structure that came up with something new. Mostly interviewees who have been involved with FLMMA from the beginning talked about innovation. In the current context of FLMMA, this code was hardly mentioned.   |
|           | Simplified Actions and Tools, | One of FLMMA's critical issues is the development of appropriate tools for capacity development and monitoring in a community-based setting. Finding the balance between scientific rigor, while respecting the communities' needs, is an on-going source of discussion within FLMMA.   |
|           | Recognition                   | <i>Recognition</i> is a code that came up regularly throughout the interviews, however in different contexts: On the one hand, FLMMA is recognized at the local level, which is apparent by the number of communities who want to join FLMMA and become a FLMMA site. On the other hand, it describes FLMMA's recognition by the Fijian Government, including governmental FLMMA members such as the Department of Fisheries, or by the Presidential Office. However, the code occurred not only in the context of an accomplishment of FLMMA but also as a main challenge, e.g. the legal recognition of FLMMA sites by the Government. This is well illustrated by the fact that the three most co-occurring codes are <i>impact</i> , <i>governance</i> and <i>finances</i> , which are all subjects of the next part of the table: codes with negative connotation. |

### Negative Connotation

|                |                           |  |
|----------------|---------------------------|--|
| Changing Times | Lack of Funding,          | <i>Lack of Funding</i> describes the funding of FLMMA activities. While funding has been secured by two principal donors ever since 2001, at least one of the funding agencies declared a change of strategy with less site-based funding activities. All interviewees identified funding as the main challenge for FLMMA in the coming years and therefore, the associated code was identified very frequently (228 times). |
|                | Change,                   | The code <i>Change</i> describes transformations around and within FLMMA from 2001 to today. This includes institutional and behavioral changes, as well as changes in members and their engagement.   |
|                | Variance in Perception of | This code shows how interviewees perceive FLMMA today and what role they see FLMMA playing. As the   |

|                                |  |  |
|--------------------------------|--|--|
|                                | FLMMA  | title of the code suggests, these perceptions vary profoundly between the respondents.   |
| Insufficient Results           | Unsatisfactory Impacts   | This code contrasts with to the code <i>Achievements</i> . Respondents argue that FLMMA should have produced more tangible impacts after 15 years of existence, which to them, is a major shortcoming and the cause of donors moving away from FLMMA.  |
| Structural Weaknesses          | Inefficient Organizational, Structure, Lack of Transparency, Insufficient Leadership | Statements regarding the <i>Inefficient Organizational Structure</i> of FLMMA mainly concern the decision-making process and unclear roles and responsibilities ( <i>Lack of Transparency</i> ). They were mostly made by interviewees who are actively involved in the Executive Committee at the moment.<br>The code <i>Insufficient Leadership</i> encompasses statements about leadership structures within FLMMA and the Fijian Government. The two main lines of thought concern the Fijian Government which, according to the interviewees, is not stepping up to its responsibilities of setting up an efficient community-based coastal resource management. Also, respondents claim the lack of a leader figure within FLMMA after formerly influential members have pulled out. |
| Shortcomings in Partnership    | Limitations to Cooperation, Lacking Commitment, Shortcomings in Communication        | This code was identified in all the interviews. It concerns <i>limitations</i> between FLMMA members, the Secretariat and the local level.<br>Equally limiting to the cooperation is a <i>Lack of Commitment</i> from members and communities. The code includes statements about inactive sites and members who are no longer engaged in FLMMA. Working Groups are not functional anymore.<br>This is amplified by <i>Shortcomings in Communication</i> . The code collects statements concerning miscommunication between members, the FLMMA Secretariat and the local level.  |
| <b>Future</b>                  |  |  |
| Views on FLMMA's Future        | Vision of FLMMA, Future Role   | In this category, statements are collected concerning where the interviewees see FLMMA in five years, and what role they see it playing. Similarly to the code <i>Variance in Perception of FLMMA</i> , opinions of the respondents show a broad range of scenarios.   |
| <i>iTaukei</i> -ation of FLMMA | <i>iTaukei</i> (Native Fijian), Leadership,  | Respondents value FLMMA as a <i>Fijian</i> movement in which Fijians play a crucial role. They see this process continuing. Five interviewees explicitly stated that FLMMA would need a Fijian Coordinator as soon as possible, which links this code closely to <i>Leadership</i> . This code unites all statements concerning leading positions in the local and the national context as well as the importance of leadership.   |

|                             |                              |   |
|-----------------------------|------------------------------|---|
|                             | Sustainability               | Both elements are perceived to be crucial to keep FLMMA, as an institution, <i>sustainable</i> . Also, this code describes measures taken to ensure sustainable coastal resource management.  |
| Future Fields of Engagement | Lessons for the Future,      | FLMMA has accumulated wealth on lessons learned concerning community-based management. Many of these lessons are valid for its future engagements. They are collected under the code <i>Lessons For The Future</i> .  |
|                             | Cooperation with Government, | <i>Cooperation with the Government</i> is seen as an essential part of FLMMA's future work according to the interviewees. The code defines the different players within the Fijian Government.  |
|                             | International Commitments,   | The respondents see a need in supporting the Government in achieving its <i>commitments under international treaties and conventions</i> , as well as revising the legislative framework on coastal resources to fight <i>poaching</i> and other forms of overexploitation. |
|                             | Poaching                     |   |

## 4.2 Results concerning the Research Questions

In light of the research questions of this study, the results in the form of codes are arranged in three groups in table 4. Linked to FLMMA's strengths, to FLMMA's challenges and to FLMMA's future, the codes are listed below, detailing the exact frequency per code.

*Table 4: Categorized codes emerged from interviews. Numbers indicate the frequency of code (node).*

| <b>FLMMA's Strengths</b>          | <b>FLMMA's Weaknesses</b>                 | <b>FLMMA's Future</b>               |
|-----------------------------------|---|-------------------------------------|
| Cooperation (269)                 | Lack of Funding (228)                     | Cooperation with Government (195)   |
| Coastal Resource Management (217) | Change (165)                              | Leadership (166)                    |
| Local Level (205)                 | Variance in Perception of FLMMA (142)     | Vision of FLMMA (166)               |
| Capacity Development (182)        | Lack of Transparency (132)                | Provincial Level (131)              |
| Commitment to FLMMA (148)         | Limitations to Cooperation (80)           | Recognition (98)                    |
| Achievements (132)                | Unsatisfactory Impacts (58)               | Sustainability (93)                 |
| CBAM Approach (118)               | Lacking Commitment (56)                   | Future Role (84)                    |
| Western Knowledge (118)           | Inefficient Organizational Structure (43) | Lessons for the Future (79)         |
| Ownership (94)                    | Insufficient Leadership (29)              | Endurance (66)                      |
| Communication (88)                | Shortcomings in Communication (28)        | <i>iTaukei</i> (Native Fijian) (62) |
| Experience Exchange (88)          |   | Poaching (26)                       |
| Wellbeing (83)                    |   | International Commitments (6)       |
| Customary Marine Tenure (62)      |   |                                     |
| Values (62)                       |   |                                     |
| Trust (60)                        |   |                                     |
| Innovation (49)                   |   |                                     |
| Simplified Actions and Tools (35) |   |                                     |
| Empowerment (35)                  |   |                                     |
| Marginalized Groups (29)          |   |                                     |
| Traditional Knowledge (26)        |   |                                     |



## 5 Discussion

The views expressed in the 26 interviews display a broad range of perspectives and opinions on FLMMA's past, present and future. In the following, the findings will be discussed in the context of the two research questions on which this study was based:

- (1) According to selected representatives of the FLMMA Network and key informants, what were the strengths and weaknesses of the Fiji Locally-Managed Marine Area Network in empowering the coastal communities in managing their marine resources efficiently from 2001 to 2015? and
- (2) How can FLMMA continue to contribute to the successful co-management of nearshore fisheries in Fiji between the local, provincial and national levels?

To answer the first research question, strengths and weaknesses of FLMMA which were identified by the interviewees are discussed regarding the past and present of the Network. In a second step, Research Question 2 will be addressed by analyzing potential areas of engagement for FLMMA in the future.

### 5.1 FLMMA's Strengths

*And that is the FLMMA approach: help people think about issues that they are facing but haven't really had a forum to sit together and discuss. But to do it in a way that is their ideas and it is just facilitated, rather than directed.*

(Interviewee 2015)

Interviewees found common ground on the point that the creation of FLMMA was an informal, gradual process. Out of the 12 interviewees who had witnessed the formation of FLMMA at the end of the 90's, only two stated that they could have foreseen the progress which FLMMA has achieved.

The following were common points amongst the interviewees as to the reason FLMMA has succeeded:

- Funding being made available as a favorable circumstances
- Community-based approach in combination with participatory practices was seen as innovative
- The communities could see the results, which gave the approach support on the community level
- Coastal communities faced decreasing fish stocks and decrease in fish size
- Culturally, communities are familiar with adaptive management through the customary marine tenure system, and Fijian culture is characterized by a collaborative mentality
- Three similar projects were started at a similar point in time; people in charge of the projects were looking for a platform to exchange information
- The kick-off of later FLMMA was informal meetings of friends and colleagues around a kava bowl<sup>9</sup> who shared knowledge and passion in marine resource management and the well-being of communities

When FLMMA was formally created in 2001, it would “serve as a forum in which communities with LMMA projects could share methods and results” on coastal resource management (Govan & Meo, 2011). Since its conception, FLMMA has become a nationally and internationally recognized institution by successfully linking Western science with Fijians’ traditional practices and knowledge. Interviewees named numerous other achievements in addition to the 466 no-take zones, known traditionally as tabu areas. For example, they agreed that FLMMA members have contributed to marine resource management in Fiji by implementing a community-based adaptive management approach. They achieved this by training the communities in fundamental scientific knowledge so they were empowered to make well-informed management decisions. By taking the CBAM approach, coastal communities keep their traditional decision-making power. However, during the decision-making process, FLMMA created an environment where all members of the communities were included, even those who were not traditionally part of

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<sup>9</sup> Kava is a traditional beverage based on the roots of the Kava plant. It is consumed in Polynesia, Micronesia and Melanesia. In Fiji, kava ceremonies are held during social or religious happenings.

the decision-making process, like the youth, women and migrants. This approach built trust within many of the communities. As a result of expanding trust, other villages began to join.

With a higher number of villages and LMMA sites, the challenges for FLMMA had changed, and FLMMA adapted accordingly to perform its responsibilities effectively. In recent years, it has moved towards a provincial decentralization by creating *Yaubula* Management Support Teams (YMSTs) which are meant to visit the community sites at least once a year. Also, Divisional Reps ensure regular visits to coastal communities and report their findings back to the Executive Committee. Both YMSTs and Divisional Reps are meant to strengthen the cooperation with governmental structures as much as possible. For this, their setup was streamlined towards the provincial structure of Fiji's Government: "But we are trying to align all that we do with the Government since they have divisional setups, so we moved that way too" (Interviewee, 2015). The data collected from the interviews shows a strong support from the Government: All respondents with a governmental background emphasized the importance of the provincial sector for this work. In total, 18 out of 26 interviewees talked about provincial decentralization. The majority of this group is currently actively involved within FLMMA.

Another recognized key element of CBAM, is the creation of a culture, built around learning, in which not only community members benefit but FLMMA partners as well, in particular young Fijian academics who have been involved with FLMMA over the years. Non-FLMMA members mainly identified this strength: "There has been a tremendous amount of capacity development amongst those individuals. Oh my gosh, they have come so far in a decade or so, it is amazing." (Interviewee, 2015)

The respondents emphasized the importance of developing and using easy tools and hands-on practices adjusted to the particular needs of Fijian coastal communities and embedded in existing community structures and schedules. As a result, FLMMA communities hold the necessary ecological knowledge to make sensible management decisions without being overwhelmed with complex scientific information. Finding this balancing act has been a core discussion point between FLMMA members. Although they all agree in essence, representatives with an academic or conservation focus usually put a stronger emphasis on scientific detail than representatives focusing on the communities' wellbeing.

In addition to creating a culture where CBAM can thrive, the multidisciplinary and diversity of FLMMA's members has also contributed to its success. FLMMA members are cooperating based on common values and mutual respect similar to a Gentlemen's agreement. Their ability to cut across disciplines and work together has been a major contributing factor in bringing a holistic coastal marine management system to Fiji. Interviewees, who had been active already when FLMMA had started, seem to particularly value these FLMMA principles.

## 5.2 FLMMA's Weaknesses

*You understood once you realized those factors: the importance of leadership, the importance of enforcement, the risks of opening tabu areas, integration of other stakeholders, mainstreaming into government* (Interviewee, 2015)

The instability of FLMMA's financial situation was the most frequently stated challenge perceived by the interviewees, mentioned during 23 out of 26 interviews in total. However, seven respondents of all demographic categories didn't find the lack of funding as a critical issue: In their opinion, funds are obtainable. For them, it was a question of making FLMMA more attractive to donor organizations which would be beneficial for the future of FLMMA. Five of the interviewees stated explicitly that the issue of future funding is closely linked to where they see FLMMA in 5 years (see section 5.3.1.)

When talking about how FLMMA is perceived right now, answers of the respondents varied considerably among the interviewees: Government representatives see in FLMMA mainly a "network of NGOs including a number of government departments" (Interviewee, 2015) whose members from the Government are "still underrepresented in FLMMA" (Interviewee, 2015). On the other hand, NGO representatives describe FLMMA as a structure whose formation was caused by the Government not fulfilling its tasks: "So you have the national platform that is not working, that you have this platform created which is helping to support the work" - "That's what it means to me and that's what we support – communities actively managing it and getting support from government" (Interviewee, 2015). Interestingly, both groups with different views on FLMMA have points in common:

They agree that FLMMA is closely linked to the Government and works in an area that arguably is under the responsibility of the Fijian Government.

Thirteen respondents talked about the high number of FLMMA sites and the current difficulties of FLMMA in meeting the expectations of sites:

*In my view, starting, getting people to commit to resource management is the easiest of things. The challenge is in having them focus on that commitment on resource management that they have agreed to.* (Interviewee, 2015)

Currently, there are more than 400 sites in Fiji alone which leads to considerable financial and logistical challenges for the Network. Also, formerly active FLMMA members, some of which used to be the lead in a high number of sites, are reducing their efforts considerably and changing their strategy to stay attractive to donor organizations. In consequence, FLMMA's main challenge, according to 13 interviewees, is to keep all communities engaged and to respond adequately to demands for support from additional villages. Respondents who are working for, or closely with, the FLMMA Secretariat share this concern. Respondents of two formerly very active FLMMA members did not mention the high number of sites as a challenge for FLMMA. While one member organization only quoted the number of sites as a success, the second organization sees this long-term engagement with sites as an obstacle to sustainability and therefore, denies responsibility:

*I think, we should be empowering them to take things up. They are adults, they are smart, so we should encourage them to go this way. We support them as much as we can do that. Bring tools that help them rather than holding their hand and have them look at us as if we were the answer to all their problems. We are not helping them that way.* (Interviewee, 2015)

However, there are also members who accept this challenge for FLMMA. They admit that they will not be able to engage with *their* sites in perpetuity and so they are trying to support FLMMA actively in identifying an appropriate problem-solving approach to have communities take ownership of sustainable resource management in the long term:

*When you look at NGO projects in general and aid projects in general, not just in conservation work, so many of them start out really well and you get two or three*

*years where it's going great and then the money runs out and the initial people who were working with the communities go away and then two or three years later it's like it has never happened. In FLMMA, we realized quite soon that we were faced with that.* (Interviewee, 2015)

In consequence, FLMMA and its members are not only challenged in meeting the demands of communities in the context of coastal resource management, but also to find ways for communities to continue without support one day:

*We should probably pull out from a couple and then just monitor whether or not this succeeds because this is one of the reasons why we're finding it difficult and problematic to take on new projects – because we don't seem to shed the established ones which was what we all wanted to do.* (Interviewee, 2015)

In the meantime, the status of existing sites is unclear. Community and provincial representatives confirm in their interviews the suspicion of many of FLMMA members based in Suva: many sites stopped their engagement when the support of FLMMA members ended: “When IAS was there, they had developed a management plan, created the Committee, they set up MPAs and did some development project. But after they left, all went back to before” (Interviewee, 2015).

Also, interviewees described the data management in FLMMA as insufficient. However, especially in regards to the FLMMA database of LMMA sites, seven respondents – all currently active members or associates of FLMMA - mentioned an enhanced data management as a promising tool to improve transparency in management at the local level:

*You would have a village list for Fiji, that each village has GIS coordinates, that one name is not sometimes used for a settlement and sometimes for a village: This is where this database could really help the Government and everybody else. And it would ensure that you are talking about the same thing at the end of the day. Same with the qoliqoli boundaries: if there are potentially different qoliqoli boundaries, work with iTaukei Affairs to get the boundaries right for once and for all. This is where you as a Network can help* (Interviewee, 2015)

However, they also stated that the database in its current state is of no use: “FLMMA would really have to maintain that database to show which communities are active” and

“...when we talk about FLMMA sites, not all of them are full FLMMA members. Some are members, some are partners and some are where FLMMA has worked” (Interviewee, 2015). But all appear equally in the database with no differentiation which leads to the current situation when only one person has the institutional knowledge to use the database, which results in a lack of transparency.

As a second example for the wish for more clarity, two-thirds of the interviewees see a vague terminology and unclear processes as another obstacle for FLMMA to be meaningful in the future. Nine interviewees felt that a fundamental challenge which FLMMA is facing is the inconsistency in terminology and definitions being used by FLMMA. This was mentioned particularly by two groups of respondents: (1) those that are relatively new to FLMMA and, according to them, struggle to find their role within FLMMA and (2) respondents from donor organizations. As one example, the term *FLMMA site* is vague as following quote demonstrates: “...the FLMMA Network cannot convincingly after 15 years describe or define what an FLMMA site is - that describes just the whole problem in a nutshell” (Interviewee, 2015).

Besides vague terminology and poor data management, interviewees also criticized the lack of transparency in the context of FLMMA’s setup and decision-making structure. The FLMMA Network is facing challenges in its decision-making processes, which are perceived very differently by the interviewees. Because of its unique structure of a network of various organizations, five interviewees explicitly stated that they don’t see a pathway for FLMMA to streamline its organizational structure in general and its decision-making processes in particular: “Within the constraints of it being voluntary, multi-stakeholder with Government and NGOs and community reps, it is probably working relatively well.” Interestingly, none of the five respondents are usually present at the Executive Committee meetings – FLMMA’s principal decision-making tool besides the AGM – and four of them used to be more involved in the beginnings of FLMMA, but are not anymore.

Nevertheless, there are equally strong voices, who call for more efficiency, especially during the Executive Committee meetings. The latter group consists of currently active members of the ExCom meetings: “The Executive Committee meetings are not functional” (Interviewee, 2015) because people from the different member organizations change from meeting to meeting. This leads to a lack of understanding and coherence. Often, junior

employees attend the Executive Committee meeting with no decision-making power and limited experience. The Executive Committee is therefore hardly efficient since its purpose is to serve as a forum for discussion and experience exchange, as well as to act as main decision-making tool within FLMMA: “So sometimes you’d be sitting in an Executive Committee Meeting and you don’t recognize any of the people who have never been to an FLMMA meeting before yet they’re voting on things” (Interviewee, 2015).<sup>10</sup>

Besides structural challenges, FLMMA faces changes in the setup of its member organizations. In 2000, the Network began as a grouping of colleagues, meeting informally around a kava bowl, exchanging ideas and experiences regarding community-based conservation. This relaxed style of information exchange became increasingly successful over time. As a result, FLMMA expanded and formalized itself into today’s FLMMA Network. However, FLMMA’s humble beginnings may be why 12 of the interviewees mentioned that there is a lack of leadership, commitment, and prioritization in today’s structure.

Approximately one third of all respondents, particularly the ones linked to the FLMMA Network or the regional LMMA Network, stated that traditionally very active FLMMA members have started to show less commitment in recent years. Amongst other reasons, this development is explained by a change of strategic prioritization of the member organization on the one hand, and a deficiency in information exchange on the other. Interestingly, the change of strategic prioritization was the explanation given by respondents who are still involved in FLMMA regarding their vanishing colleagues. However, the concerned member institutions themselves named insufficient communication and information exchange between the Secretariat and the members as major factor:

*A lot of partners these days are feeling, ‘well we’re not seeing that information sharing happening so why are we continuing to invest effort into that Network?’. I believe in the Network, I believe it’s a good thing so I will continue to invest effort to keep it functioning... There is value but again, just to emphasize this because it’s very important there is only value if the Network is functioning as a coordinating body*

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<sup>10</sup> On a positive note, the new Chair of FLMMA informed the member organizations that they had to appoint focal points to assist the FLMMA Executive Committee meetings from now on (2016).

*and sharing the information otherwise it is just a waste of everyone's time*  
(Interviewee 2015)

In general, interviewees stated the importance of the Institute of Applied Sciences (IAS), which belongs to the University of the South Pacific (USP), especially during the first ten years of FLMMA's existence. In recent years, IAS "has shut down largely around FLMMA...they used to be the *de facto* Network" (Interviewee 2015). As a result, today's active members agreed that it was a struggle within FLMMA to fill the gap after the former Director of IAS and his team took a step back from a strong involvement within the Network.

During the interview process, it became apparent that the relationship between the *core* structure of FLMMA (the Secretariat) and the most influential FLMMA members, often cited as *the NGOs* (referring mainly to WWF and WCS), has to be defined more clearly, as well as roles and responsibilities. This becomes more obvious in the broadness of the interviewees' visions of FLMMA in the future, which will be subject of the next section.

### **5.3 FLMMA in the Future**

*There's a religion to LMMA. They don't like NGOs in essence. They want communities to be empowered. That all sounds fine and good but in many ways I don't care about the religion, I care about what you can do for communities.*

(Interviewee, 2015)

The institution FLMMA is at a crossroads. Its initial reason for existence – to empower local communities and to ensure their voices are heard nationally and internationally – is accomplished. Of course, there is room for improvement, but in general, communities have proven their ability to efficiently manage coastal resources. As a next step, principal donor organizations are orienting their support from site-based conservation towards the designation and management of MPAs or LMMAs. They argue that

*...although there has been substantial progress in the growth of marine reserves and related site-based interventions, evidence increasingly shows that marine reserves in their current form are not sufficient to protect the integrity of the region's coastal marine ecosystems from mounting pressures (nor have most of these interventions proved to be durable without continued outside support and resources).* (Packard Foundation, 2013, 3)

Throughout recent years, scientists, practitioners, and donor organizations have taken a step back from a purely community-based approach towards a management solution which includes responsible government entities and other stakeholders. With it, formerly important member institutions within the Network are moving away at the same time. Now, FLMMA's growing pains of imprecise terminology and fuzzy processes are becoming more apparent when former leader figures, and with them the institutional memory, vanish. Finally, the consistently praised 400+ FLMMA sites are still not legally recognized, and there is hardly any indication that this will change soon:

*...[some] clear evidence is the lack of Government policy supporting FLMMA. A lack of recognition of FLMMA work by Government. There is no formal protection or formal legislation of policy on the FLMMA sites.* (Interviewee, 2015)

However, some of the favorable conditions during the creation of FLMMA remain and not all changes are negative for FLMMA: the cultural setup in Fiji is advantageous to a structure like FLMMA. People are open to collaboration, and the *qoliqoli* system allows FLMMA members to work directly with the communities. Compared to 2001, FLMMA today is a recognized entity in Fiji, in the region and internationally, and is equipped with experience in participatory coastal resource management. Now that the LMMA approach is spreading to Africa and other parts of the world, FLMMA is a valuable partner sharing its lessons learned globally.

And also in Fiji, many challenges are waiting for FLMMA: In *Coasts at Risk*, Beck (2014) identifies Small Islands Developing States (SIDS) including Fiji as most-at-risk nations in terms of vulnerability and exposure to coastal hazards. These derive from impacts of climate change and coastal development which, unfortunately, were proven right in February 2016 when the devastating tropical cyclone Winston rolled over Fiji (Beck, 2014).

Fiji's Government has been aware of the risks and has committed itself to numerous international treaties and even beyond. Fiji officially intends to triple the commitments of Aichi Target 11; instead of 10%, Fiji wants to declare 30% of its waters as protected areas by 2020 (UN DESA, 2016).

Overall, the context of FLMMA has changed, but there are plenty of opportunities for FLMMA to continue to contribute to the successful management of nearshore fisheries in Fiji. However, for this, FLMMA will have to adapt and develop further. The following sections describe three areas where this study identified potential for FLMMA's future engagement.

### **5.3.1 FLMMA as an Institution**

*FLMMA is an entity on its own and no longer the FLMMA I started off with, where we were just a group coming together with the same heart, vision and do things.*

(Interviewee, 2015)

To make a meaningful contribution to nearshore fisheries management in Fiji, FLMMA needs to review its institutional setup. Although all interviewees share FLMMA's vision, they identified a need for clarification of its future strategic development including identified challenges such as opaque processes and procedures, a lack of commitment from members, and a lack of leadership and communication.

In this light, it seems beneficial to clarify roles and responsibilities within FLMMA. As an example, the position of the FLMMA Coordinator is currently laid out as a fundraising position with a high dependence on engaged FLMMA members who have the decision-making power. There are numerous publications on leadership in a not-for-profit context (Bear & Fitzgibbon, 2005; MacMurray Pirola-Merlo, Sarros & Islam, 2009) which show clearly the challenges of this position:

*The fact is that leaders of not-for-profit organizations must not only be passionate about the mission of their organizations, but must also be good leaders of people, articulate visionaries, good strategic planners, strong in organizational skills, competent in and comfortable with fund-raising, knowledgeable about financial*

*reports and statements, and have some marketing sense* (Bear & Fitzgibbon, 2003, 90).

Currently, there is no formal leader foreseen in the structural setup of FLMMA. One could assume that the Coordinator would be in a leading position, but this is not how it is laid out. In the current Strategic Plan of FLMMA, the position of the Coordinator is not listed in the Governance section (FLMMA, 2014). It might be surprising, particularly in a country which possesses a strong traditional system of leadership. Four interviewees representing FLMMA member organizations explicitly linked shortcomings of the current Coordinator with FLMMA's current situation:

*...no one wants to rock the boat and I think that at this point there are some people that would say: 'If it implodes, then it implodes and we find another way to work around this.' So some people are just willing to sink the boat* (Interviewee, 2015)

The future of FLMMA is uncertain for all of the interviewees. Six respondents doubt that FLMMA will continue for much longer as the above quote indicates; four of them were co-founders of FLMMA and three are currently active members. The table in Appendix C gives an overview of other potential scenarios of FLMMA in a 5-year-timeframe, suggested by the interviewees. It demonstrates the high variance of views on FLMMA's future. Although it is not extensive, it illustrates two things: (1) the broad range of opinions by the interviewees and (2) how unclear the future of FLMMA is to them.

It became apparent during the interview process that respondents closely linked to the FLMMA or LMMA structure see FLMMA's focus on supporting communities in close cooperation with provincial partners and government entities. In total, 12 interviews followed this line of thought, from which ten interviewees are FLMMA members. The respondents have a broad range of backgrounds, representing the Secretariat, the NGO sector, the Government, communities and donor institutions. They argued for an empowerment of the Secretariat in decision-making power to increase the speed and efficiency of the approach to respond to the needs of the 400+ FLMMA sites. A core team would work mainly on the local and provincial level while being rather independent of FLMMA member organizations. The Executive Committee would act as technical advisors to this core team, with less influence during the decision-making process. In other words, FLMMA would move away from its consortium character and become more

institutionalized and independent from its members and, in consequence, from their commitments.

On the other side, seven interviewees would prefer an FLMMA that acts as an information sharing platform between different organizations working on participatory coastal management. Representatives of institutions with long histories of FLMMA membership form this group, which cherishes the initial idea of FLMMA as a network. However, for respondents following this line of thought, they admit the risk of FLMMA losing its importance over time if nothing changes:

*A lot of partners these days are feeling, 'well we're not seeing that information sharing happening so why are we continuing to invest effort into that Network?'. I believe in the Network, I believe it's a good thing so I will continue to invest effort to keep it functioning...There is value but again, just to emphasize this because it's very important there is only value if the Network is functioning as a coordinating body and sharing the information otherwise it is just a waste of everyone's time.*

(Interviewee 2015)

It's a fine balance between having it operate as a loose network of partners and it becoming more formalized and fitting it into Government, or having it go on its own and becoming its own independent NGO with staff. It also became apparent that these two lines of thought have developed over time due to a lack of clear communication between the different groups. Both groups seemed frustrated about the level of commitment, impacts and cooperation. As a symptom of this, formerly relevant working groups are non-existent at present. Based on the results of this study, it would seem beneficial for FLMMA to undergo a reform of organizational development instead of fixing the decision-making process:

*I don't care much right now about the meetings. Until you can fix that part of it the meetings are just a symptom of a problem. You can fix the meetings, but you still didn't address the leadership question, the decision making, the organizational one and maybe all they can do is streamline.*

(Interviewee, 2015)

### 5.3.2 FLMMA as a Partner to Communities

*FLMMA's greatest assets are the communities and their commitment to securing livelihoods and food security of current and future generations* (FLMMA, 2014)

According to the present Strategic Plan of FLMMA (2014-2018), the key challenge faced by the Network is the steep increase in numbers of FLMMA sites. This development challenges FLMMA's ability to provide on-going support to established sites and assist new communities who are interested in developing an FLMMA site. Based on FLMMA's core value of *community at heart*, several planning workshops resulted in a strategic plan document which states that it is FLMMA's "vision to move towards a provincial decentralization of these activities by the establishment of provincial or island based *Yaubula* Management Support Teams," hoping they would be sufficiently resourced to ensure an annual visit per site (FLMMA, 2014). FLMMA hopes that the increased cooperation will lead to higher compliance of FLMMA sites while keeping costs as low as possible. This strategy of decentralization is equally directed towards the divisional and the communities' reps as well as the Conservation Officers. Twenty respondents directly referred to this development by underlining the importance of the provincial level in the future – for FLMMA and the coastal resource management in Fiji.

Eight out of 26 interviewees acknowledged the role that Fijians have played within FLMMA from the start, two of the respondents being Fijian themselves. In the beginning, Fijians played an essential role within FLMMA although there were still "these white *kaivalagis* in the forefront" (Interviewee, 2015). Today, the majority of the long-term engaged associates are Fijians who have "...actually mobilized their own community to do their own resource management plan [...] although your organization was working in a site somewhere else" (Interviewee, 2015). Five respondents, including the current Coordinator, suggested the next FLMMA coordinator be Fijian.<sup>11</sup> In light of shifting international attention away from FLMMA, it is likely that the process of *iTaukei*-ation within FLMMA will continue, meaning that most activities will be increasingly planned and conducted by Fijians.

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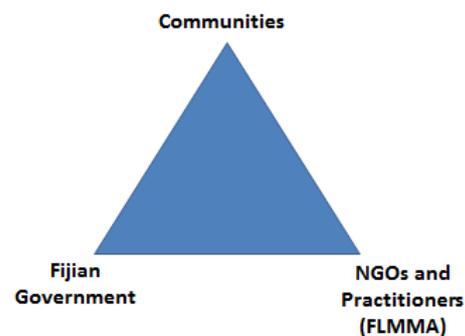
<sup>11</sup> The current FLMMA Coordinator did not extend his contract in January 2016. FLMMA currently searches for a new Coordinator. Expected start of the new contract is April, 1<sup>st</sup> 2016.

Fifteen years ago, FLMMA engaged in a long-term commitment with the FLMMA sites. With partners moving away, the communities are staying behind with high expectations towards FLMMA, which the Network seems to accept: “But the good thing is that FLMMA is still prioritizing communities as the heart of the Network. No matter in what way we assist, it has to be for the communities” (Interviewee, 2015). So far, FLMMA has not found a satisfactory way of putting an end to its support in sites while the work on the management plans continues. Many communities have stopped their efforts over time, when visits of FLMMA members became rare as 13 interviewees have pointed out. “...We don’t seem to shed the established ones which was what we all wanted to do. We wanted to build it up and then let them run with it” (Interviewee, 2015). Since last year, FLMMA has changed its approach slowly. While in 2015 the number of re-contacted FLMMA communities was around 80, the year before, no FLMMA sites were visited to check on their status (pers. comm.). As a result, FLMMA is gaining an overview of the state of most sites which will be complemented by the Lessons Learned Initiative this year.

FLMMA becoming more Fijian-driven might have an impact on the current co-management system: In the beginning of FLMMA, co-management was established between the communities and NGOs and practitioners who were forming FLMMA. Six interviewees, who witnessed the early days of FLMMA, stated that FLMMA’s establishment was born out of the need to fill the gap where the Fijian Government was unable or unwilling to meet its

responsibilities regarding coastal resource management. Over time, the Fijian Government increased its engagement slowly within FLMMA, according to 14 interviewee partners (including all Government representatives), creating a co-management triangle. This triangle consists of communities, the Government, and non-governmental organizations (see figure 8). In the long term, all interview partners agreed that FLMMA should aim at

### The Triangle of Co-management



*Figure 9: The Triangle of Co-Management*

strengthening the co-management between communities and the Government. Six interviewees think that FLMMA should go one step further. They formulated FLMMA's goal: "We would want to see that most of this FLMMA work is handed over to them [Department of Fisheries]. But not to make it [the FLMMA work] die out but to make it sustainable" (Interviewee, 2015). The majority of these six respondents used to be actively involved in FLMMA in the past; all six are currently inactive concerning the FLMMA Network.

### **5.3.3 FLMMA supporting the Government in Policy-Making**

*The government at least on paper knows what it wants; NGOs know what they want; The private sector knows what it wants - everyone know what they want. So the community needs to go in as groups that really know what they want and know how to fight for it.* (Interviewee, 2015)

As mentioned earlier in the policy section, the legislative framework of nearshore fisheries in Fiji is insufficient and outdated. The lack of a fisheries legislation that addresses current issues hinders the efficient management of coastal resources. Twenty-two interviewees agreed that FLMMA can play a more prominent role in cooperation with the government, which goes hand in hand with an international shift from pure community-based approaches to resource management solutions, including primary stakeholders such as the Government. In particular, interview partners from Government entities want governmental departments to play a bigger role in FLMMA's Executive Committee meetings.

However, two interviewees identified this process of convergence between FLMMA and the Government as a balancing act for FLMMA. FLMMA needs to identify (1) where the Department of Fisheries needs FLMMA's support for the benefit of the local communities, and (2) where FLMMA just serves as an excuse for DoF to engage less in nearshore

fisheries management.<sup>12</sup> However, one interviewee representing a group of experts who hold observing positions regarding FLMMA argued that

*The things I don't think we can...Government expect to do – not just in this country but particularly in this country – is really represent communities, is really convene them, is really [encourage] them to share their thinking and their experiences openly.*

Twenty-two interviewees agreed that FLMMA, through its network, could complement Government efforts towards food security, conservation, disaster risk reduction and green growth. One FLMMA associate sees a need to “think about a diplomatic, an acceptable strategy for improving the Government delivering its services in a way that supports community-based management” (Interviewee, 2015). Three main areas are of particular importance:

1. A coherent policy framework “that brings out the best in communities and covers the most serious things that communities can't handle”, for example the sustainable harvest of species with high economical value or dealing with poachers. Also, the policy framework would have to recognize “that communities within FLMMA...doing the core work in terms of achieving food security for the country and that's a main objective under the Green Growth Framework” (Interviewees, 2015)

In November 2015, FLMMA released a Policy Brief explaining how FLMMA can assist the Government by referring to the Green Growth Framework, which has the objective of ensuring the sustainability of Fiji's resources through wise management (FLMMA, 2015). Currently, Fiji's nearshore fisheries are over-exploited, coastal ecosystems are degrading because of destructive activities on land and sea, and the risk of coastal hazards is increasing. Sixteen interviewees, including governmental and non-governmental institutions, stated independently from each other that FLMMA should help bring adequate

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<sup>12</sup> So the question is: Is FLMMA complementing the Government because it only has limited financial and technical resources by “plugging the gaps of what the Department of Fisheries is unable or unwilling to do” as one of the interviewees expressed it? Or is FLMMA “some sort of fig leaf for the Department's lack of involvement in Coastal Fisheries because they can use this cooperation whenever they are being criticized” (Interviewee, 2015)? The fact is that FLMMA was created because there was a strong need to support local communities in the nearshore fisheries management which wasn't met by the responsible ministries.

information out to coastal communities on how Fisheries' system works, what the national rules are and what causes the reduction in catches so that they can react to the threats.

Finally, the majority of respondents agreed that FLMMA's efforts regarding the establishment of LMMA sites can only reach full potential if they are lock-stepped with governmental policies for an effective nearshore fisheries' management.

## 2. Supporting the Government achieving its commitment towards Aichi Target 11

Only four interviewees talked about the international commitments regarding the declaration of MPAs during the 26 interviews. However, as the following quote demonstrates, Fiji's objective to effectively manage 30% of its seas by 2020 has been subject to considerable discussion in the Network: "FLMMA is driven by Government's necessity to answer the 30% protection commitment." This interviewee, who represented an FLMMA member, continued critically: "This has been, in my opinion, a completely sideways priority. It's got nothing to do with community management whatsoever" (Interviewee, 2015). On the other hand, a respondent working for a Government entity admitted shortcomings of the Government in informing the local communities in the past. The interviewee sees a definite need for FLMMA's expertise to improve communication and cooperation between the national and the local levels to achieve the Aichi Target.

Currently, it is not clear if LMMA sites are eligible for being included under the definition of Aichi Target 11 (see section 5.4. Future Research). These delays hinder Fiji's objective to effectively manage 30% of its seas by 2020, including LMMAs and offshore MPAs which, notably, triples the original CBD commitment of Fiji (UN DESA, 2016). Nevertheless, to fulfill its international engagement towards Aichi Target 11, the Fijian Government depends on LMMA sites and, therefore, on FLMMA.

## 3. Supporting the development of the Inshore Fisheries Division within the DoF and stimulating experience exchange workshops

Twelve out of 26 interviewees pointed out the need for the Government to effectively manage the nearshore fisheries in Fiji. In 2014, Bob Gillet strongly argued for the establishment of an Inshore Division within the Department of Fisheries which would complement the comparatively well-resourced Division of Offshore Fisheries (Gillet, 2014). Surprisingly enough, the inshore sector has been unstaffed by the DoF until today

although it accounts eight times more toward GDP than the offshore fisheries sector (FLMMA, 2015). To date, the Inshore Fisheries Division hasn't been formally established. In the opinion of one respondent, FLMMA needs to engage in the process of the establishment of this division, and it should think about ways how to share its experiences in participatory coastal zone management with future staff of the Inshore Division to help to determine strategies for future inshore fisheries management.

## **5.4 Future Research**

This study complements the Lessons Learned Initiative of the LMMA Network, which will be focused on identifying impacts by FLMMA activities on the community level. Throughout the process of this study, the need for data concerning FLMMA's impact on the ground has come up repeatedly. Also, long-term FLMMA members are not sure what would be needed for communities to continue their efforts without regular support from FLMMA. It would be valuable to find out how communities feel about the sustainability of their efforts regarding resource management. The data collection is scheduled for 2016.

In addition, the provincial structures and their functioning constitute an area of potential research. So far, little is known about the functioning of the established structures. The fact is that the number of governmental and non-governmental structures in the provinces is comparatively high. Research could help to identify what the most efficient way is to support communities from a provincial perspective. One interviewee put it the following way: "You know a country like Fiji that is not terribly wealthy can't effort to have two sets of basically Fisheries Officers at that [provincial] level. They have to get rid of any possible duplication effort." It is likely that these structures will get aligned, which would be cheaper and more transparent.

At the national level, the Inshore Fisheries Management Decree has been drafted. When enacted, it will result in many changes regarding qoliqoli ownership and Fiji's nearshore

fisheries management, which will impact FLMMA's work considerably. Further research would be helpful to help identify the changes and appropriate measures to take.

As mentioned above, Fiji committed itself to the Convention on Biological Diversity and the inherent Strategic Plan for Biodiversity 2011-2020. This is a potential area of research if linked to the formulation of the Aichi Target 11, which states the following:

*By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape. (CBD, n.d.)*

By this definition, the key question is if LMMAs can be defined as “protected areas and other effective area-based conservation measures.” Govan and Jupiter analyzed in 2013 whether IUCN's definitions on protected areas can be applied to locally-managed areas Pacific island approaches (Mills et al., 2011; Govan & Jupiter, 2013)? The article concluded that these definitions are not compatible because livelihood, rather than conservation principles, usually drive LMMAs. Also, the time spans of tabu areas are often limited within LMMA sites.

However, the formulation of the Target includes “other effective area based conservation measures,” a phrase which is never clearly defined the formulation of the Target. According to the IUCN World Commission on Protected Areas (WCPA) in its Protected Planet Report from 2014, there is no final clarification of the term but “work is underway to rectify this” (Juffe-Bignoli et al., 2014). In September 2015, WCPA formed a task force in Oceania to work explicitly on criteria for “other effective area-based conservation measures” (IUCN, 2015). Hopefully, first results will be presented at the World Conservation Congress in September 2016. This will open various fields of future research, particularly regarding the legal recognition of tabu areas within FLMMA sites.

## 6 Conclusion

The FLMMA Network is at a crossroads. Its initial *raison d'être* – to empower local communities and to ensure their voices are heard nationally and internationally – has been accomplished. This study has identified strengths, weaknesses and potential areas of future engagement for FLMMA, based on the statements of selected representatives and key informants of the FLMMA Network.

The interviewees presented a broad range of opinions, particularly concerning FLMMA's future. However, groups of similar views could be identified: The witnesses of FLMMA's early days around 2001 often share similar views on FLMMA. Stakeholders active today are divided into two groups: 1) the influential NGOs, often with a stronger conservation perspective, and 2) individuals who are close to the regional Network or the FLMMA Secretariat and representatives of smaller organizations. This group focused primarily on the wellbeing of the community.

In light of the first research question, this study started off by identifying the strengths of FLMMA, from 2001 to 2015, in empowering coastal communities in managing their marine resources efficiently. According to the interviewees, the LMMA approach has been a success in Fiji in many ways. Since its conception, FLMMA has become a nationally and internationally recognized institution which has followed its principle of *community at heart* consistently over 15 years. By linking Western science with Fijians' traditional knowledge, and by involving relevant partner organizations, the interviewees agreed that FLMMA has contributed to making marine resource management more efficient in Fiji by empowering local communities. More than 400 FLMMA sites exist today, which makes FLMMA the most successful country network within the LMMA territories in number of sites.

Concerning FLMMA's weaknesses, the data provided identified the lack of funding as the biggest challenge. Also, FLMMA struggles to support the high number of established sites, and can hardly react to requests from new communities. From an organizational point of view, a majority of the interviewees stated a lack of transparency, leadership and

commitment as additional weaknesses. The perception of FLMMA varied a lot between the respondents.

After identifying the strengths and weaknesses of FLMMA, this study then evaluated how FLMMA could continue to contribute to the successful co-management of nearshore fisheries between the national, provincial and local levels in Fiji. Based on the data provided by the interviews and the desktop study, this research suggested the following:

- 1) FLMMA has to address its internal challenges by undergoing a process of organizational and strategic strengthening, finally eliminating the so-called growing pains which damage its credibility at the moment. In the long-term, FLMMA should work in clarifying its organizational structure, deciding if it will continue as a loose network of partners or if it will move towards becoming an institution with staff similar to an NGO.
- 2) FLMMA has proven to be very successful in participatory community-based adaptive management. While the legislative framework in Fiji continues to be insufficient, FLMMA's role remains to support the community in managing its marine resources to improve resilience now and in the future. FLMMA is becoming more inclusive of Fijians with a stronger focus on the provincial level. Future research should be encouraged to identify the efficiency of existing provincial structures and the particular needs of capacity development so that FLMMA can direct its support accordingly.
- 3) The Fijian Government has signed international and regional conservation treaties and conventions, showing on paper its commitment to fighting climate change. FLMMA could play a crucial role in transforming these into actual initiatives. Also, FLMMA can prove its value to the Fijian Government by supporting the Inshore Fisheries Division within the Department of Fisheries.

This study complements the Lessons Learned Initiative of the LMMA Network, which will be focused on identifying impacts by FLMMA activities at the community level. Besides its practical value for the Network in Fiji, this study describes the process of FLMMA from a confined focus on empowering communities towards strengthening partnerships between the local, provincial and national levels in co-managing coastal resources in Fiji.

*Fiji is such as this: When I came to Fiji in 1975, there was no yellow pie. You know the yellow pie? You get it served when you go to the village. So there was none in 1975 or in 1978. And then, SPC did this training and they taught women how to make yellow pie. It was just 7 or 8 women who went out and the entire country was transformed. Why? Because:*

- 1. Locally available material*
- 2. It was not expensive*
- 3. It was women sharing recipes with women*

*And it conquered the entire nation with yellow pie! And yellow pie has taught me something about this country: All we need to do is something very small in this country because the people emulate. They do. They see something working and it passes from community to community. And what we need to do is to look at the qoliqoli management as Yellow Pie. We just need one or two real good model sites and it will happen, it will spread. We can change this country. This could be the model for the planet. Where else in the world would Yellow Pie do that? It is Fiji, Fiji is the Yellow Pie kingdom where with Yellow Pie, women – WOMEN - can do it.*

(Interviewee, 2015)



## References

- Aalbersberg, W. G., Tawake, A., & Parras, T. (2005). Village by village - Recovering Fiji's coastal fisheries. In World Resources Institute in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank. *The World Resources 2005: The Wealth of the Poor – Managing Ecosystems to Fight Poverty* (p.144-151). Washington D.C.: WRI.
- Dalzell, P., Adams, T. J. H. & Polunin, N. V. C. (1996). Coastal fisheries in the Pacific Islands. In Ansell, A. D., Gibson, R. N., Barnes, M. (eds.). *Oceanography and Marine Biology: an annual review* (p.395-531). UCL Press.
- Bear, A. B. & Fitzgibbon, M. A. (2005). Leadership in a not-for-profit world. In Sims, R. R. & Quatro, S. A. (eds.), *Leadership. Succeeding in the Private, Public, and Not-for-Profit Sectors* (p.87-104). New York: M.E. Sharpe Inc.
- Beck, M. W. (2014). *Coasts at Risk: An Assessment of Coastal Risks and the Role of Environmental Solutions*. A Joint Publication of the United Nations University-Institute for Environment and Human Security, the Nature Conservancy and the Coastal Resources Center.
- Benbow, S., Humber, F., Oliver, T. A., Oleson, K. L. L., Raberinary, D., Nadon, M., Ratsimbazafy, H. & Harris, A. (2014). Lessons learnt from experimental temporary octopus fishing closures in south-west Madagascar: benefits of concurrent closures. *African Journal of Marine Science*, 36(1), 31-37.
- Cakacaka, A., Jupiter, S. D., Egli, D. P., & Moy, W. (2010). *Status of fin fisheries in a Fijian traditional fishing ground, Kubulau District, Vanua Levu*. Suva: WCS-Fiji.
- Caillaud, A., Boengkih, S., Evans-Illidge, E., Genolagani, J., Havemann, P., Henao, D., Kwa, E., Llewellyn, D., Ridep-Morris, A., Rose, J., Nari, R., Skelton, P., South, R., Sulu, R., Tawake, A., Tobin, B., Tuivanuavou, S. & Wilkinson, C. (2004). Tabus or not taboos? How to use traditional environmental knowledge to support sustainable development of marine resources in Melanesia. *SPC Traditional Marine Resource Management and Knowledge Information Bulletin #17*.
- Cinner, J. E., & Aswani, S. (2007). Integrating customary management into marine conservation. *Biological Conservation*, 140(3), 201-216.

Conservation and Community Investment Forum (2013). *Country Report Fiji. Assessment of the Enabling Conditions for Rights-Based Management of Fisheries and Coastal Marine Resources*. Retrieved from

[http://www.trustforconservationinnovation.org/sponsored/project\\_page.php?pid=16](http://www.trustforconservationinnovation.org/sponsored/project_page.php?pid=16)

Convention on Biological Diversity (n.d.). *Aichi Biodiversity Targets*. Retrieved from <http://www.cbd.int/sp/targets/>

Convention on Biological Diversity (n.d.). *Fiji country profile*. Retrieved from <http://www.cbd.int/countries/profile/default.shtml?country=fj>

Convention on International Trade in Endangered Species of Wild Flora and Fauna (n.d.). *Fiji*. Retrieved from <https://cites.org/eng/cms/index.php/component/cp/country/FJ>

Dalzell, P., Sharma, S., & Nath, G. (1992). Estimation of exploitation rates in a multispecies emperor (Pisces: Lethrinidae) fishery in Fiji, based on length frequency data. *Papers on fisheries science from the Pacific Islands, 1*, 43-50.

Department of Environment (2007). *Fiji biodiversity strategy and action plan reviewed*, Fiji Islands.

Fiji Bureau of Statistics (2007). *Fiji Statistics at a Glance*. Retrieved from <http://www.statsfiji.gov.fj/>

Food and Agriculture Organization (2016). *The Republic of the Fiji*. In Fishery and Aquaculture Country Profiles[Data file]. Retrieved from <http://www.fao.org/fishery/facp/FJI/en>

Gillett, R. (1999). Voices from the village: a comparative study of coastal resource management in the Pacific Islands. *Fisheries Newsletter-South Pacific Commission*, 26-32.

Gillett, R. (2005). Global study of non-industrial tuna fisheries. In Bayliff, W. H., de Leiva Moreno, J. I. & Majkowski, J. (eds). *Second Meeting of the Technical Advisory Committee of the FAO Project Management of Tuna Fishing Capacity: Conservation and Socio-economics* (p.171-232). Madrid: FAO.

Gillett, R. (2009). *Fisheries in the economies of the Pacific island countries and territories*. Mandaluyong City: ADB.

Gillett, R. (2011). *Marine fishery resources in the Pacific islands*. FAO Fisheries and Aquaculture Reviews and Studies. Rome: FAO.

Gillet, R. (2014). *Coastal Fisheries in Fiji. Resources, Issues, and Enhancing the Role of the Fisheries Department*. Suva: Lucile and David Packard Foundation.

Govan, H. (1999). *Empowering local communities to reverse the decline of coral reef ecosystems in Fiji*. Suva: FSPI.

Govan, H., Aalbersberg, W., Tawake, A., & Parks, J. (2008). *Locally-Managed Marine Areas. A guide for practitioners*. The LMMA Network.

Govan, H., Tawake, A., Tabunakawai, K., Jenkins, A., Lasgorceix, A., Schwarz, A. M. & Afzal, D. (2009a). *Status and Potential of Locally-managed Marine Areas in the South Pacific: Meeting Nature Conservation and Sustainable Livelihood Targets Through Wide-spread Implementation of LMMAs: Study Report*. Suva: SPREP/WWF/WorldFish-Reefbase/CRISP.

Govan, H., Tawake, A., Tabunakawai, K., Jenkins, A., Lasgorceix, A., Techera, E. & Hills, R. (2009b). *Community conserved areas: a review of status & needs in Melanesia and Polynesia*. Suva: ICCA regional review for CENESTA /TILCEPA /TGER/IUCN/ GEF-SGP.

Govan, H., & Meo, S. (2011). *FLMMA Operations Guide: The way we work together*. Suva: FLMMA Network.

Govan, H. (2013a). Strategic Review of Inshore Fisheries Policies and Strategies in Melanesia: Fiji, New Caledonia, Papua New Guinea, Solomon Islands, and Vanuatu. In Part I: *General Overview. Reports to the Secretariat of the Pacific Community for the Melanesian Spearhead Group*. Noumea: SPC.

Govan, H., Kinch, J. & Brojosniovsch, A. (2013b). Strategic Review of Inshore Fisheries Policies and Strategies in Melanesia: Fiji, New Caledonia, Papua New Guinea, Solomon Islands, and Vanuatu. In Part II: *Country Reports. Reports to the Secretariat of the Pacific Community for the Melanesian Spearhead Group*. Noumea: SPC.

Govan, H. and Jupiter, S. (2013). *Can the IUCN 2008 Protected Areas Management Categories support Pacific island approaches to conservation?* *Parks*, 19, 73-80.

Green, A., & Mous, P. J. (2005). Delineating the Coral Triangle, its ecoregions and functional seascapes. In *Report Based on an Expert Workshop Held at the TNC Coral Triangle Center, Bali, Indonesia (April–May 2003), and on Expert Consultations Held in June and August*. Hand, T., Davis, D., & Gillett, R. D. (2005). *Republic of the Fiji Islands: Fisheries Sector Review*. ADB.

Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162(3859), 1243-1248.

Harris, A. R. (2011). Out of sight but no longer out of mind: a climate of change for marine conservation in Madagascar. *Madagascar Conservation & Development*, 6(1).

Huntington, H. P. (2000). Using traditional ecological knowledge in science: methods and applications. *Ecological applications*, 10(5), 1270-1274.

Huxley, T. (1883). Inaugural Address. Fisheries Exhibition, London. *The Fisheries Exhibition Literature*, 111, 1.

Institute for Applied Science (2009). A nation-wide survey of village-based fishing pressure in Fiji. In Jenkins A. P. et al. (eds.). *Proceedings of the Inaugural Fiji Islands Conservation Science Forum*, Suva: Wetlands International Oceania.

International Union for Conservation of Nature (2014). *BIOPAMA to engage new cadre of Conservation Officers in Fiji*. Retrieved from [https://www.iucn.org/about/work/programmes/gpap\\_home/gpap\\_news/?14377/BIOPAMA-to-engage-new-cadre-of-Conservation-Officers-in-Fiji](https://www.iucn.org/about/work/programmes/gpap_home/gpap_news/?14377/BIOPAMA-to-engage-new-cadre-of-Conservation-Officers-in-Fiji)

International Union for Conservation of Nature (2014). *Ridge to Reef. Managing water from Source to Sea*. Retrieved from [https://www.iucn.org/about/work/programmes/water/wp\\_our\\_work/wp\\_our\\_work\\_ridgetoreef/](https://www.iucn.org/about/work/programmes/water/wp_our_work/wp_our_work_ridgetoreef/)

International Union for Conservation of Nature (2015). *New WCPA groups looking into governance of protected and conserved areas, and OECMs*. Retrieved from [https://www.iucn.org/news\\_homepage/news\\_by\\_date/?21835/New-WCPA-groups-looking-into-governance-and-OECMs](https://www.iucn.org/news_homepage/news_by_date/?21835/New-WCPA-groups-looking-into-governance-and-OECMs)

International Union for Conservation of Nature (2016). *Chelonia mydas*. Retrieved from <http://www.iucnredlist.org/details/4615/0>

Jennings, S., Kaiser, M., & Reynolds, J. D. (2009). *Marine fisheries ecology*. John Wiley & Sons.

Jennings, S., & Polunin, N. (1996). Effects of Fishing Effort and Catch Rate Upon the Structure and Biomass of Fijian Reef Fish Communities. *The Journal of Applied Ecology*, 400-412.

Johannes, R. E. (1978). Traditional marine conservation methods in Oceania and their demise. *Annual Review of Ecology and Systematics*. 9, 349-364.

Johannes, R. E. (2002). The Renaissance of Community-Based Marine Resource Management in Oceania. *Annual Review of Ecology and Systematics*. 33, 317-340.

Juffe-Bignoli, D., Burgess, N. D., Bingham, H., Belle, E. M. S., de Lima, M. G., Deguignet, M., Eassom, A., Wicander, S., Geldmann, J., van Soesbergen, A., Arnell, A. P., O'Connor, B., Park, S., Shi, Y. N., Danks, F. S., MacSharry, B. & Kingston, N. (2014). *Protected planet report 2014*. Cambridge: UNEP-WCMC.

Jupiter, S., & Egli, D. (2010). Ecosystem-Based Management in Fiji: Successes and Challenges after Five Years of Implementation. *Journal of Marine Biology*, 2011, 1-14.

Jupiter, S.D., Weeks, R., Jenkins, A.P., Egli, D.P. & Cakacaka, A. (2012). Effects of a single intensive harvest event on fish populations inside a customary marine closure. *Coral Reefs*, 31(2), 321-334.

Jupiter, S.D., Cohen, P.J., Weeks, R., Tawake, A. & Govan, H. (2014). Locally-managed marine areas: multiple objectives and diverse strategies. *Pacific Conservation Biology* 20(2), 165-179.

MACBIO (2016). *Marine Biodiversity Conservation in the South Pacific*. Retrieved from <http://pipap.sprep.org/content/Marine-Biodiversity-Conservation-South-Pacific-MACBIO>

McMurray, A. J., Pirola-Merlo, A., Sarros, J. C., & Islam, M. M. (2010). Leadership, climate, psychological capital, commitment, and wellbeing in a non-profit organization. *Leadership & Organization Development Journal*, 31(5), 436-457.

Mills M., Jupiter S., Adams V., Ban N. & Pressey B. (2011). Can management actions within the Fiji Locally-Managed Marine Area Network serve to meet Fiji's national goal to protect 30% of inshore marine areas by 2020? *Wildlife Conservation Society and ARC Centre of Excellence for Coral Reef Studies*, Suva, Fiji.

Ministry of Strategic Planning, National Developments and Statistics (2014). *A Green Growth Framework for Fiji. Restoring the Balance in Development that is Sustainable for Our Future*.

Morris, C., & Mackay, K. (2008). Status of the coral reefs in the South West Pacific: Fiji, New Caledonia, Samoa, Solomon Islands, Tuvalu and Vanuatu. Status of Coral Reefs of the World. *Global Coral Reef Monitoring Network and Reef and Rainforest Research Centre*, Townsville, Australia.

Muehlig-Hofmann, A. (2007). Traditional authority and community leadership: Key factors in community-based marine resource management and conservation. *SPC Traditional Marine Resource Management and Knowledge Information Bulletin*, 21, 31-44.

Museum Victoria Australia (n.d.). *Map of the Fiji Islands*. Retrieved from <http://museumvictoria.com.au/fiji/map.aspx>

Ostrom, E., & Cox, M. (2010). Moving beyond panaceas: a multi-tiered diagnostic approach for social-ecological analysis. *Environmental Conservation*, 37(04), 451-463.

Parks, J. E., & Salafsky, N. (2001). *Fish for the future? A collaborative test of locally-managed marine areas as a biodiversity conservation and fisheries management tool in the Indo-Pacific Region*. Washington D.C: WRI.

Plummer, R., & Armitage, D. (2007). A resilience-based framework for evaluating adaptive co-management: linking ecology, economics and society in a complex world. *Ecological economics*, 61(1), 62-74.

Ravuvu, A. (1988). *Development or dependence: The pattern of change in a Fijian village*. editorips@usp.ac.fj.

Richards, A. (1994). *Fiji Fisheries Resources Profiles*. Report 94/4. Honiara: Pacific Islands Forum Fisheries Agency.

Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (eds.) (2013). *Qualitative research practice: A guide for social science students and researchers*. London: Sage.

Roberts, C.M., McClean, C.J, Veron, J.E.N., Hawkins, J.P., Allen, G.R., McAllister, D.E., Mittermeier, C.G., Schueler, F.W., Spalding, M., Wells, F. et al. (2002). Marine Biodiversity Hotspots and Conservation Priorities for Tropical Reefs. *Science* 295(5558), 1280-1284.

Ruddle, K., Hviding, E., & Johannes, R. E. (1992). Marine resources management in the context of customary tenure. *Marine Resource Economics*, 249-273.

Ruddle, K. (1995). A guide to the literature on traditional community-based fishery management in Fiji. *SPC Traditional Marine Resource Management and Knowledge Information Bulletin*, 5, 7-15.

Salafsky, N., Cordes, B., Parks, J., Hochman, C. (1999). *Evaluating Linkages Between Business, the Environment, and Local Communities: Final Analytical Results from the Biodiversity Conservation Network*. Washington, D.C.: Biodiversity Support Program.

Skelton, P. (2011). *Natural resource inventory of the Fiji Islands*. Retrieved, from <http://repository.usp.ac.fj/4857/>

Singh, W. (2005). An appraisal of artisanal and subsistence fisheries monitoring in the Fiji islands. *Rep. Department of Fisheries, Ministry of Fisheries & Forest*.

Sloan, J., & Chand, K. (2015). A Review of Near Shore Fisheries Law & Governance in Fiji.

Secretariat of the Pacific Community (2015). *A new song for coastal fisheries – pathways to change: The Noumea Strategy*. Retrieved from [https://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwi48JSp6rjLAhWn8HIKHfFrDNkQFggkMAA&url=http%3A%2F%2Fwww.spc.int%2FDigitalLibrary%2FDoc%2FFAME%2FInfoBull%2FFishNews%2F146%2FFishNews146\\_36\\_NewSong.pdf&usq=AFQjCNGor\\_0vbYEH-GHDr-F2LXqF8SeCBw&cad=rja](https://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwi48JSp6rjLAhWn8HIKHfFrDNkQFggkMAA&url=http%3A%2F%2Fwww.spc.int%2FDigitalLibrary%2FDoc%2FFAME%2FInfoBull%2FFishNews%2F146%2FFishNews146_36_NewSong.pdf&usq=AFQjCNGor_0vbYEH-GHDr-F2LXqF8SeCBw&cad=rja)

Tawake, A., Parks, J., Radikedike, P., Aalbersberg, B., Vuki, V., & Salafsky, N. (2001). Harvesting clams and data involving local communities in monitoring can lead to conservation success in all sorts of unanticipated ways: a case in Fiji. *Conservation in Practice*, 2(4), 32-35.

Tawake, A. (2007). Scaling-up networks of locally managed marine areas (LMMAs) to island wide ecosystem management while decentralising the effort of Fiji LMMA network and its implementation from national to provincial levels. *A Kadavu Yaubula Management Support Team (KYMST) case study draft unpublished*. Available from the author at: [alifereti.tawake@jcu.edu.au](mailto:alifereti.tawake@jcu.edu.au).

Teh, L., Teh, L., Starkhouse, B., & Sumaila, U. (2009). An overview of socio-economic and ecological perspectives of Fiji's inshore reef fisheries. *Marine Policy*, 33(5), 807-817.

The Basement Geographer (2011). *Exclusive Economic Zones: How Some Countries Are a Lot Larger Than They Appear*. Retrieved from <http://basementgeographer.com/exclusive-economic-zones-how-some-countries-are-a-lot-larger-than-they-appear/>

The David and Lucile Packard Foundation (2013). *Western Pacific Subprogram: Strategic Plan 2014-2020*.

The Fiji Locally-Managed Marine Area Network (2014). *Strategic Plan 2014-2018*. Suva: FLMMA.

The Fiji Locally-Managed Marine Area Network (2015). *Working with Government towards a better Fiji*. Suva: FLMMA.

The Locally-Managed Marine Area Network (2003). *Learning Framework for the Locally-Managed Marine Area Network*. Suva: LMMA Network.

The Locally-Managed Marine Area Network (2005). *2004 Annual Report*.

The Locally-Managed Marine Area Network (2011). *2010 Annual Report: Defining our Future*.

The Locally-Managed Marine Area Network (2013). *LMMA Lessons Learning Initiative*. Unpublished Concept Note.

Tolosa, F., Gillett, R., & Pelasio, M. (1991). Traditional marine conservation in Tokelau. Can it be adapted to meet today's situation. In *23<sup>rd</sup> SPC Regional Technical Meeting on Fisheries*. Noumea: SPC.

United Nations Convention on the Law of the Sea (2013). *Declarations and statements*. Retrieved from [http://www.un.org/depts/los/convention\\_agreements/convention\\_declarations.htm](http://www.un.org/depts/los/convention_agreements/convention_declarations.htm)

United Nations Department of Economic and Social Affairs (2016). *Partnerships for SDGs. Sustainable Development of Marine Resources through Effective Management of 30% of its seas by 2020*. Retrieved from <https://sustainabledevelopment.un.org/partnership/?p=7687>

United Nations Development Programme (2012). *Fiji Locally-Managed Marine Area Network, Fiji. Equator Initiative Case Study Series*. New York: UNDP.

University of the South Pacific (2015). *Evolutionary Ecogonmics and Conservation of Scalloped Hammerhead Sharks in the WCPO*. In Research@USP. Pacific Ocean & Natural Resources [Data file]. Retrieved from [https://research.usp.ac.fj/?page\\_id=379](https://research.usp.ac.fj/?page_id=379)

Veitayaki, J. (1998). Traditional and community-based marine resources management system in Fiji: An evolving integrated process. *Coastal Management*, 26(1), 47-60.

Veitayaki, J., Aalbersberg, B., Tawake, A., Rupeni, E., & Tabunakawai, K. (2003). Mainstreaming resource conservation: The Fiji Locally Managed Marine Area Network and its influence on national policy development. *Resource Management in Asia-Pacific Working Paper No. 42*. Canberra: Resource Management in Asia-Pacific Program.

Worm, B., Hilborn, R., Baum, J. K., Branch, T. A., Collie, J. S., Costello, C., Fogarty, M. J., Fulton, E. A., Hutchings, J. A., Jennings, S. & Jensen, O. P. (2009). Rebuilding global fisheries. *Science*, 325(5940), 578-585.

# Appendix A: FLMMA Network Partners

List FLMMA Network Partners, retrieved from FLMMA Annual Report 2014

1. Department of Fisheries
2. Department of Environment
3. Ministry of *iTaukei* Affairs/ *iTaukei* Affairs Board
4. Wildlife Conservation Society – Fiji
5. World Wide Fund for Nature – Pacific
6. Conservation International
7. Coral Reef Alliance
8. SeaWeb Asia Pacific
9. Pacific Blue Foundation
10. Global Vision International
11. Resort Support
12. Institute of Applied Science, the University of the South Pacific
13. Eastern Division
14. Central Division
15. Western Division
16. Northern Division

## Appendix B: Endorsement of the Study

**From:** Brad Carte [mailto:brad\_carte@hotmail.com]

**Sent:** Thursday, September 10, 2015 1:34 PM

**To:** Saimoni Waibuta <saimoni.waibuta@govnet.gov.fj>; Elisapeci Tamanisau <elisapeci.tamanisau@govnet.gov.fj>; Margaret Tabunakawai <margievnt@gmail.com>; eleni.tokaduadua@govnet.gov.fj; Tavenisa Luisa <tavenisa.luisa@environment.gov.fj>; Helen Sykes <helenthereef@gmail.com>; Scott Radway <sradway@seawebap.org>; Sangeeta Mangubhai <smangubhai@wcs.org>; Susana Waqainabete-Tuisese <swaqainabete-tuisese@conservation.org>; Roko Sau Josefa Cinavilakeba <rokosau@pacificbluefoundation.org>; Kesaia Marama Tabunakawai <ktabunakawai@wwfpacific.org>; Chinnamma Reddy <creddy@wwfpacific.org>; krbdaffairs@gmail.com; Juliane Diamond <jdiamond@coral.org>; Patrick Saki Fong <patrick.fong@usp.ac.fj>; Mesake Draniatu <mdraniatu@yahoo.com>; Kini Ravanola <kravonoloa@gmail.com>; Alifereti Tawake <livingwealthsolutions@gmail.com>; Stacy Jupiter <sjupiter@wcs.org>; Bill Aalbersberg <william.aalbersberg@usp.ac.fj>; Fiji Marine GVI <marinefiji@gviworld.com>

**Cc:** Itamata@gmail.com; Isoa Korovulavula <isoa.korovulavula@usp.ac.fj>; Amelia Pei <ameliapei26@gmail.com>; Berthold, Sophie GIZ FJ <sophie.berthold@giz.de>; andrawhiteside@gmail.com

**Subject:** LLI Institutional Study

Bula FLMMA Executive Committee Members and other Partners,

At last weeks FLMMA Executive Committee Meeting, the EXCOM endorsed an add on to the planned LMMA International Lessons Learnt Initiative on an Institutional Study of the FLMMA Network. The study will be performed by two MACBIO Interns, Sophie Berthold and Andra Whiteside. Sophie and Andra have provided a Concept Note on the Study including Research Methodology and Topics of Questions to be investigated as requested by the Executive Committee.

Please review the Topics of Questions and let us know of any other topics you feel should be included in the interviews by Tuesday, September 15. Sophie and Andra will be contacting selected FLMMA Stakeholders to schedule approximately 1 hour interviews.

Vinaka,

Brad Carte

FLMMA Coordinator

## Appendix C: FLMMA Scenarios in Future

Table 5: Scenarios interviewees talked about when answering the question: Where do you see FLMMA in 5 years?

| Scenario                            | Description  | Government   | Communities   | Other Partners  | Feasibility                         | Comment  |
|-------------------------------------|--|--|---|---|-------------------------------------|--|
| Status Quo                          | Network of equal members with inefficient decision-making processes  | Status Quo   | Status Quo  | Status Quo  | Easy                                | Easy because no change; low likelihood of FLMMA being as meaningful in 5 years   |
| Organizational Development          | Reform of decision-making processes (DMP), clarification of roles and responsibilities and strategic rigor (strategy for new member) | Closer Cooperation   | Empowerment of divisional and provincial structures                                     | It is likely that it would come to changes in partner setup | Medium                              | Strategic Consistency, reform of DMP and stronger leadership could damage the unique network character of FLMMA which might upset some of the active partners. Feeling of togetherness could suffer.               |
| FLMMA closer attached to Government | Statutory body like TLBT   | Government mandates FLMMA to play official role in resource and coastal management | FLMMA would be the official advocate on behalf of coastal communities on national level | FLMMA would lose the network character                      | Medium, dependent on political will | This scenario describes what many early FLMMA members had in mind for FLMMA's future: to become a statutory body of the DoF. It would strengthen FLMMA's recognition while losing its independence and flexibility |

| <b>Scenario</b>  | <b>Description</b>   | <b>Government</b>   | <b>Communities</b>                                  | <b>Other Partners</b>   | <b>Feasibility</b> | <b>Comment</b>  |
|--|--|---|---|---|--------------------|---|
| FLMMA becomes an independent NGO                       | Strengthening of Secretariat (expansion of staff and DMP)                                    | It depends on political will. Chances that FLMMA loses its recognized status as a network | Empowerment of divisional and provincial structures | Members would become technical advisor with no DMP, risk of competition towards existing NGOs | Medium             | Risk of FLMMA becoming "another" NGO floating around; funding would be per se easier (structure), network character would be lost             |
| FLMMA functions as advising core team of practitioners | Full-time experts could push FLMMA's support for communities in a strategic and rigorous way | Closer Cooperation  | Empowerment of divisional and provincial structures | No partners   | Difficult          | Higher technical expertise, DMP easier, FLMMA would lose the network character, who would be ready to take the job? Where to take the salary? |

## Appendix D: List of Interview Partners

| Organisation   | Name                       | Position Title   |
|--|----------------------------|--|
| FLMMA  | Brad Carte                 | FLMMA Coordinator  |
| FLMMA  | Amelia Pei Raratabu        | Secretariat; Project Management                                      |
| LMMA Network   | Alifereti Tawake           | FLMMA Technical Advisor, Regional Chair                              |
| LMMA Network   | Hugh Govan                 | LMMA Technical Advisor, FSPI   |
| Independent  | Aliti Vuniseya             | Consultant   |
| Gillet and Associates                                      | Bob Gillet                 | Consultant   |
| Institute of Applied Sciences (USP)                        | William Aalbersberg        | Director IAS   |
| Institute of Applied Sciences (USP)                        | Isoa Korovulavula          | FLMMA Trustee, former FLMMA Coordinator                              |
| USP  | Joeli Veitayaki            | Senior Lecturer, School of Marine Studies                            |
| USP  | Semisi Meo                 | PhD Candidate IAS, former FLMMA Coordinator                          |
| Department of Environment                                  | Eleni Tokadua              | Principal Environment Officer  |
| Department of Fisheries                                    | Margaret Tabunakawai       | Research Officer   |
| Community leader   | Tevita Raibe               | Community Leader   |
| Divisional Representative                                  | Kini Ravanola              | Western Divisional Representative                                    |
| Provincial <i>Yaubula</i> Management Support Team (Kadavu) | Ratu Kaminieli Nabalarua   | KYMST Coordinator  |
| Ministry for <i>iTaukei</i> Affairs                        | Saimoni Waibuta            | Dep PS <i>iTaukei</i> Affairs, current FLMMA chair                   |
| <i>iTaukei</i> Affairs Board                               | Semi Rogoyawa              | Conservation Manager   |
| WCS  | Stacy Jupiter              | Melanesia Program Director   |
| WWF  | Kesaia Tabunakawai         | South Pacific Representative   |
| PCDF   | Austin Bowden-Kerby        | Former staff of PCDF   |
| IUCN   | Etika Rupeni               | FLMMA Technical Advisor; IUCN employee                               |
| Conservation International                                 | Susana Waqainabete-Tuisese | Fiji Country Director  |
| Seaweb Asia Pacific  | Scott Radway               | Managing Director  |
| Resort Support   | Helen Sykes                | Managing Director  |
| MACBIO   | Jan Steffen                | Project Manager  |
| UNDP   | Floyd Robinson             | Environment Department - Environmental Analyst; former staff of PCDF |

# Appendix E: Questionnaire

1. What does community-based adaptive management mean to you?
2. Tell me about your experiences with community-based adaptive management in Fiji.
  - a. What are your prior experiences with FLMMA?
  - b. For how many years have you been involved with FLMMA?
  - c. In your opinion, what is FLMMA's role in CBAM in Fiji?
  - d. What were expectations when you first joined/ heard of FLMMA?
  - e. Were your expectations met? How? Why not?
3. How do you see yourself, or your organization's role within the FLMMA Network?
  - a. Has it changed?
  - b. Where do you see it heading to?
4. What are key steps in regard to the evolution of the national FLMMA network in your opinion and why are they important?
5. What are key successes of FLMMA in your opinion?
  - a. In your opinion, what is the main strength of FLMMA?
6. What are key shortcomings of FLMMA in your opinion?
  - a. In your opinion, what is the main weakness of FLMMA?
7. Have you heard of the Lessons Learnt Initiative?
  - a. If yes, go to question 7, if not: explain briefly
8. How do you feel about the Lessons Learnt initiative?
  - a. Do you think it is necessary? Why? Why not?
  - b. How has FLMMA changed during its existence the past 15 years?
  - c. What are your expectations on the Lessons Learnt Initiative?
9. Where do you see FLMMA in 5 years?
10. Where do you see funding coming from in the future (for FLMMA)?
11. How would you describe the working relationship between FLMMA members from your perspective?
  - a. Do you work with other FLMMA members on site? If yes, which?
  - b. In your experience, can you give me one example of successful cooperation? Why was it successful?
  - c. In your experience, can you give me one example of a failed cooperation? Why was it unsuccessful?
12. In your opinion, what can the FLMMA Network do to ensure LMMA's are successful?

- a. What other challenges do you see with FLMMA? How would you address these challenges?
  - b. Ideally, how would coastal communities be supported by FLMMA?
13. In your words, could you please explain the decision-making process within FLMMA?
- a. Do you feel the decision-making process should be changed and if so, why?
14. As a representative of your institution, is there anything you feel that needs to be addressed that wasn't addressed in the questions above?
15. In your view, is there someone we should be talking to?

Thank you for your time.

## Appendix F: Coding Dictionary

| Code                 | Thesaurus   |
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| Achievements         | <p>successful; success; improvement; things are going pretty good; effective; lessons; take them one step up to the provinces; strong impact; it really motivates; get that into the national consciousness; get into the minds of the community; to succeed; to expand so fast; contagious; move forward; a lot of good things; peak in terms of impact; sustain; winning the UN summit Equator Prize for sustainable development; pulled it off; no other similar network of that size; survived so many years; a tremendous asset; small signs of steps in the right direction; rewarding; replicate; to improve livelihood sources; so it is working; achieved; outcomes; sites willing to join FLMMA; a strong bond; strengthening; complement each other; success stories; raise awareness; change a person's mind; they believe you; flourished; benefit; role model; repeat; performing; positive changes; it spread out from there; expanded; reaping the benefits; worked well; happy of what we are doing; where we started and where we are now; getting involved; working together; strengths; benefitting communities; locally-driven, replicate; impact; a template; getting more communities involved; good practice; involvement of increasing numbers of communities; we won Government and Fisheries being a partner; teach; if the people have seen any change; contribution</p>  |
| Capacity Development | <p>community workshop; to learn; trainings; capacity building; to train; learning; strengthening; help them discover; to teach; improving approaches; resource people; trainers; testing; share lessons learned; this course at USP; community engagement processes; participatory; educating; answering the questions; once they're able to do so; we run a number of participatory tools with them; training of trainers; facilitate; help them to see; using our own personal experience; they translate that down to the community; have improved their capacity, their skills; they can develop themselves and their community even further; to convince [them] to come away from their norms; changing the mindset; to invest in the people; more access to the science; to enable them; build capacity; the ability for them to drive action when they go back; We see that the fish gets smaller, but we don't know why; the experience that the reps got; awareness work; make aware; he is more knowledgeable of the work; have the adequate information to know how Fisheries' system works; awareness raising; guidance; we guide them through; thinking them through the problems that they currently face; explain to them that this is the reason why this is happening; make them understand; to guide; introduce them to; that we don't repeat the mistakes that we've come across; culture of learning; Science helps them to understand; be over-workshopped</p> |

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| CBAM Approach           | approach; adapt; participatory; sensitivity; people; community makes the core decisions; methodology; assist them with making their own plans; no "one size fits all" approach; adaptation; self-developed management measure; implementation; effective management; a key involvement effort; a tool; learn as you go; not a foreign planning process with a lot of foreign concepts; behavioral changes; psychological change in the thinking of communities; no blanket strategies; solutions; a cycle; CBAM cycle; the process; concept; follow-up; converting it (NGO concepts) in their own version;   |
| Change                  | the changes; changed; climate change; behavioral changes; institutional changes; have left now; used to be; trying to align all; we moved that way; we are at the stage now; this year is different; it cannot continue; we realized it was too difficult; new player; other work; the excitement has died down; a lot more now than before; our meetings have become a lot more; bigger; different; has become foremost; used to; there is this sense of less; no longer the FLMMA I started off with; move forward; steps in the process; went back to the drawing board; the fish was getting smaller; switch; the good thing about our generation; getting stronger; at that time; 15 years ago, the fight was different; anymore; the fight is over; to move on; when those guys were active; transition; shut down; I miss talking to him; gradually moving away; it was about time; trigger of change; started again; as things have grown; no longer; walk away; it's grown so fast; left on their own; before; anymore; dating back to; beyond that point; at the moment; these days; was really active; right now; be able to maintain; reducing; size of catches; impact; my point of view was different; at one point in time; back to business as usual; at the time; beginning to focus on other things; anymore; the current experience; we haven't got the same than we did 10 years ago |
| Customary Marine Tenure | traditional customary; permanent no-take area; belief-system of their culture; kaivalagi traditional governance structures at the community level; tabu sites; traditional; qoliqoli ownership; their own fishing resources; community control over their fishing resources; peer pressure; fishing rights; the villages establish their own marine protected areas; temporary closures; ban; chiefly system; their own management; resources owned by the iTaukei people; fishing grounds for the iTaukei people; iTaukei structures; Chiefs are seen to be the owners of the resources; Adaptive Management is nothing new to communities; passed on for generations; passion to do it for themselves; open up the tabu area; poaching; the Fijian way; fisheries management rules in place; rights-holders; the things that communities do by themselves; customary practice; no-take; the old mechanisms in the village are still working  |

Commitment

active; to catch up with their deliverables; the amount of work that people here had invested; sacrificing their reefs, putting them aside; saying that they wanna do it; interest; working with interested villages; motivation; continue to do the work; communities want to open a site; the excitement; supporting it; people staying; to commit; It was voluntary and self-organizing; time to devote for this; Support; enthusiastic; committed people; strong network members; the will of the community consensus; not falling off; not just a financial benefit; ; incentive; there was a lot of energy and excitement; ; solid foundation and conviction of people; involvement; spirit; a lot of energy and drive; be really keen; after hours; in addition to our normal work; the heartbeat comes because the issues are real, the people are real and do want a solution and they put in efforts to create a solution; volunteer work; heart for the work; heart into the work; I am sure all of us, if getting invited to go and speak in a community, we will go; a very community-oriented person; our strength has always been in the people; in the heart, they believe what they are doing; passionate people; passion to do it; everyone came; an inspiration; 7 years without any pay; a lot of work. It was the sites that need this; frequent visits; they're starting to look at their management plan themselves; engaged; level of engagement; level of participation by the community; personal focus; people with motivation; we all have the same overall objectives so my FLMMA hours would be my WCS hours; face to face time; level of willingness of people; engaging, initiating and strengthening the collaboration; the support from anybody from the outside; obsessed; the partners' willingness

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| Lacking Commitment | sites at risk; lip service; no dedicated person; lost interest; Why didn't DoF jump in bad for FLMMA?; give up on; no interest in working on community-level; less commitment from NGOs; busy; few people turn up; don't see the value of supporting it; commitment is shaken; not in the business of solving the problem; I'm not sure how long the commitment would last; not equipped to make these decisions; that the only partnership that is going on now; I feel the spirit of oneness and togetherness is dying; not feeling the same passion; they didn't give us the support that we wanted to see; without commitment; aren't fully committed; part time input; nobody is showing up; too hyper-focused with lots and lots of activities; They never came back till now; abandoned; a lot of the sites were inactive; that they were no longer active; disillusioned of FLMMA; they go away; the majority of the sites are left on their own; which site liaison officer – they (communities) don't really know or haven't seen him in 5 years; they walk away; The partners can't continue; we don't get any response; never respond when you try to call a meeting; no one shows up or responds; the priorities of those NGOs have changed; neglected; Sometimes they do (come), usually not; The NGOs don't necessarily have the capacity or the will; the kind of inertia of NGOs because they got their own jobs to do; I don't believe that the coordinator is truly onboard with the interests of the communities; sites stopping their management or changing their management in a way that's not sustainable; no face to face visits; not having this interface with sites anymore; Ever since then, hardly any FLMMA activity had been brought back to the island; regular visits are no longer there; not devoted; typical Government civil servant attitude; they have moved on; disappointing; we haven't got the same commitment than we did 10 years ago; I don't quite have the immediate connection that I used to have; nothing gets done for that community; doing some work for FLMMA is actually a loss for us; many members rank their institutional objectives above the FLMMA objectives; it would need to be public and transparent and that they don't want to do; Fisheries wasn't investing this much; I am expected to give my time. No pay, no nothing; All of these are conflicts of interest |
| Communication      | get the message out; publicity; saying the same things; raise the profile; use the media; get a newspaper article out; work materials; shoot an email; welcome any comments or input; a lot of documents from that period; share with them all you can and let them share with you whatever they want; Brainstorming; put it out, write about it, talk about it; sell the idea; translate that down to the community; discussions; be the door from the community; to advising communities how to network; gather information; have the information heard; the voice; communicating; we raised that with each of the provincial officers; the way they shared during their village meetings; to share, to talk; tanoa session; same message; NGO language; building momentum; articulate the issue; listen; media training; outreach; actionable information; Kava sessions; interaction; reporting back; to believe someone; do awareness work; word of mouth; through email; meetings; we relate back to the community the results; information provisioning; information; regular monthly newsletter; to step across; translating (traditional knowledge); radios  |

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| Shortcomings<br>in<br>Communication | not totally being informed; sense of independence and less reliability on other's input; the network was meeting next door for example but no one from IUCN would be there; no reporting or communication in place; the information is nowhere collected; Just because the entire qoliqoli isn't well managed, it doesn't matter but that is actually your slide; communities were not happy about how it was broadcasted to them; no steps before to explain why; misinformation; I wish we shared with all the members; never heard of FLMMA before; not very good in communicating the scientific components; no resonance with the public; I didn't know anything about FLMMA, I only knew about IAS; I said: Please come back to Gau. But they never answered anything; the report goes straight to England; it wasn't discussed with the members; we tried to discuss things with the members and try to get input, we don't get any response; you just don't get any response; no one shows up or responds; miscommunication; we are not telling them very clearly; the FLMMA strategy very happily talks about very ambitious targets; not particularly consultative; there could be some more consistent messaging happening; they weren't really sharing the ideas with the rest; |
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| Cooperation | <p>Work together; make the link; help with the work; a lot of LMMA people from different organizations; partner organizations; to sit down; develop the relationship with Government; We are somewhat connected; we have representatives from different organizations; partner institutions; partnership; they use FLMMA; a strategy to get PCDF back on; in the group; join; engagement; intimate; coordinated (effort); So then we agree on ways to determine if we are doing the right thing; forming this group; getting this network of people who knew each other; a cooperative way; we sat down and talked about it and in most cases, we worked it out; integration of other stakeholders; family; linking; mutually beneficial; to gravitate closer to FLMMA; the FLMMA team; working with the practitioners; the institutional support of FLMMA; FLMMA committee; he calls us to advise him; we all went and supported; the network; networking; she would send an email but we could pick up the phone and call and it would be easy; to have an informal discussion; informal networks; good relationships; They helped bridge the gap; be the vehicle between the communities and national development plans; be the bridge between the communities and the NGOs; to bring in the stakeholders together to touch base; coordination role; a club of people who would swap lessons; Other FLMMA members come in and help us; get the churches involved; In that way, FLMMA's been great because I work alone and I don't speak Fijian; we go in teams; we adapt to one another in trying to do what we can do best given our resources within every organization; we would divide parts of a workshop; other's input; support of other existing entities and organizations; have a good relationship and partnership; they are the connecting points; willing to share a lot of information; just share with them all you can and let them share with you whatever they want and hope that everybody benefits; since then we have all learned that it wasn't a very good idea to leave the other stakeholders, particularly the Government, out of the equation; to move the coordination in rotation; strengthen the linkage, the connectivity within the network; complement each other; mutual understanding; all the communities come up with things that have worked in their communities last year; we cannot work on this in isolation; inclusion into FLMMA; trying to fill the gaps; the partners all participate; integration with relevant stakeholders; network relationship; We are doing one job; they all have a say; consultation with everyone; associations, create networks amongst the practitioners, amongst the communities themselves; they need to be exchanging ideas; willingness of people to share experiences and ideas; to consult very closely with; collaborate; collaboration; provide support; building partnership; team; participatory;</p> |
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| Limitations to Cooperation | Affected relationship; distance; negative talks; isolated; my name has been spoilt; disunity; only serving the interest of some; Government influence in the process is not fully encompassed; not a FLMMA rep; fracturing; without getting endorsement; lack of involvement; fig leaf; taking over a lot of the Departments work; reluctant; no contact; no coordination; differences among the members; had a clash; not seeing eye to eye; personal thing; protect interests concerning funding; behind the scenes; becoming derailed; the politics of running an organization; dominate; falling by the waist side; tough to reach the right people; specific way of thinking about things; difficulties recruiting new members; membership is scattered; losing its spirit of togetherness; spirit of oneness is dying; increased tension; lost hope; no one would be there; difficult for the network to strategize; two parallel universes; competing interests; underrepresented, struggle with people giving input; they don't like NGOs; everyone has a stake; not fully committed; they got mad; no substantive discussion; who helps?; folks who don't show up but share very strong opinions; chase the funding; different priorities; left on their own; someone will not be happy because they weren't consulted; not working; to push through; no way I'm getting input; criticized; we don't have that kind of time; you can't dictate what they do; different approach; weak point in the network; not helpful for discussion; blocking; not capable; not clear; marry a community; paternally; anti-FLMMA people; partners grabbing money; shattered relationship for years; not engaging in the same way that they used to; not having this interface with sites anymore; failures with engagement; not effective; They don't want my advice; I am expected to give my time. Verbally they say that they are using it but in practice it's not the case; resigned as a partner; they have moved on; strategies have changed; disappointing; lack of cooperation; most of the FLMMA partners don't agree; they don't talk well of FLMMA; start looking at other NGOs |
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Coastal  
Resource  
Management

a core permanent no-take area with rotational no-take areas on both sides; permanent no-take areas in association with resorts; a permanent Marine Protected Area; When they close it for 5 years, they think about its opening 5 years later. It is like a refrigerator; temporary closures; management systems; ICM; traditional practices of harvesting; managing your resource well; management plans; management regime; resilient; community-based qoliqoli management plan the management of their resources; how communities were managing; coastal fisheries management; resource management, marine resources; holistic management of marine and land resources; rules; enforcing; exploited coastal resources; community-based MPAs; coastal management; resources management structures; integrated coastal management; coastal based communities setting up no fishing zones; management plans like tabu site; Fijis Coastal Fisheries Conservation and Production; Most of the villages keep it for 4, 5, 6 years and then open it to vacuum clean everything; conflict management approach; integrated approach; less fish stocks; one of the women's key source of income is a little reef; poachers; The original idea was income generation and the conservation was a secondary thing; community's concept; gazetting; leasing; community management; community action plans; customary fishing grounds; biological issues involved, economic, social, governance issues; to conserve coral reefs and other marine life because of potential economic gain that these sponges had; management approaches; the way it was set out (which was different); community resource management; sustainable manage the land; diversify; holistic village development; effectively managed; connect the dots; integral; sustainable development of natural resource management; network of marine protected areas; improving their income base without necessarily go out and fish five times a day; balancing their resource taken from land and from sea, qoliqoli management; manage natural resources; manage the whole marine area, R2R; regulations and rules; ecosystem; switch from development to management; ecosystem-based management; community-based awareness management; concept; getting all these MPAs recognized; MMAs; quota; holistic; the nature resource from the land into the sea; Like reforestation, village development plans and setting up MPAs in village; Not only in the sea, it is also on land; with solution to help revive their marine resources and ecosystems; adapt to CC; restriction on overexploitation; marine resource network; how more to look after their terrestrial systems; you are looking at the whole landscape from the mountain top to the reef to the wide ocean; The impact of fire, the impact of bad agriculture practices on the fisheries management that they are doing; natural resource owner committee; we see the link between the marine, the land, the forest; ICM; ensure the long term use of that resource; sustainable rural development; make sure that people see the connectivity; moved from the marine environment to the coast; watershed management

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| Empowerment | <p>Be able to do it themselves because they are involved right from the beginning; absorbed the process and techniques; empowering; the ability to manage everything independently; ability to grasp and take part in projects; some of the goals from the offset is we want the Fisheries to own it; strengthening; letting communities run the management at all levels; communities identify their problems through participatory mapping; getting them develop their management plans; because we don't seem to shed the established ones which was what we all wanted to do; let them run with it; train community representatives to be able to facilitate without a NGO; to push actionable information and enough for them to make good decisions; enabling environment that allows women to come in</p>   |
| Endurance   | <p>bring them up again to the level that they were when they actually started; get tired; my nickname in the villages is woqai which is the iguana; need to continue to build the capacity; to endure; you were moving communities too fast to things that they are maybe not ready yet; it takes time; patience; it might take 2 years, 5 years or beyond; working with for now 18 years; to shed the established ones; a three year project is nothing in Fiji; baby steps; long term continuing commitment; 10 year timeframe; how long would last; did not spend enough time with the community; still a very active member; it took a lot of effort; not yet; happen overnight; going to be there forever; still waiting for the results; Not as fast as we wanted to be but the mindset is slowly changing; growing so fast; we are moving so fast and we are trying to catch up with every wheel that is turning but the community are still trying to slowly move up; moving too fast for the communities; we had jumped in too fast; mindsets are slowly changing; still a long way to go but it is starting; on hold now for a while; people who stuck around; It takes a long time to build relationships; take the bulk of the time; and then nothing moves; fast track the training; haven't seen him in 5 years; they walk away; it relies on work of actual partners; It took us a year just to do the basic workshops; the village has its own time; dragging on; taken a long time to get off the ground; slows everything down; they are still talking about it; It is too hard to wait; slowly introduce; regular visits; over time</p> |

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| Experience Exchange  | community lessons learning workshops; lessons learned; lessons learning; to raise issues and challenges; sharing (experiences); learning network; widespread knowledge across communities; learn the conditions under which the approach worked best; talk about what seemed to be best practice; learning; same mistakes being made; they were given us some ideas; for them to talk about their resource management; sharing of what is working; that actually checks some approaches; What is working, what is not; share experiences; this worked and this didn't; come together; bring people together to talk; That is the opportunity for all of them to come and raise their issues; they can learn how; learning best from each other; That is why the annual meeting is a good thing in my opinion...rather than one person who supposedly knows all the answers; them sharing with me how they are now see more fish; learning buzz; They are not talking science, they are just talking lessons that even we never thought of; communities go out and talk about their problems and solutions; lessons exchanges; share best practices; contact each other just to be aware; take the best of that; what has helped rather than who has helped; networks amongst the practitioners; the practitioners need to be talking about solutions; sharing ideas; promote best practice; matching the knowledge between NGOs, communities and the Government   |
| Future Role of FLMMA | something that FLMMA will take on now; mature; needs to be looking more into policies; bit more intimate; what FLMMA has to do now; focus more on; to integrate with biodiversity priorities of Government to be recognized at a national level; It needs to identify the key setups; their niche is a lot of experience in Community-based adaptive management; climate change adaptation; It needed to repackaged; should make effort; an element of plugging the gaps; setting up a marvelous model; FLMMA can plug into that; be the vehicle between the communities and National Development Plans; a need for it to stay but it needs to grow and change; there are already plans of FLMMA; FLMMA will have a role to support; to survive is going to be a challenge; our absolute priority; that FLMMA should form another body; role of the FLMMA network; unless we make FLMMA take a smart approach; I see FLMMA as a very wide arm; FLMMA needs to state what it wants to do; they would be able to serve the provincial YMSTs; So let FLMMA continue that; have FLMMA try and connect those; FLMMA it still prioritizing communities as the heart of the network; that's a key thing to keep the communities engaged; they need a Coordinator who is an iTaukei; So 'moving forward' is just having a better understanding of the level of activity; getting our own staff and (with) the Secretariat to start help engaging those communities where the partners no longer are; that needs to be expanded; the Government should do it; because if FLMMA just ends up hiring its own staff then it becomes its own organization and it's not a network anymore; It's basically time for; That the way forward; more into inshore areas, doing more watershed management and all this |

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| Cooperation with Government | iTaukei Affairs; gazetted MPA; the Government; legislation; policy; Department of Environment; the Departments; National Environmental Council; policy makers; a separate division on inshore fisheries management; inshore bill; enforcement; Fisheries; top-down approach; Department of Fisheries; Fishery policy; legally recognized MPA in Fiji; regulations;a loophole in the law'; gazetting; leases; leasing; legal status; politically; inshore fisheries division; NBSAP; Ministry; Green Economy Framework; rules; law; Fisheries Act; cabinet papers; moratorium for the humphead parrot fish; license quota; Inshore Fisheries Act; Cabinet; Native Lands Fisheries Commission; HRDP (Human Resource Development Program); line ministries; the resource owners committee; an Act; EIAs; joint collaboration with UNDP; national strategy; MoU; offshore fisheries management; national rules; national fisheries management rules; decree; the State; extension of fisheries management; legal; Inshore Fisheries Decree; Pacific Oceanscape Forum Secretariat Commitment; Country leader; National Environmental Council; department of fisheries; The bills are there, the policies are there, the frameworks are there...why is it not legislated in any FLMMA? |
| Innovation                  | business as usual is not enough; additional things that we can add on to the process; competition; to learn the conditions under which the approach worked best; new; exciting; using modern technology; eye-opener; putting together western-science knowledge and information and community and traditional knowledge; improving practices;it wasn't a conscious thing we did; This was something that I wasn't even thinking of; finding; this was lacking in Fiji; to create a solution; we were forerunners in this; innovative; creativity; Just try out what meets the community needs  |
| International Commitments   | Government just came in and said: Ok, you have to set up MPAs; the government has always put aside money for work to do with MPAs; what will we be doing with all of these MPAs?; There are 75 villages and 64 MPAs in Kadavu; to give legal recognition to community management plans; the 30% protection commitment; this magic number 30%; to police  |
| iTaukei (Fijian)            | a Fijian; not kaivalagis in the forefront; the A-Factor; home grown; my focus is the work in Lau Islands. I am from there; Fiji's best community workers; Alifereti tries to convince me what we can do in Kadavu; I've got my qoliqoli in Molo, I belong to there; with his own community in Kadavu; everybody involved has actually mobilized their own community to do their own resource management plan; individuals in their own communities; somebody who looks like them, talks like them; A broader problem with conservation is, it's owned by NGOs...intentional or not; he doesn't even speak Fijian; to champion; Reaching out to these islands was thought of from people from there; I am from Vanua Levu and Alifereti is from Kadavu. So it was more about our drive to have things go there; When Alifereti was away, FLMMA stopped the visitation to the island; I don't speak Fijian; Coordinator who is an iTaukei; 2 white old guys in charge of the fractions; the white-people-NGOs; core staff were by large Fijian; locally driven; I built my career on FLMMA   |

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| Lack of Funding         | difficult to get a grant; we don't get funding; we have to change some of our strategy to fit into their strategy so they can give us money; grants; a fund; funding; to cut costs for us; we really need a lot of money to do our work; grab the donor money; pay for it; we had all this money; there was money there and USP was controlling it; donors interests; you don't have much money; be able to attract more funds collectively; spending a large amount of money; mayor funder of LMMA; budget; the Fijian Government has 3 Mio. \$ under GEF and Ridge to Reef work; major funding; money well spent; who is going to pay for this; smelling money in the air; not paying for this; it is the same philanthropical foundation; not wealthy; none of us has resources; fundable; fundraiser; investment; trust fund; benefits; not paying the cost of that person; doing some work for FLMMA which is actually a loss for us; sustainability of FLMMA in terms of finances; Finance is a big challenge; a commercial entity, so every hour every minute; donors; Packard; rewarding; There are so many millions out there for climate change; limited funding; expect the community to do volunteer work; the priorities of our budget; financial; to pump in the heart of it; we are trying to get more; the budget can increase; costly; put aside an allocation for FLMMA; I am not paid; that would be difficult with the resources we have; we don't have the staff; Two percent of their departure tax would ensure the long term sustainability; They are spending half a million on this MRI thing, Marine Resource Inventory, which is extremely expensive; cheaper; costs to operate a FLMMA site; cost model; basic resourcing to able to go around; very expensive to continue; get financially sustainable; need some financial assistance; I am expected to give my time. No pay, no nothing; LMMAs become not so sexy anymore |
| Leadership              | Chief; coordinator; chair; community reps; IAS; pushed by; dominated; key educational people; leadership role; lead; control; responsible; a central person; Kadavu is kind of under IAS; traditional leaders; community leader; the A-Factor; Aalbersberg; one person being responsible; be in the driver's seat; individual leader; lead organization; IAS driven; taking the lead; traditional governance structure; the secretariat; people represented at a high enough level; the right people; decision-makers; a dominant person; team leader; the core; elders; people who were then dominating; responsibility; a respected senior person; NGO-driven; chairmanship; coordination role; reps from the district; authorities; power; hierarchy; the Godfather; they used to be de facto the network; Roko Tui; chiefly system; they have to be screened by the KYMST first before they are given the approval to work; to step up; decision-making; they were driving this; the void where USP left; regional country leaders; gave the nod; provincial offices; YMST; champion  |
| Insufficient Leadership | my boss can't do it; things are currently at a crossroads and people are not sure or know where to go; lost focus, lost leadership; lack of leadership; Recent leadership has been very weak; hasn't been any strong leadership; everyone is responsible, so no one is responsible; didn't see eye to eye; responsibility diffused; a head-off thinking; Who is Brad's boss?; the guy leading it couldn't make any decisions; can't drive change; Leadership is always diffused; there's nobody to champion; they still lack a Coordinator; The role of the coordinator should not be to lead the work but to be  |

|                                      |   |
|--------------------------------------|---|
|                                      | consulting; no one wants to 'rock the boat'; headless   |
| Lessons for the Future               | uptake to another level; effectiveness; replicate; timing; mainstreaming; (hard) data; more funding leads to less success; communication to donors; show the benefits; participation; readiness; favorable conditions; money well spent; learn how to walk before you run; sound research methodology; show that it is working; support; standardizing performances; common approach; boundaries qoliqolis; consistent; experiences taken to Solomons and other places; So more you put it out, you write about, you talk about it on radio, the more the communities identify with the issue and of course, they want help; good leadership; coherence; justify investments; People are likely to feel more comfortable listening to somebody who looks like them, talks like them; create wider support; minimum fish size; simplify the action and the tool; community identity; powerful; religion to FLMMA; follow-ups; meet income and food needs; people and their passion; relationship with partners; experience; positive effects; continued funding; trust with the communities; learning; should be doing; unsustainable; added value; effectively and cheaply; clearer; targets; varied opinion; costs; efficient with money; functional; disseminating information; coordinating body; information sharing; waste of time; lesson to learn; meaningful; doing core work; achieving food security; Green Growth Framework; standards; assessment; face-to-face time; in practice; look back; influence; impact; to make sure; same message |
| Local level                          | on the ground; community; going down; the people; community level; Verata; Cuvu; the villagers; village level; Site-based; a site; bottom-up; Chief; the villages; local perspective; community-driven; community-based; village-based; community structure; community organization; household level; rural; remote areas; base level; tikina level; every single fisherman; chiefly system; target audience; target group; Macuata; Ba; Kadavu; Cakaudrove; Gau; Lau; Taveuni  |
| Marginalized groups                  | a project starts to evolve around an individual rather than an actual community; ; the gender component; Indian communities; non-iTaukei communities; wife; the youth and the ladies; the young; others that are not in the iTaukei system; Oh, we don't know what FLMMA was doing because every time they come to our village, we were too busy trying to feed them; women; not everybody has the same power, not everybody has authority in the village; have the same say like an elder; marginalized members; migrant communities   |
| Inefficient Organizational Structure | Decisions; decision-making body; Executive Committee; ExCom; Trustees; quorum; everyone has a stake and an interest in something; Brad should have a Board to me, not a group of NGOs telling him what to do; organizational development, clear roles and leadership lines; nobody is showing up at the Executive Committee meetings; the Executive Committee meetings are not functional; my role; I don't know where that's mapped out; I don't know what I'm supposed to do; control; management; more organized; operations; authority; Working Groups; you don't recognize any of the people who have never been to a FLMMA meeting before yet they're voting on things; regular meetings; voluntary, multi-stakeholder with Government and NGOs and community reps; It's made up of partners; consultation with everyone;   |

|                                 |   |
|---------------------------------|---|
|                                 | slow; consultation; influence   |
| Ownership                       | communities have the ultimate say; the main managers; communities making the plan; we asked the community leaders; local ownership; to own; we trust the communities to develop management plans; it's their site; be in the driver's seat; community-based MPAs; they are running the whole show; you have to leave it to the villagers; they will take over; community-driven; a community who made their decision and I go in there to assist them; own decisions; These communities should be independent of us by now and they're not; self-governance; self-management; community management; control; responsibility; in total control; the custodians; decisions made by them; do this management in their own behalf; The resources are with the people; what they think is best for them, they do it; Chiefs are seen to be the owners of the resources; do the work by themselves; whatever is decided by the community; stewards of that area; free-for-all   |
| Variance in Perception of FLMMA | when I say FLMMA, I mean; FLMMA is a network; the main focus has been on NGOs, accessing funds; Maybe FLMMA is too famous; It needed to be repackaged a bit; FLMMA is not the only approach for promoting community-based management; FLMMA is a some sort of fig leaf; If FLMMA is an association; you say FLMMA, you mean Brad Carte (the Coordinator)?; sites; it is about coordination; role that FLMMA plays; coordination role; important role; IAS was driving FLMMA; the role I would like to see FLMMA doing is not necessarily the role that every FLMMA member is taking; FLMMA is a different organization now than I thought we were building; a lot more official than perhaps I expected it to be (more structured); bigger; FLMMA progress; when I need something that I don't have the capability to do, other members have come in to assist like that; FLMMA has been helpful; no proper thought; it had to grow organically; platform; has reached its peak in terms of impact; FLMMA is very much structured; "Der Weg ist das Ziel, das Ziel ist weg"; a moving target; Many of the horses are running in different directions; Who is FLMMA?; marine associated issues; sustainable NRM; they don't really understand what is the role of FLMMA, what is FLMMA doing?; a consultant to the community; a team; to be there for the community; they can adapt to what the Government is trying to do; how I see FLMMA's role; complementing the government; what it means to me; bringing people together; who is FLMMA? Is it just Brad?; the questions are hard because sort of 'what does that mean' and 'who is' part of the vagueness of FLMMA; we don't want the NGOs to dominate the meeting; they think that FLMMA is super organized; It's a consortium of partners; communities managing resources. That's what FLMMA is; FLMMA has been the heart of LMMA; FLMMA is a group of NGOs; FLMMA is an umbrella organization; Facilitator; dependent upon what the partners are doing; That's what FLMMA has been; it relies on work of actual partners, you can't actually dictate what they specifically do; the issue of the different people doing what they think is FLMMA and whether that is the case; that shows how varied the actual thing "FLMMA" that people talk about, is...; value if the network is functioning as a coordinating body and sharing the information otherwise it is just a waste of everyone's time; a knowledge sharing |

|                  |   |
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|                  | network and bringing people together; forum; framework; The difference between FLMMA and those other networks is the communities are part of the network; the voice of the community  |
| Poaching         | Poachers; so there's nothing left for these guys; get those sea cucumbers'; loophole in the law'; monitoring and enforcement trips; control surveillance; to poach; fish wardens; chief hasn't get his people to comply; non-compliance; You guys are coming and fishing in our area; international ships try to fish in their qoliqolis; It is too hard to wait for the garden to mature so they want to get the thing from fishing  |
| Provincial level | provincial representatives; within the division; divisional rep ; YMST; provincial officers; commissioner; provincial level; provincial ICM plans; conservation officers; provincial offices; the provinces; Eastern Division; governance at community level; Fisheries Officer; this Yaubula committee; something that is in between Government and Communities, they are calling them district reps – representatives; provincial government; community reps; Provincial and District Officers; The 4 District reps; provincial plan; Environmental Officer; commissioner's offices; Western Division; Western Division YMST; a bridge from the FLMMA network to the community; Yaubula groups; fish wardens; divisional commissioners' office; provincial administrators; the officers; 14 provincial reps; provincial council; BYMST; Tikina level; a structure and it's like a Board and chaired by government and Roko Tui; the Council; provincial communities; District Level; provincial groups; provincial decentralization; Extension Officer; the YMST approach; honorable fish wardens   |
| Recognition      | Recognizing; popularity; boosts; I know now that FLMMA can add value to our policies; supporting FLMMA; Gov has confidence in the FLMMA processes; how successful things were, was quite powerful; the mileage they got out of this award; Government sees the value of FLMMA; recognize LMMA; FLMMA is becoming more attractive to be funded; acknowledge them; has the backing of Government; politically important; legal recognition; more demands; the last SIDS Conference, FLMMA was mentioned; carries a lot of weight; winning the UN summit Equator Prize for sustainable development; global recognition; gazettes; a big plus; it gave a little bit of good light to the Department; a really good plus point for us in that sense; re-known; we see FLMMA as one of our very important stakeholders; a very important stakeholder to take on board; never heard of FLMMA before; FLMMA has no resonance with the public; acknowledgement; a good reputation; because of the success of FLMMA, are able to access a lot of money. FLMMA is mentioned in important policy documents; respected by; because Government talks about the impact of FLMMA; not so sexy anymore; LMMA is becoming an acceptable term for resource management and CBD regionally |

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| Simplified Tools and Action | Overkill; simpler sets; (community) appropriate; simple; simplicity; very difficult; bridge the gap; rapid; the best way for them to be able to understand; it is so eloquently written; all of these concepts...; too technical; the knowledge that we are trying to take down to the people; the same message; They need more access to the science but they don't need it at the level often that the NGOs are giving it; message box; we're only talking about the sliver of the issue; overwhelming, abstract; they don't relate; too complicated; complex; NGO talk; easy to get across; complicated techniques from overseas; convert into laymen language   |
| Sustainability              | so the FLMMA work doesn't die with the chief; in the long-term; to continue in perpetuity; integrating the process into the on-going work program; in the future; long-term funding commitments; continuous; funding for these activities dry out; not to rely too much; without being reliant; get them going; the right support; they are not really committed in doing the surveys when you are not there; Most of the villages keep it for 4, 5, 6 years; to keep it alive; sustain long term involvement with communities These communities should be independent; make them take ownership in the long term; two or three years later it's like it has never happened; that the commitment is just really strengthened; it won't last after you go away; we don't seem to shed the established ones which was what we all wanted to do; long term continuing commitment; at least be thinking of a 10 year timeframe if you're going to make something like this really work and can get established; concept for the children's future; what would we do if you die; build it up and then let them run with it; sustainably; creatively looking into ways for growing their own resources; help them rather than holding their hand and have them look at us as if we were the answer to all their problems. We are not helping them that way; for the future generation; sustain; for the young, for the future; embedded in community development plans; creating another cumbersome structure that needs funding and support; We teach them so they can do the work by themselves; not rely on; longevity; to keep going; to look after their resources for the future; The challenge is in having them focus on that commitment on resource management that they have agreed to; good resource management arrangements that stick; not only at one point in time but over time as well |
| Traditional Knowledge       | permanent no-take area; the belief-system of their culture; That was sacred and no one would ever fish there. It was always closed; the communities and the reef are one; the vanua: that the people and the land and the sea are one unit; the traditional practices and harvesting tools for fishing; with so much...wealth of information that they have; their own management; Community identity; passed on for generations; the different techniques and methods used to catch fish; it is more likely to be sustainable and appropriate; their own local knowledge; Recognizing the community for its knowledge; women's knowledge; What is if we come across a community that doesn't have FLMMA and still does management or is doing well   |

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|----------------------|---|
| Lack of Transparency | <p>much things weren't clear; I still don't understand what their role is; need to be more clear; I can't figure out who has the leadership role; need to understand; not clear; our law does not recognize Conservation Officers, it recognizes Environment Officers; would have a better grip on that; It is hard to see or to understand; try to illuminate what actually happens; not knowing what they are doing; fuzzy; would be interesting also to find out; and they don't see the value; behind the scenes; I don't know; without being transparent; questionable; a ghost; nor took the time to reflect on what they refer to when they say "community"; was struggling with the actual objectives; is who in the community takes responsibility; hard to document; we didn't tell you that; to support a moving target; the FLMMA network cannot convincingly after 15 years describe or define what a FLMMA site is; pure nonsense; not talking about the same things; argue on basic things that should be clear by now; not a black and white decision; who do you fund when you fund FLMMA?; obvious options for confusion; What role are they playing? didn't get a clear answer; It is not obvious; it would need to be public and transparent and that they don't want to do; they call these different things "sites"; as long as these things are unclear; we have to start nailing some things; wishywashy; nebulous; we don't have any documentation in our system; they don't really understand; if you want to be transparent; to confuse; different information from different people; it is really hard for me to know; When you say 'LMMA' it can mean typically 3 to 4 things; 'What is FLMMA?' this is the core (question) and over time this has been a challenge; it's not entirely clear; that gets a little grey; not clear to me; not to have a clear work plan; conflicts of interest; doesn't make sense'; not having clear organizational structure; areas overlap, they contradict each other; they never answered; the people of Gau didn't know anything; not very clear concept to me; his work is not clear; They weren't practicing even though in our database it appears they were; not neutrally reviewed; will have to be a little bit clearer; the different people doing what they think is FLMMA and whether that is the case; very unopen, a very closed way; through asking many, many questions</p> |
| Trust                | <p>she couldn't work with him because of his moral character; to entrust; friends; family; informal networks; good relationships; we would divide parts of a workshop up; conviction of people; Communities had high expectations; Packard didn't see the tangible results after 10 years nor feeling the same passion; a mutual understanding; mutual respect; they believe you; they know that this is really for us; relationships; see the outcome; disillusioned; word of mouth, personality thing; social capital</p>   |

|                               |  |
|-------------------------------|--|
| <p>Unsatisfactory Impacts</p> | <p>running for too long for us to see not much; as far as I know in 2 or 3 years that didn't happen; we want to be able to show for once and for all, that the FLMMA approach is actually working; impacts on communities, unintended consequences; it varies member by member as to how FLMMA is working; nothing to actually get them started; nothing significant come out; lack of unified response; they haven't necessarily had the results they wanted out of the funding they've been giving so far; go to conferences; We're all very aware that not every FLMMA site works; in our hearts we know that half of them are not even functioning; so many NGOs are not necessarily in the business of solving the problem of the business that they think they're there to address. They're really there to extend their own organization; not yet; lost hope; the main horse trained; 10 years; who is responsible?; tangible results; consequences of their actions; functional; data; information; reporting; nobody can measure it; It's really hard to fully know in a meaningful way how change has happened; deliver clearly; too long; sweet language; waste of time; solutions go away; inactive sites; to see action; warm and fuzzy; not been involved with these communities directly, but it is through the YMST, that is how we got the largest number; abandoned; FLMMA came in and left; after they left, all went back to before; database; disillusion; big push for 5 or so years to increase the numbers maybe to help attract funding; survey fatigued; neglected; priorities change; not using outcome for future decisions; lack between monitoring and decision-making; no evidence for improves management; they do probably as much fisheries destruction as fisheries management; not leading to results; no follow-up; propaganda; going back to business as usual</p> |
| <p>Values</p>                 | <p>Most of us were friends that worked together; network of people who knew each other: dedication; there wasn't any physical; without getting FLMMA endorsement; ethical practices; that's always been the approach; core values; you have to sign that you agree to that; shocking to the local people; off center culturally; church; they believe in FLMMA; build relationship; FLMMA is more like a family in some ways; a group coming together with the same heart, vision and do things; social contract; FLMMA principles; share the same ideas; The village heart; the community at heart; There's a religion to LMMA; It just took a phone call or just an email; mutual respect; common objectives; common belief in community management; they wanted to work together and supported each other; our vows; the relationship; they got on very well and had a common point of reference; strong local core; a team sort of feeling; the Fijian culture is very collaborative; you are meant to share; we all have the same overall objectives; devoted to the cause; manifestation of the principles; for Fiji and for the people; commit to each other and this is what we expect from each other; Gentlemen's Agreement</p>  |

|                   |   |
|-------------------|---|
| Vision of FLMMA   | Vision; the idea; This could be the model, yellow pie; where do we go from there; the objectives and the mandate of FLMMA; what they want to see at the end of this; the direction; we had that clear direction; strategic planning done with all the groups; where to go; focus; knows what it wants ; know what they want and know how to fight for it; shared vision; what we should be doing; is driven by; a common approach – common approach would be the participatory process; just a group coming together with the same heart, vision; “Der Weg ist das Ziel, das Ziel ist weg”; struggling with the actual objectives; what FLMMA stands for; rethink its key objectives; drawing board; difficult to tie down what it actually is trying to achieve; the goal; way forward; 5 years from now; I would like to see with FLMMA in the next 5 years; It’s an idea and for some it’s a religion; I would want to focus on; I’d like FLMMA to play that role ; what we want to see; the directions of FLMMA in the future; What we envisioned was; I think FLMMA’s role is much to be; I think FLMMA would be the driver to make the change; see the value of FLMMA to; where I look at the FLMMA; my long term view of where we need to go; my version of; the ultimate aim for me would be to; this is what FLMMA would hopefully be able to concentrate more time on |
| Wellbeing         | centered around the communities; People’s satisfaction; focus on what makes people happy; focus on the communities; livelihoods; community prosperity; food security; income; alternatives; focus on community management; income generation; alternate income; health and education; income generating project; benefits; benefitting; diversify income sources; village development; you make your living out of harvesting resources, on the land as well as on the sea; issues faced on the household level; improving their income base; looking into ways for growing their own resources; volunteer work; welfare; better living standard, healthy people and happy people; value adding; money for the family; maximize and benefit to their resources; maximize the returns; well-being of iTaukei people; they have very good reasons why they need to fish there; source of food; so they have to eat at the end of the day  |
| Western Knowledge | monitoring and evaluation; science; scientific knowledge; to monitor; research work; researcher; community data; survey; hard data; be individuals in the NGOs: too strong, too pushy; academic; scientific; expertise; meta-level; theoretical thinking; outside concept; eloquent; sophisticated; All of these concepts; studies; NGO language; terminology; technical; assessments; measure; validity; inventories; methodology; definitions; giving back (information); the learning framework; you need to know how many fish are there before the community can do it as management; accurately; root-cost-analysis workshops; biological training; good data   |

## Appendix G: Draft Report FLMMA



INSTITUTIONAL STUDY ON THE FIJI  
LOCALLY-MANAGED MARINE AREA  
NETWORK (FLMMA)

The Lessons Learned Initiative 2015/2016

Sophie Berthold and Andra Whiteside  
Study Report  
September to December 2015

Content

- Introduction .....107**
- Study Approach.....108**
- Results .....108**
  - 1. The History of FLMMA..... 108
  - 2. Perceived Challenges ..... 110
  - 3. The perceived Future of FLMMA..... 112
  - 4. How can the FLMMA Network best support communities according to the interviewees ..... 114
- Suggestions.....117**
- Conclusion.....121**
- References .....123**
- Appendix:.....124**
  - III. Open Questions from the Respondents ..... 124

*“I think it’s very easy to be negative and it’s easy to criticize. I also think it’s easy to trumpet (FLMMA) as a massive success. Not every FLMMA site is a massive success but what we’ve achieved over the last 15 years is remarkable. Even if the sites aren’t always the most effective, the awareness that has been raised by them and the consciousness now in many communities’ minds is the marine resources you can’t just take (from) forever and you have to manage the same way as you farm. [...] if you’ve got that into the national consciousness then I think that’s a success. That’s what I hope.”*

(Study Interviewee, 2015)

## **Introduction**

The Locally-Managed Marine Area (LMMA) Network is an international network of natural resource management practitioners working in Asia and the Pacific, who have joined together to share best practices, lessons learned and to amplify their community voices national and internationally (LMMA, 2016). Established as a regional network in 2000, it includes Indonesia, Federated States of Micronesia (of which Pohnpei participates in the network), The Philippines, Papua New Guinea, Palau, and Solomon Islands (Govan, Aalbersberg, Tawake, & Parks, 2008).

One of the long-term goals of the regional LMMA network has been identifying and sharing lessons learned on community-based adaptive management and the factors for their success at the on-site level for later uptake at scale. The LMMA Network is now implementing a systematic program to identify impacts and define lessons learned to inform future strategies within and outside the network, and for stakeholders ranging from communities to governments, NGOs, and donors. The goal of this Lessons Learned Initiative (LLI) is *“to understand and disseminate how to better support sustainable livelihoods in islands and coastal areas by learning what interventions [approaches] are important for community-based marine conservation projects”* (Terms of Reference,

Lessons Learned Initiative 2015). Fiji is the first LMMA-member country to carry out the LLI.

The core of the initiative is a social science field survey which will be conducted in 30 to 40 villages throughout Fiji. Also, this complementary study was carried out at the institutional level, supporting the LLI team. The study focused on institutional FLMMA members and key resource persons to address questions of how to scale up, replicate, and how LMMA's evolved over time. Furthermore, it sought to understand the unique aspects of the FLMMA network and how these elements contributed to the success of FLMMA. It also aimed to highlight certain challenges as seen from an institutional level.

This study takes an integrated approach to the Lessons Learned Initiative. The following report presents results of the survey, based on two intentions: First, it aims to give valuable complementary information to the Lessons Learned Initiative and secondly, it intends to consolidate practical recommendations for decision-makers in FLMMA and interested members to strengthen FLMMA as an institution further.

## **Study Approach**

A qualitative approach was taken by interviewing 26 key FLMMA members and key persons during September and November 2015. The interview was constructed with several different sections pertaining to the following; 1) Interviewee's position and role within FLMMA; 2) Important historical points over the past 15 years, particularly regarding the functioning structures of FLMMA; 3) Perceived areas of improvement, and ways for FLMMA how to better support communities.

## **Results**

### **1. The History of FLMMA**

Interviewees found common ground on the point that the creation of FLMMA was an informal, gradual process. Out of the 12 interviewees that had witnessed the formation of FLMMA at the end of the 90's, only 2 stated that they were foreseeing the progress which FLMMA would achieve to the present time.

The following were common points amongst the interviewees as to the reason FLMMA has succeeded:

- Favorable circumstances of funding being made available
- Community-based approach in combination with participatory practices was seen as innovative
- The communities could see first results quickly which gave the approach support at the community level (e.g. spill-over from no-take zone)
- Coastal communities faced decreasing fish stocks and decrease in fish size
- Culturally, communities are familiar with adaptive management, and the Fijian culture is characterized by a collaborative mentality
- Three similar projects started around the same point in time, people in charge of the projects were looking for a platform to exchange information
- The kick-off of later FLMMA were informal meetings of friends and colleagues around a kava bowl who shared knowledge and passion in marine resource management and the well-being of communities

When FLMMA was formally created in 2001, it would *“serve as a [nationa]] forum in which communities with LMMA projects could share methods and results.”* (FLMMA Operations Guide, 2011). Since its conception, FLMMA has become a nationally and internationally acknowledged institution by successfully linking science with Fijian traditional practices and knowledge. FLMMA is part of the regional LMMA network which extends to several countries in the Pacific and beyond (LMMA, 2011).

Interviewee’s named numerous other achievements in addition to the 466 no-take zones, known traditionally as tabu areas (FLMMA Strategic Plan 2014-2018). For example, they agreed that FLMMA members have contributed significantly to marine resource management in Fiji by implementing a community-based adaptive management approach. They achieved this by training the communities in fundamental scientific knowledge, so they were able to make well-informed management decisions. By taking the CBAM approach, coastal communities keep their traditional decision-making power. However, during the decision-making process, FLMMA created an environment where all members of the communities were included, which built trust within many of the communities. As a result of expanding trust, other villages began to join.

*“And that is the FLMMA approach: help people think about issues that they are facing but haven’t really had a forum to sit together and discuss. But to do it in a way that is their ideas and it is just facilitated, rather than directed”*

(Interviewee 2015)

Also recognized as a key element of CBAM, is how it was able to create a culture of learning, capacity building and scientific reasoning. However, the interviewees also recognized the equally important simple tools and hands-on practices that were actively embedded in existing community structures. As a result, FLMMA members are cooperating based on the mutual values and respect similar to a Gentlemen's agreement.

In addition to creating an environment in which the CBAM approach can be suitable, the multidisciplinary diversity of FLMMA members has also contributed to its success. FLMMA member's ability to cut across disciplines and work together has been crucial to the LMMA's success.

## 2. Perceived Challenges

Funding was the most frequently stated challenge perceived by the interviewees, mentioned during 23 out of 26 interviews in total. However, out of the 26 interviews 25% of the respondents didn't find the lack of funding as a key issue: In their opinion, funds are obtainable. For them, it was a question of making FLMMA more attractive to donor organizations which would be beneficial for the future of FLMMA. 20% of the interviewees stated explicitly that the question of future funding is closely linked to where they see FLMMA in 5 years (more details in section 3).

13 respondents talked about the high number of FLMMA sites and the current difficulties of FLMMA to meet the expectations of sites: "In my view, starting, getting people to commit to RM is the easiest of things. The challenge is in having them focus on that commitment on resource management that they have agreed to" (Interviewee, 2015).

Currently, there are more than 400 sites in Fiji alone which leads to considerable financial and logistical challenges for the Network. Also, IAS as a FLMMA member with a high number of sites is reducing its efforts considerably. To keep all communities engaged and to adequately respond to demands for support from new villages is seen as one of FLMMA's main challenges.

Nine respondents felt that a key challenge facing FLMMA was the inconsistency in terminology and definitions being used by FLMMA. Besides other examples, the term "FLMMA site" was mentioned as the following quote demonstrates:

*"And this brings us back to the question if it turns out [...] that the FLMMA network cannot convincingly after 15 years describe or define what an FLMMA site is - that describes just the whole problem in a nutshell - and actually not having a recipe to resolve this problem! So they call these different things "sites": yes, we can't compare them to each other, yes they are not the same things, yes some of these are not actually areas, but we call them LMMA's - sorry, you lost me"*

(Study Interviewee, 2015)

As a second example where interviewees wished for more clarity, concerns the FLMMA database. Of the 26 respondents, seven of them mentioned the database as a problem. These two issues – the inconsistency of the terminology and the database - were raised by various representatives of differing institutions, of which they had a varying degree of interaction and involvement with FLMMA.

FLMMA as a network began as a grouping of colleagues, meeting informally around a kava bowl, and exchanging ideas, and experiences regarding community-based conservation. This relaxed style of information exchange became over time increasingly successful. As a result, FLMMA expanded and formalized itself into today's FLMMA network. However, nearly half of the interviewees saw in this development the reason for FLMMA's lack of leadership, commitment, and prioritization in today's structure.

In the early 2000's, there was an international paradigm shift taking place, during which traditional top-down conservation efforts changed in favor to a bottom-up approach, putting a strong emphasis on the role of communities.

*“So one of the main things that happened when they started to work with the community and started to recognize the knowledge that communities had. Recognizing the community for its knowledge, that was a big change.” (Interviewee, 2015)*

FLMMA made valuable contributions to enable this paradigm shift in Fiji and internationally which brought new challenges. One respondent put it this way:

*“To some extent, we are way beyond the point where we were excited about communities being able to do stuff. We know they can do that” (Interviewee 2015)*

So today, the challenges have changed. As a consequence, FLMMA needs to determine a new common goal to ensure future engagement and commitment of its network members. FLMMA has developed a new strategic plan, but still eight interviewees stated that the working relationships between FLMMA members have deteriorated in the past two to five years.

About a third of all respondents stated that traditionally very active FLMMA members have started to show less commitment in recent years. They gave several explanations. Amongst other reasons, this development is often explained by a change of strategic prioritization of the member organization or a deficiency in information exchange. In general, interviewees stated the importance of the Institute of Applied Sciences (IAS) at the University of the South Pacific (USP), especially during the first ten years of FLMMA's existence. In recent years, IAS *“has shut down largely around FLMMA because they used to be the defacto network”* (Interviewee 2015). As a result, today's active members agreed on the struggle within FLMMA to fill the gap after Bill Aalbersberg and his team took a step back from their strong involvement within FLMMA.

The FLMMA network is facing challenges in its decision-making processes which are perceived very differently by the interviewees: While 25% of interviewees don't see a pathway for FLMMA to streamline its organizational structure in general and its decision-

making processes in particular due to its unique structure as a network, there are equally strong voices who call for more efficiency, especially during the Executive Committee meetings. However, the key issue of today's FLMMMA seems to lie deeper according to one of the interviewees:

*"I don't care much right now about the meetings...the meetings are just a symptom of a problem. You can fix the meetings, but you still didn't address the leadership question, the decision making, the organizational one and maybe all they can do is streamline."*

During the interview process, it became clear that the relationship between the "core" structure of FLMMMA (the secretariat) and the most influential FLMMMA members, often cited as "the NGOs" (referring mainly to WWF and WCS), has to be defined more clearly as well as the different roles and responsibilities. This becomes more apparent in the broadness of the interviewees' visions of FLMMMA in the future on which this report will elaborate in the following section.

FLMMMA is "currently at a crossroads and people are not sure where to go" (Study Interviewee 2015). This challenge can be turned into a unique opportunity for FLMMMA if managed well.

### **3. The perceived Future of FLMMMA**

According to 6 of the 26 interviewed, the fate of FLMMMA seemed uncertain. Future funding uncertainty surrounding FLMMMA was centered on concerns of where funding would come from to carry out the network's goals. As funding from the Packard and MacArthur Foundations slows down, it was suggested other external donors could potentially step in, including key Governmental entities notably the Ministry of iTaukei Affairs, Department of Fisheries or the Department of Environment. In addition, it was also suggested that other possible sources of funding could come from the Green Growth Policy Framework, Global Environment Facility or potentially the Fisheries Program at SPC.

Two respondents proposed that FLMMMA could act as a statutory body (similar to the National Trust of Fiji or the iTaukei Land Trust Board) that receives mandate from Government to play official roles in resource and coastal management whilst advocating on behalf of community members. In this way, the network would be financially supported by Government. Advocating on the behalf of communities, FLMMMA could then ensure more emphasis be placed on policy implementation of community work within a Governmental Department such as the Department of Fisheries for instance, aiming for increased outreach and continuity of inshore management efforts. It must be noted that although this approach is likely to be favored of having more organizational structure, it risks having its flexibility compromised. While this scenario would strengthen the recognition of FLMMMA, its feasibility needs to be further analyzed. Among the 26 respondents, 7 suggested close partnerships with Government institutions would likely

play a crucial role in FLMMA's relationship with them. In addition, this concept is reiterated in a separate paper by Sloan & Chand (2015):

*“All of FLMMA's stakeholders realize that the current state of near shore fisheries management is not optimal, needs to improve, and could be helped by greater legal clarity of roles and responsibilities as well as better alignment between how the Government and communities value their near shore resources”.*

In November 2015, FLMMA published a strategy paper called “Working with Government towards a better Fiji. How FLMMA can assist government towards food security, conservation, disaster risk reduction and green growth” (FLMMA 2015). This publication details how FLMMA positions itself strategically towards the Fijian Government in the future.

Nearly a quarter of those interviewed argued that keeping the structure as it is now would allow for the most flexibility in setting its own objectives in the presence of governmental departments, NGOs and community members who support the network. No change in structure is naturally the most feasible scenario however; the likelihood for FLMMA to better support Fijian communities is unlikely to increase.

Future active participation in the 400+ sites under FLMMA would require the expansion of its staff and Secretariat. Major questions that arose were of how it would become active in all of its sites given the size of the network's full-time staff and level of funding they are expected to get in order to cater for representatives to visit each one.

Building capacity within the network was one way of answering this question to carry out the work it intends to engage communities in and playing a role that directly features community based management and allow NGO members to become technical advisors to them. For instance, more committed Divisional Reps could strengthen the network by reaching out to sites who may have felt 'neglected' over the years. The expansion of the Secretariat would require a reform in the decision-making processes, clarification of roles and responsibilities and strategic rigor (strategy for new member). In addition, having full-time experts could push FLMMA's support for communities in a strategic and rigorous way. The important question for this type of approach is then how these experts are to be compensated or will it to be on a voluntary basis.

Some have hoped for FLMMA to remain focused on the communities that it serves and for much of the work to go back to the people who face challenges and the threats of overharvesting coastal resources on their livelihoods.

Suggestions of FLMMA turning into a non-governmental organization were mentioned by 2 interviewees. Only 1 respondent out of the 26 interviewed, thought FLMMA should become its own NGO in the future. In this way, the network would be independent, strategic planning would be strengthened and their focus would then shift to the 400+ sites in Fiji. Current 'hot topic' issues such as climate change (CC) and Integrated Coastal Management (ICM) incorporated to FLMMA's set of objectives may drive donor funding and offer a holistic overview of the entire situation. FLMMA becoming a NGO however runs the risk of losing its initial 'network character' as well as many key members who

have been instrumental in providing sound guidance and knowledge toward achieving the network's success.

#### 4. How can the FLMMA Network best support communities according to the interviewees

Interviewees were asked what members of the network could do better to help support communities in Fiji. The most common response highlighted engaging all communities more actively and regularly by increasing the involvement of key representatives.

Of the 26 interviewed, 10 respondents suggested that regular community engagement involving Divisional Reps, YMSTs and conservation officers may spark motivation and trust within communities themselves to manage their marine ecosystems and thus contribute to achieving FLMMA's overall targets. Building the capacity of these representatives and officers could further contribute toward FLMMA's success as a network.

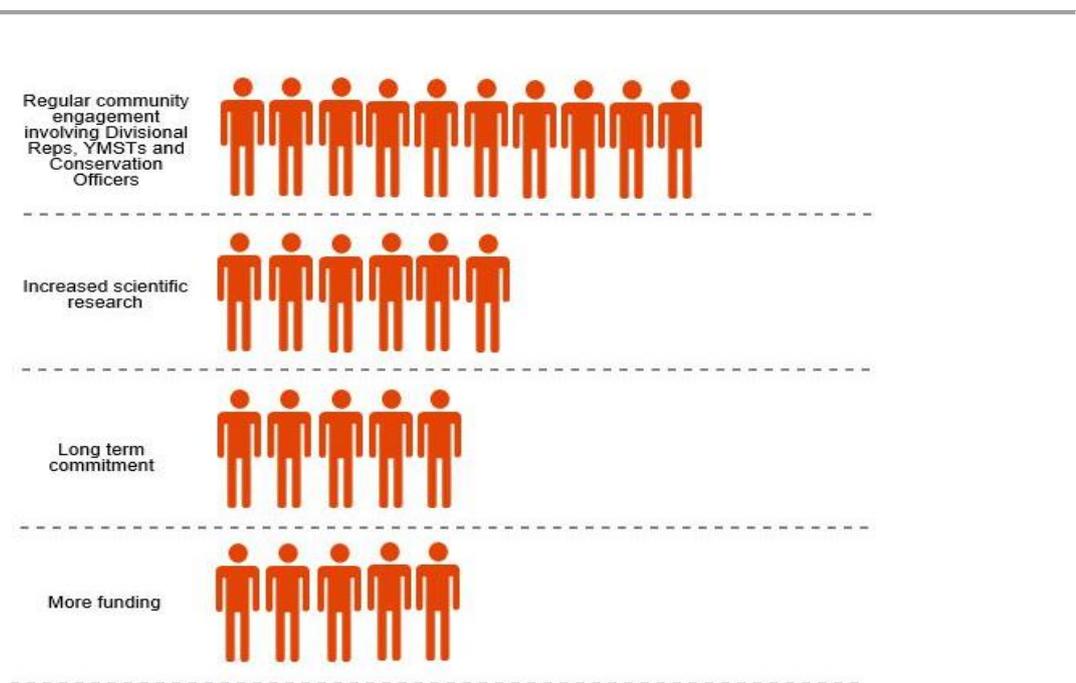


Figure 1 Number of interviewees responding to how FLMMA could best support their communities

Specific applied research in the marine science discipline was said to be lacking according to 6 interviewees. They believe that the provision of scientifically collected data will give Government and perhaps other external donors the confidence in the FLMMA process in addition to its intentions for communities. Interviewees also indicated that better representation of data that is properly communicated to policymakers may be more effectively integrated into community-based management (from a top-down approach) and management of resources would be based upon solid science. The feasibility of comprehensive scientific data collection in order to make informed decisions however requires further assessment and at what cost for the benefit of Fiji's communities.

Long term commitment was believed to be necessary between communities and FLMMA partners in the sites that they are in charge of, for 5 interviewees. One respondent felt that if members of FLMMA spent a number of years in villages they work in, they would initiate the process of communities feeling a sense of empowerment and take on the responsibility themselves of maintaining their resources. Some interviewees felt that by giving recognition to villages for the good work that they have done throughout the years will instill pride and passion for the marine area they protect or manage.

*"If we get a newspaper article out, or if something goes on the radio and if a student group comes down to want to look at it [project], it's not just a financial benefit. It's the recognition that they [communities] get something special. That means an awful lot to the community. We have to seek out methods that reinforce commitment"* (Interviewee, 2015)

Careful steps need to be taken when selecting sites in order to increase the chances of achieving marine managed area success. Communities must show a willingness to work on their own and expect no rewards when applying to be a FLMMA site. If there is a lack of motivation of properly managing resources, which could well be a waste of FLMMA's time, resources and would be unsustainable in the long run.

In addition, performing value chain analysis to encourage communities to 'add value' to the commodities they sell whilst supporting sustainable management could contribute significantly to their livelihood.

More funding according to 5 interviewees means more support for communities. However, funds must be spent in a cost-effective way in order to sustain efforts. FLMMA would need to first consider its objectives and the direction the network intends to take to become (increasingly) attractive for donors. In addition, careful planning following the outcomes of the LLI will be fundamental for future steps and aligning objectives to donors' interests.

Funding from the Global Environment Facility (GEF) for example, was considered an option under the GEF R2R project in particular. The project encompasses biodiversity preservation, ecosystem services and sustainable livelihoods through a ridge-to-reef

management approach. The Department of Environment is the executing agency for this project while some activities will be led by FLMMA on the ground (Project Document, 2014). Strategic planning by aligning FLMMA's objectives with ICM or CCA was also considered to be a way forward.

Receiving feedback from the FLMMA communities 10-15 years after the establishment of the network may allow better oversight in regard to the broader picture of the effectiveness of its sites. Finding key reasons for the success or failure of marine managed areas is paramount to make improved management decisions for improving management and strengthen a 'culture of learning'.

# Suggestions

## Clarification

Resulting on the interviews, three main suggestions were identified in regards to the future of FLMMA.

First, it seems beneficial that FLMMA clarifies terms and procedures as a network. One possible way to move forward would be to answer open questions that were raised by respondents. The list is representative, and the order of the questions does not display any weighting in importance.

When presenting first results at the Executive Committee Meeting on November 16, 2015, in Suva, the following questions were part of the presentation.

- *How will FLMMA sustain itself in the future?*
- *Where is the focus of FLMMA?*
- *How can FLMMA make communities take ownership in the long term?*
- *How does FLMMA strategize its Government engagement?*
- *In which direction is FLMMA thinking of operating in - an NGO, a Statutory Body or a part of the Government?*

These questions are meant as food for thought for the FLMMA Network and its members. They might be difficult and some even uncomfortable to answer which makes them particularly important to be addressed. In the annexes, a more extensive list of questions is included (see Annex III). However, it appears to be important for FLMMA members to discuss and answer these questions since it would help clarify FLMMA terms and future strategic development.

Currently, the FLMMA secretariat is aiming to improve the FLMMA database. Interviewees agreed that the database could become a highly valuable tool if set up in a coherent and clear way.

## Communication

The second recommendation resulting from this survey concerns communication within and beyond the FLMMA network. This includes the communication between FLMMA members, the secretariat on the national and the provincial level (divisional representatives and YMSTs), as well as the way FLMMA presents itself to outsiders. This is closely linked and partially dependent on the clarification process mentioned above.

As FLMMA grew, FLMMA's structure evolved organically over time. The process was strongly influenced by the long-term goal to keep the FLMMA structure as cost

efficient as possible while aiming for equal rights amongst its members. As a result of FLMMAs evolution, it has become unique to the Southwest Pacific and serves as inspiration in other LMMA countries and territories.

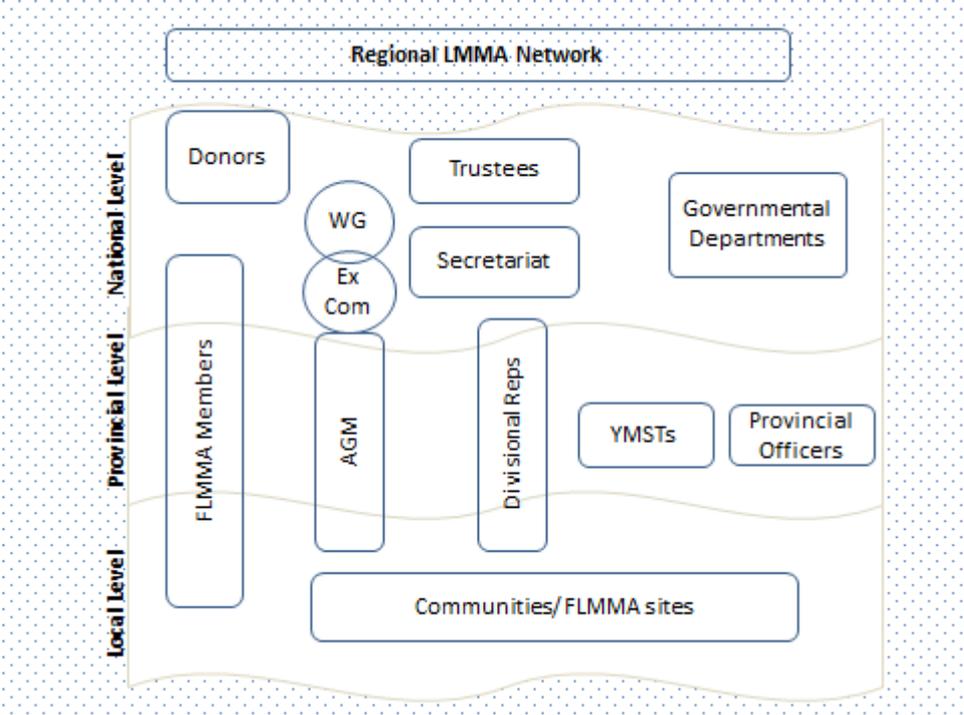


Figure 2 Overview FLMMA Structures and associated entities

However, it seems from interviewee comments that FLMMAs structure lacks coherence, probably due to unrealistic expectations towards the network. This concerns general understandings of the role of the FLMMA coordinator, member organizations, and the role played by the Divisional Representatives. The following graphic depicts the different entities that make up the structure of the FLMMA network on the local, provincial and national level.

Depending on the background of the respective interviewee, the relationships were weighted differently. The respondents are counted among two lines of thought.

It became clear during the interview process that respondents closely linked to the FLMMA or LMMA structure see FLMMA’s focus on supporting communities in close cooperation with provincial partners and government entities. In this first scenario, they argued for an empowerment of the Secretariat in decision-making power to increase the speed and efficiency of the approach to respond to the needs of the 400+ FLMMA sites. In this scenario, a core team works mainly on the local and provincial level, while being rather independent of FLMMA member organizations. The Executive Committee would act as technical advisors to this core team with less influence during the decision-making process. In other words, FLMMA would become more institutionalized and independent from its members and, in consequence, from their commitment.

Concerning the second scenario, respondents argued for FLMMA acting as information sharing platform between different organizations working on participatory coastal management. In this case, FLMMA would persist being a network. However, for respondents following this line of thought, they see the risk of FLMMA losing in importance over time if nothing changes:

*“A lot of partners these days are feeling, ‘well we’re not seeing that information sharing happening so why are we continuing to invest effort into that network?’. I believe in the network, I believe it’s a good thing so I will continue to invest effort to keep it functioning. [...] There is value but again, just to emphasize this because it’s very important there is only value if the network is functioning as a coordinating body and sharing the information otherwise it is just a waste of everyone’s time”* (Interviewee 2015)

It’s a fine balance between having it operate as a loose network of partners to it becoming more formalized and fitting it into Government, or having it go on its own and becoming its own independent NGO with staff. It also became clear that these two lines of thoughts have developed over time due to a lack of clear communication between the different groups. Both groups seemed frustrated about the level of commitment, impacts and cooperation. As a symptom of this, formerly important working groups are non-existent at the present time.

Respondents strongly recommended FLMMA to improve their internal communication and information exchange. FLMMA is in the process of refocusing its main resources towards current and potential future FLMMA sites. The core part of the Lessons Learnt Initiative will hopefully provide valuable insight regarding their coastal resource management activities. However, it seems beneficial that a close cooperation and exchange between the FLMMA secretariat and FLMMA members is maintained and strengthened. In the short term, an easy, cheap, but effective measure could be to re-implement the kava sessions as a way to revive the old atmosphere of FLMMA. Furthermore, it was recommended to reactivate Working Groups in the medium- and long-term.

*“That to me is why FLMMA was good and strong, because it had a number of people sitting together over a kava bowl and talked about these things and came up with ideas”*  
(Interviewee 2015)

As a second step, it could be useful for FLMMA to invest more resources in its marketing efforts to raise awareness. This could be done in different ways, e.g. a regularly published newsletter about activities and success stories. By doing this, FLMMA would not only strengthen the information sharing inside the network but also attract the attention of potential funding agencies.

## Consolidation

In about one-third of the interviews, FLMMA partners talked about changes in today's world and the need for FLMMA to adapt to current topics to be successful in the future. FLMMA has to position itself by finding its niche - what is FLMMA's field of expertise? Addressing this one question would make it easier for Government departments and donor agencies to justify future cooperation.

*"But they [FLMMA]...have [to] really [sell] themselves: 'we are the experts on participatory techniques with communities, and if you want this, we can train you, we can be partners in these projects.' I think that should have happened...I don't think FLMMA has taken that on: where is your niche? To me, their niche is a lot of experience in community-based adaptive management and to use participatory techniques. So that is one direction"* (Interviewee, 2015)

13 of 26 respondents see a need for a consolidated approach in how to support and strengthen the 400+ FLMMA sites which challenges FLMMA's ability to provide on-going support to established sites and assist new communities who are interested in establishing a FLMMA site. Based on FLMMA's core value of "Community at Heart", FLMMA's "vision to move towards a provincial decentralization of these activities by the establishment of provincial or island based Yaubula Management Support Teams", hoping they would be sufficiently resourced to ensure an annual visit per site (FLMMA, 2014). FLMMA hopes that the increased cooperation will lead to higher compliance of FLMMA sites while keeping costs as low as possible. This strategy of decentralization is equally directed towards the divisional and communities' reps as well as the Conservation Officers.

Also, respondents recommended FLMMA to strengthen its strategic planning efforts. This need becomes apparent when looking at the collection of questions to be addressed (see Appendix III). Although FLMMA is just about to finish its strategic plan, not a single interviewee mentioned it. On the contrary, two-thirds of the respondents stated a lack of strategic thinking in its funding efforts, member management, planning or Government cooperation. So it is likely that the problem is not the lack of strategic planning efforts, rather it is; (1) poor communication (in and outside of FLMMA) and (2) the lack of a progressive leader who champions FLMMA.

# Conclusion

This report had two intentions: First, it aimed to provide complementary information to the Lessons Learned Initiative and secondly, it intended to identify and consolidate develop practical recommendations for decision-makers in FLMMA and interested members to strengthen FLMMA as an association further.

FLMMA's contribution to community-based adaptive management has led to FLMMA becoming an acknowledged entity in conservation efforts. In the past 15 years, FLMMA grew regarding sites numbers as well as member organizations which led to challenges in today's working of FLMMA.

Today, FLMMA is well-known on a national, regional and international level, but its structures lack transparency and coherence. As part of this survey, interview respondents identified three main areas in which FLMMA could improve:

- (1) Clarification: FLMMA members may gain clarity by working through the questions in Annex III. This could help to strengthen FLMMA. Doing this in cooperation among FLMMA members would be beneficial.

In a second step, FLMMA is encouraged to continue its efforts to build a coherent database of the LMMA efforts in Fiji.

In the long term, FLMMA should work on clarifying its organizational and developmental structure, deciding if it will continue as a loose network of partners or if it moves towards becoming an institution (e.g. an NGO) with own staff.

- (2) Communication: FLMMA may want to improve the information exchange between the Secretariat, its members, and funding agencies. Respondents recommended re-establishing regular, informal kava sessions in the short term. Furthermore, FLMMA could re-vive the system of working groups as technical support to the FLMMA Secretariat in 2016. Additionally, we suggest that FLMMA establishes a formalized institutional memory.

For the external communication, FLMMA would benefit from strengthening its marketing efforts, e.g. through a periodical newsletter, or publications in scientific literature.

- (3) Consolidation: Through FLMMA's growth in size and responsibility due to its success, FLMMA's structure and the number of sites grew unrestrained. After 15 years of existence, it seems beneficial for FLMMA to take a step back from the daily business and go back to the drawing boards and work some of the kinks out, and eliminate stumbling blocks. This will help define roles and responsibilities of the FLMMA secretariat as well as of FLMMA members. Furthermore, FLMMA needs a clear strategy how to best support FLMMA communities in times when formerly active network members move away.

*“Fiji is such as this: When I came to Fiji in 1975, there was no yellow pie. You know the yellow pie? You get it served when you go to the village. So there was none in 1975 nor in 1978. And then, SPC did this training and they taught women how to make yellow pie. It was just 7 or 8 women who went out and the entire country was transformed. Why? Because :*

- 1. Locally available material*
- 2. It was not expensive*
- 3. It was women sharing recipes with women*

*And it conquered the entire nation with yellow pie. And yellow pie has taught me something about this country: All we need to do is something very small in this country because the people emulate. They do. They see something working and it passes from community to community. And what we need to do is to look at the qoliqoli management as Yellow Pie. We just need one or two real good model sites and it will happen, it will spread. We can change this country. This could be the model for the planet. Where else in the world would Yellow Pie do that? It is Fiji, Fiji is the Yellow Pie kingdom where with Yellow Pie, women, women (!) can do it. Ok, that's it”*

*(Interviewee, 2015)*

# References

Govan, H., & Meo, S. (2011). FLMMA Operations Guide: The way we work together. FLMMA, Fiji.

Government of Fiji & United Nations Development Programme (2014). Project Document: Implementing a Ridge to Reef approach to Preserve Ecosystem Services, Sequester Carbon, Improve Climate Resilience and Sustain Livelihoods in Fiji, Suva, Fiji.

Sloan, J. and Chand, K. (2015): A Review of Near Shore Fisheries Law & Governance in Fiji. David and Lucille Packard Foundation pp 39.

The Fiji Locally-Managed Marine Area (FLMMA) Network (2015): Working with Government towards a better Fiji. How FLMMA can assist government towards food security, conservation, disaster risk reduction and green growth. Policy Paper. FLMMA, Fiji.

The Fiji Locally-Managed Marine Area (FLMMA) Network (2014). Strategic Plan 2014-2018. FLMMA, Fiji.

The Locally-Managed Marine Area (LMMA) Network (2011). 2010 Annual Report: Defining our Future.

# Appendix

## I. Open Questions from the Respondents

During the interview process, we felt the respondents had diverse ways of answering the questions and it seemed as if the interviewees didn't share the same understanding for potentially crucial questions such as 'who is FLMMA?'. Therefore, FLMMA may want to internally go through a list of questions that were raised by the respondents during the interviews. Vision

Who is FLMMA?

Where is FLMMA going? Do we really want to continue as it is or do we want a new focus?

What is the focus of FLMMA?

What is the long term goal of FLMMA? What is it trying to do?

How is FLMMA going to survive?

Do we need more scientists or do we need more social scientists or do we need more people who are passionate about working with people or communities?

How to best support FLMMA?

### Structures and Processes

What are the necessary capacities to build FLMMA?

So is the Executive Committee only for making decisions and keeping it at that and hold a meeting where there's more free flowed discussion?

The bills are there, the policies are there, the frameworks are there. Why is it not legislated in any FLMMA (plan)? If they did it right, they could be contributing much more in 5, 10 years' time.

What are the things that FLMMA has been successful in doing? What are some the challenges and weaknesses, and what should FLMMA do?

These people are sacrificing their reefs, putting them aside, so what can we do for them that will cause ultimate changes and give them an alternative livelihood?

How can this study help get FLMMA focused on that direction?

How do you strengthen the strategic thinking of a network?

How can Brad make decisions? Who is Brad's boss?

What is the role of the Coordinator?

### Strategic Planning

FLMMA would really need to think about strategic planning: what are the risks, what is the way forward and how to achieve this? What is the purpose of this learning analysis because right now, it seems funding is difficult, so is this analysis going to give you results which allow you to go donors and get funds, or?

In which direction is FLMMA thinking of operating in? Do they want to become (i) a statutory body (ii) an independent NGO with staff or, (iii) more formalized and fitting it into Government?

### FLMMA and the Government

How does FLMMA strategize its Government engagement? At the highest policy level, at the middle or at the grassroots level?

Where do communities get their technical backup from if not from the iTaukei Affairs? FLMMA need to fill this void.

What specific programs can FLMMA come up with that will effectively fit into resource management planning in Fiji?

Could FLMMA do more to integrate FLMMA-type activities into the Department of Fisheries?

How does FLMMA strategize its Government engagement? What is the role of the FLMMA network on the potential creation of an inshore fisheries division?

### FLMMA sites

How can remote areas such as Lau be supported by FLMMA?

How can FLMMA make communities take ownership in the long term?

Questions for communities when FLMMA/Divisional Reps re-visit their sites after 2 years for assessment/evaluation:

What has been done in the communities?

Where were the problems?

What are ways in which these can be improved?

If the villages approach and say they want to become a FLMMMA site – who is responsible?

If Amelia gets a call the next day and two new communities want to manage their resources and want to help; who helps them? Where's the tool set? The capacity that goes out and visits them?

### Funding

How will FLMMMA sustain itself financially in the future?

Who do you fund when you fund FLMMMA?

### FLMMMA members

What is the benefit for PCDF of going back to FLMMMA?

### Roles

Who considers whom as a representative of whom to be or not be a or the community? (about the difficulty of the term "FLMMMA community")

What role are the Conservation Officers playing?

The question is in how far do activities of members, either corporate or individual, reflect on what the network does?

What staff do they (the FLMMMA secretariat) need to actively support communities to raise money, to start shifting it away from foreign NGOs?

Why don't you have a village-based database and keep improving it?

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