

Collaborative Governance in the Nusa Penida Marine Protected Area, Indonesia

Master Thesis



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The photograph on the front cover shows a seaweed farming area at low tide between the two islands Nusa Lembongan and Nusa Ceningan in Indonesia (source: author).

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Summary

Coral reef conditions are declining around the world with devastating consequences for biodiversity, economies, and food security. Marine Protected Areas (MPAs) have emerged as one type of coastal and marine management tool to address issues of overfishing, habitat degradation, and to foster alternative livelihoods. In order to achieve these diverse MPA goals collaborative governance approaches are being used extensively around the world. The aim of collaborative governance is to accomplish desired goals together which could not be achieved by individuals acting alone. A collaborative governance approach has been applied in the Nusa Penida MPA in Indonesia. Previous studies have shown, however, that successful collaboration in the Nusa Penida MPA governance network is hampered by three major problems: First, the potential for conflicts and misunderstandings due to differences in language and culture between professional groups; second, a lack of commitment to the process by some stakeholders; and third, the lack of adequate resources for the implementation of the management plan. In order to investigate these obstacles to effective collaborative governance in the Nusa Penida MPA network, eight weeks of field work were conducted. For the collection of data three qualitative methods were used, namely document analysis, stakeholder interviews and participant observation. This case study was designed to reach the four objectives of this thesis: The first objective is to understand how social dynamics within a collaborative governance arrangement impact collaborative action in the local context of MPAs. Applying the collaborative governance framework of Emerson *et al.* (2012) has shown that achieving effective action is highly dependent on the successful generation of all twelve elements of the collaboration dynamics. Yet, while all elements are important to reach *action*, the three elements 'deliberation', 'trust', and 'shared commitment' are absolutely indispensable to yield *collaborative action*, and sustain collaboration over a longer period of time. The second objective of this thesis is to assess the applicability of the collaborative governance framework of Emerson *et al.* (2012) in practice. With the help of a second framework, namely the governance network theory of Charlie *et al.* (2012) it can be concluded that the collaboration dynamics are interacting differently, dependent on the *type* of collaborative governance setting. The third objective is to generate knowledge that may help to achieve the mission of the Nusa Penida MPA management plan to foster collaborative governance among stakeholders. Five suggestions are presented in the conclusion that might help improving collaboration among partners and overcoming collaborative inertia. Lastly, this thesis has the objective to support UNEP's core strategic effort to develop innovative approaches and capacities for the implementation of collaborative governance in MPAs. In order to reach this objective, this thesis aims at understanding and assessing the theoretical framework that will have a real, positive and direct influence on collaborative governance practice and might serve as a blueprint for governance endeavors in the future. Overall, despite the challenges that collaboration poses, collaborative governance is currently one of the most promising governance mechanisms to ensure sustainable management of MPAs. It is worthwhile to study the complex social dynamics within collaborative governance networks in order to find ways to generate effective collaborative action. Collaborative action is so important because only by working jointly can we tackle the vast amount of problems – such as plastic pollution, climate change, biodiversity loss, and the destruction of marine ecosystems – that are currently posing threats to the health of our and future generations.

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List of Abbreviations

AA	Aquatic Alliance
CI	Conservation International
CoC	Code of Conduct
CFCs	Chlorofluorocarbons
CGR	Collaborative Governance Regime
CTC	Coral Triangle Center
GIS	Geographical Information System
IPB	Bogor Agricultural University
IUCN	International Union for the Conservation of Nature
MPA	Marine Protected Area
NGO	Non-Governmental Organization
ODS	Ozone Depleting Substances
TNC	The Nature Conservancy
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme

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1. Introduction

1.1. Marine Protected Areas

Coral reefs are highly diverse and complex ecosystems with a large number of important functions: First, they are home to an incredible diversity of marine life (Bell *et al.* 2006); second, they provide essential ecosystem services such as storm and flood protection; third, they are the food source for many coastal communities in tropical developing countries (Bottema, 2010); lastly, they provide the livelihood for fishermen as well as local tour operators. Therefore, it is fundamental to maintain healthy reef ecosystems for the well-being of current and future generations (Bell *et al.* 2006).

However, coral reef conditions are deteriorating around the world with disastrous consequences for biodiversity, food security and economics (Christie and White, 2007). The so-called “coral reef crisis” has many complex causes; the two main types of pressure that have been identified are global-scale climate change and local-scale impacts (Bell *et al.*, 2006). Local impacts include natural catastrophes as well as human activities along coasts (Bottema, 2010). Geographical information system (GIS) mapping reveals that about 60% of the world’s reefs are impacted by unsustainable human activities, such as intense diving tourism, destructive fishing practices, and marine pollution (Clifton, 2003).

Marine Protected Areas (MPAs) have emerged as one coral reef management tool to address issues of habitat degradation, over-fishing, and to create alternative livelihoods (Christie and White, 2007). The International Union for the Conservation of Nature (IUCN) defines MPAs as “*any area of intertidal or sub-tidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment*” (Resolution 17.38 of the IUCN general assembly [IUCN, 1988] reaffirmed in Resolution 19.46 [IUCN, 1994]).

MPAs generally have two objectives: First, they have ecological goals, aiming to conserve marine and coastal ecosystems and to protect endangered species; and second, they have socio-economic goals, aiming to manage fisheries and ensure sustainable tourism development (Jentoft *et al.*, 2007). While these objectives are potentially complementary they may lead to conflict or at least trade-offs that must be carefully considered (Christie and White, 2007). An MPA might be an ecological ‘success’ – resulting in improved health of the ecosystem, maintained biodiversity and increased fish stocks – but at the same time a social ‘failure’ – lacking a strong institutional framework, mutual understanding between partners, and conflict resolution mechanisms (Christie *et al.* 2003). Therefore, a balanced relationship between social and ecological goals is indispensable; if social issues and concerns are not addressed within the governance network there is the risk that ecological gains might disappear (Jentoft *et al.*, 2007).

MPAs take many forms, but all share the characteristic of management interventions that are spatially organized (Christie and White, 2007). They restrict the level of activity within the regulated area and often alter the relationships among stakeholder groups (Jentoft *et al.*, 2007). The social processes that they generate occur within a particular socio-political, historical, and socio-economic context which can create opportunities as well as conflicts (Christie and White, 2007). Therefore, MPAs need to be embedded into the complex social systems of institutions, rules, norms and values. At the same time, MPAs generate the opportunity to mobilize resources and benefit from social capital that already exists in the social system. In fact, the prevalence of social capital, such as shared

commitment and mutual understanding, is perceived as crucial for the success or failure of MPAs (Jentoft *et al.*, 2007).

1.2. Collaborative Governance of MPAs

Oceans and coasts are likely among the most challenging ecosystems to govern (Chuenpagdee, 2011). MPAs are one potential management tool for the conservation of unique marine ecosystems. In order to reach the goals of protecting marine habitats and providing food sources and tourism services MPAs need to be managed effectively over time (Christie and White, 2007). Yet, MPAs cannot be merely managed, but they must be governed. While the term 'management' refers to a more tool-oriented and instrumental approach, the term 'governance' includes the discussion about what constitutes good practice and the values to be attained (Kooiman *et al.*, 2008). Governance of any MPA, however, is a complex and long term endeavor (Christie and White, 2007).

Governance efforts are not only complicated by the need to balance marine conservation with development goals of local communities but also compromised with the growing concerns about global climate change, ocean acidification, and sea level rise (Chuenpagdee, 2011). Major challenges for successful governance are the complexity of marine ecosystems, the dynamics of linked social-ecological systems, and the scale issues related to jurisdictional boundaries (Berkes, 2010). Moreover, implementation is not straightforward and requires cross-institutional collaboration in almost all cases (Christie and White, 2007).

In order to achieve the diverse goals of MPAs collaborative governance approaches have emerged (Margerum, 2001). IUCN defines collaborative governance as *"one form of shared governance in which decision-making authority and responsibility rest with one agency but the agency is required, by law or policy, to inform or consult other rightsholders and stakeholders, at the time of planning or implementing initiatives"* (Borrini-Feyerabend *et al.*, 2013, p.32). As Thomson and Perry (2006) phrase it: *"Collaboration is when everybody brings something to the table (expertise, money, ability to grant permission); they put it on the table, take their hands off and then the team creates from there"* (Thomson and Perry, 2006, p. 20).

The aim of collaborative governance is to accomplish desired goals together which could not be achieved by the individuals acting alone (Emerson *et al.*, 2012). It represents a longer-term endeavor through which stakeholders who perceive problems differently, explore these differences, search for solutions that go beyond their own perspective of what is possible, and implement these solutions jointly (Thomson and Perry, 2006). Thus, collaborative governance is a type of governance in which public and private actors work together in order to establish rules and regulations for the provision of the common good (Ansell and Gash, 2008).

However, according to Tett *et al.* (2003) there are many barriers to effective governance and tension and conflict are inevitably part of collaboration. For one, it is essential to address the fact that partners in collaborative settings, such as MPAs, may have conflicting interests, worldviews and aspirations (Jentoft *et al.*, 2007). As far as interests are concerned, governments may wish to prevent social conflicts and take action against overexploitation of natural resources. Tourism operators however, might be more concerned with the conservation of coral reefs to attract tourists in the future. Civil society organizations may focus on awareness raising of the degraded state of the MPA and on biodiversity conservation (Kooiman *et al.*, 2008). Fishing communities finally may want to continue earning their livelihood with traditional fishing practices. These varying interests may lead to inter-resource user group conflicts where stakeholders compete for the same spaces or resources (Christie and White, 2007).

Moreover, the participation of these diverse interest groups causes collaborative networks like MPAs to be in a state of flux; they change over time, largely dependent on what user groups do and what they demand. Hence, MPAs should be recognized as a social or political process, and not just as an outcome (Jentoft *et al.*, 2007). Furthermore, like any other management tool, MPAs impose restrictions on user groups and they often influence people's ability to sustain themselves. Therefore, MPAs are often contested by stakeholders, if they find their situation impaired rather than improved. If compliance with MPA rules and goals is not voluntarily obtained but has to be imposed, implementation is likely to be problematic (Jentoft *et al.*, 2007).

The complexity of collaboration is the most challenging obstacle to successful governance (Thomson and Perry, 2006). The diversity of organizational and individual goals tends to make an agreement for joint purpose difficult (Huxham *et al.*, 2000). Yet, collaboration can only work, if there is a consistent engagement and long-term commitment from all relevant stakeholders. According to Thomson and Perry (2006) *"managers may find themselves overwhelmed by the dynamism collaborations can create or the inertia that often transpires as partners seek to achieve collective goals"* (Thomson and Perry, 2006, p.28). It has been demonstrated that the effectiveness of MPAs deteriorates when conflict resolution mechanisms and collaborative action break down (Pollnac and Pomeroy, 2005).

1.3. Nusa Penida MPA

A collaborative governance approach is applied in Nusa Penida MPA in Indonesia. Nusa Penida MPA is located within the Coral Triangle region which represents the global center of marine biodiversity containing 30 % of the world's coral reefs. The MPA includes the three islands Nusa Penida, Nusa Lembongan, and Nusa Ceningan with a total population size of 48,660 people (Figure 1). The region is an undeveloped rural area, with low quality infrastructure, such as transportation, energy, and water (Yunitawati, 2013). The main livelihoods of local people include artisanal fisheries, seaweed farming, marine tourism, agriculture, and animal husbandry (Pokja, 2012).



Figure 1. Location map for Nusa Penida MPA (Pembab, 2011).

Nusa Penida MPA is a relatively young MPA which was established in November, 2010 and officially declared in June, 2014. The initiative to establish the MPA was taken by the district government of Klungkung and two non-governmental organizations (NGOs) the Coral Triangle Center (CTC) and Conservation International (CI). Nusa Penida MPA is governed in a collaborative approach by the CTC and multiple local departments (Yunitawati, 2013). Administratively, Nusa Penida MPA belongs to the Klungkung District which is part of the Province of Bali (Pokja, 2012).

The prevalent denomination on the islands is Balinese Hinduism. Local people are strongly attached to their culture and ceremonies are a daily ritual. Next to the 16 official villages with formal leaders from the local government, the area is divided into 40 traditional villages called 'desa pekramen' each with their own traditional leader or 'adat'. Next to the official law, communities need to follow customary laws called 'awig-awig' (Yunitawati, 2013).

The three islands together comprise a coastline of 84 km (Yunitawati, 2013). Nusa Penida MPA protects 20,057 hectares of unique coral ecosystem. The marine life is highly diverse with 296 species of coral and 576 species of reef fish. Flagship species are sharks, manta rays, sea turtles, and ocean sunfish (*Mola mola*) (CTC, 2012). Located within the tropics, Nusa Penida MPA has a tropical climate with a rainy season from October to February and a dry season from March to September. The high season for tourists is during dry season due to the higher chance to encounter ocean sunfish. Yet, tourist numbers have been increasing during rainy season over the last years. Every year more than 200,000 tourists visit the area engaging in surfing, diving, snorkeling, sailing and other water sport activities with an upwards trend (Pokja, 2012).

A zoning system was established to govern and direct the resource use within Nusa Penida MPA (Figure 2). Seven zones have been created, each associated with specific regulations and limitations: Core Zone (research only), Sustainable Fisheries Zone, Limited Marine Tourism Zone (fishing activities between 4 p.m. and 9 a.m. while remaining time is utilized for recreational purposes), Marine Tourism Zone, Seaweed Cultivation Zone, Sacred Temple Zone, and Anchorage Zone.

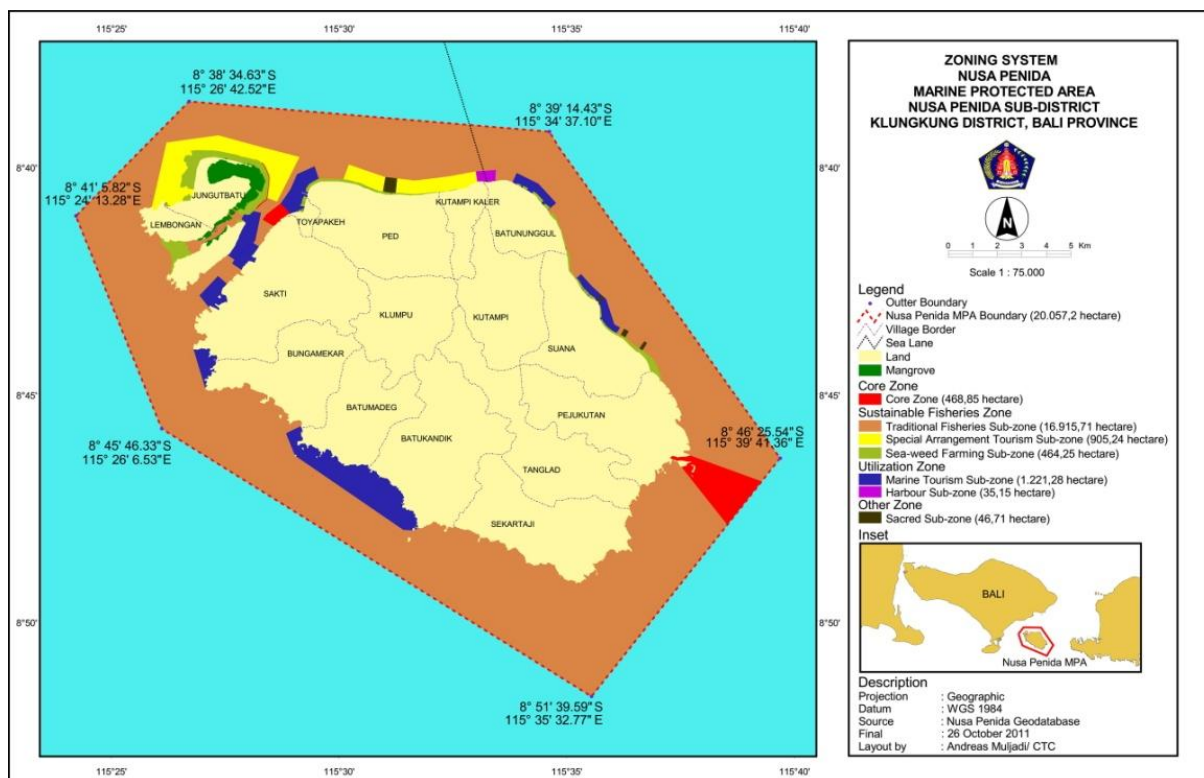


Figure 2. Zoning Plan of Nusa Penida MPA (CTC, 2012).

1.4. Drivers for the Establishment of Nusa Penida MPA

Several drivers have led to the establishment of Nusa Penida MPA. First, the destruction of reef ecosystems though intensive diving tourism is one of the biggest problems in the area. Overuse of popular dive sites, coral trampling and anchoring, as well as fish feeding practices are threatening wildlife and coral reefs (Yunitawati, 2013). Mass tourism and the lack of environmental awareness by tourism operators as well as locals have damaged the unique marine life in Nusa Penida (Pokja, 2012). Not only at sea are the impacts of unregulated tourism activities tangible but also on land. On



Figure 4. Jungut Batu coastline covered by boats (source: author).

Third, over-fishing and destructive fishing practices have been another driver for the establishment of the MPA. About 850 fishermen are living within Nusa Penida MPA alone. Many more fishermen come from surrounding areas, such as Lombok, Tanjung Benoa and East Java to Nusa Penida for fishing. Illegal fishing of sharks, mantas, and sea turtles is a tremendous problem. Shark fins and the gills rakers of manta rays are sold to Bali from where they are traded further to be used in traditional Chinese medicine. Also destructive fishing practices, such as cyanide and potassium fishing, are used by



Figure 3. Hotels lining the hillside of Jungut Batu village (source: author).

Nusa Lembongan new hotels are being built on a daily basis. Where there had been jungle five years ago are now dive resorts and villas lining the hills (Figure 3). Moreover, most of the hotels are built without adequate concern for environment sustainability, such as wastewater treatment facilities (Yunitawati, 2013).

Furthermore, the entire beach of Jungut Batu village is covered by boats, including fast boats bringing tourists to Bali mainland, boats of dive centers, snorkeling boats, fishing boats and seaweed farming boats (Figure 4).

Second, coastal areas have been affected by mangrove logging as well as coral and sand mining. In some areas entire beach parts have been mined which has caused the erosion of large parts and has left behind houses right at the water front (Yunitawati, 2013).



Figure 5. Manta ray in Nusa Penida filter feeding in an ocean of plastic (Pumphrey, 2015).

some fishermen (Pokja, 2012).

Fourth, trash in the water as well as on land is one of the most serious environmental problems in the area (CTC, 2012). Entire beaches are covered in plastic bags, cans, bottles, and whatever is non-degradable (Figure 6). The lack of sewage and garbage treatment facilities on the island causes most of the garbage being dumped in the sea (Yunitawati, 2013). Trash in the ocean is a deleterious problem for marine species all around the globe, as they get entangled in packaging bands or ingest harmful plastic debris. Especially filter feeders, such as manta rays, are highly threatened by plastic debris in the water (Figure 5) (Derraik, 2002).

The collaborative governance approach in Nusa Penida MPA aims at tackling all of the above-mentioned problems and drivers. The vision of the twenty-year management plan is *“to achieve effective and sustainable management of Nusa Penida MPA for community benefits”* (Pokja, 2012, p.18). Based on this vision, three missions have been identified: First, developing environmentally friendly and sustainable fisheries; second, promoting sustainable marine tourism that benefits local communities; and third, fostering collaborative management among stakeholders.

According to Pokja (2012) these missions shall be accomplished through a set of seven objectives:

1. Maintaining and restoring healthy conditions of coral reefs, mangrove forests, and sea grass beds that provide food sources and tourism services/attractions;
2. Protecting unique marine species, such as sunfish, manta rays, sea turtles, dugongs, whales, dolphins, and sharks for tourists attractions;
3. Acquiring wide support from various stakeholders;
4. Creating a strong and clear legal framework for MPA management;
5. Establishing a management authority with sufficient capacity;
6. Developing long-term (twenty years), medium-term (five years), and short-term (one year) management plans that will direct management actions;
7. Developing surveillance and sustainable financing mechanisms (Yunitawati, 2013).

Currently, it seems like there are still several obstacles on the way to realizing these goals and achieving effective collaborative governance.

1.5. Problem Statement

Some of the challenges that collaborative governance faces seem to be present in the Nusa Penida MPA network: First, according to Yunitawati (2013) the rapid increase of unregulated tourism activities appears to provoke conflicts between the tourism industry and local resource users. Moreover, differences in language and culture between professional groups seem to be causing misunderstandings (Yunitawati, 2013). Therefore, it is important to investigate if stakeholders show ‘principled engagement’, meaning, if they have a shared perception of the problem, an awareness of differing interests between user groups and an openness to explore mutual gains. If partners do not



Figure 6. Jungut Batu beach covered in trash (source: author).

understand and respect the world views and needs of others, collaborative governance is prone to conflict which will lead to diminished effectiveness (Christie and White, 2007).

Second, Yunitawati (2013) writes that the lack of stronger political will from the government is a major issue. However, consistent engagement and long-term commitment between NGOs, community groups, and all levels of government are essential for effective MPA governance (Mills *et al.*, 2010). Thus, it is crucial to investigate whether all stakeholders show 'shared motivation', meaning, if they are committed to the process, if they feel responsible for management, and if there is trust among partners. The level of shared motivation to collaboration is a critical variable when it comes to success or failure of natural resource management (Ansell and Gash, 2008).

Third, effective governance is also dependent on a strong legal framework, including the potential for cross-sectoral controls (McCay and Jones, 2011). However, no specific management and enforcement authority had been established in the Nusa Penida MPA by 2013 and also the zoning system was not implemented yet; there were neither signboards depicting the reserve area and zoning system nor markers for zone boundaries at sea (Yunitawati, 2013). Hence, the analysis of 'capacity for joint action' within the Nusa Penida MPA seems to be of relevance. The question is whether organizations responsible for implementation are identified, whether there are plans and agreements for monitoring and whether roles and relations are defined.

Overall, it appears that collaborative action in the Nusa Penida MPA is hampered by several factors within the collaborative governance approach. If these social issues and concerns are not addressed within the governance network there is the risk that ecological gains might disappear. Furthermore, without effective governance implementation and monitoring are likely to be ineffective – or costly (Jentoft *et al.*, 2007). Therefore, the three factors 'principled engagement', 'shared motivation', and 'capacity for joint action' fostering collective action and effective collaborative governance will be under closer scrutiny in this thesis.

1.6. Research Objective and Research Questions

The objective of this research project is to understand how social dynamics within a collaborative governance arrangement impact collaborative action in the local context of MPAs. Furthermore, this thesis aims to assess the applicability of the collaborative governance framework by Emerson *et al.* (2012) in practice. By doing so the generated knowledge will help to achieve the mission of the Nusa Penida MPA management plan to foster collaborative governance among stakeholders by investigating complex social dynamics that might lead to conflict and impede effective governance. Lastly, this project aims to support UNEP's core strategic effort to develop innovative approaches and capacities for the implementation of collaborative governance in MPAs. In order to reach these objectives a general research question has been identified that will be addressed within the scope of this research project:

How does collaborative governance, and particularly the collaboration dynamics 'principled engagement', 'shared motivation' and 'capacity for joint action' affect collaborative action in the Nusa Penida MPA network?

This question will offer insights into the way complex social dynamics facilitate or hamper collaborative action among stakeholders of the Nusa Penida MPA. The first concept, 'principled engagement' refers to the way stakeholders work together across their institutional boundaries to reach common goals. The second concept, 'shared motivation' or social capital, relates to the

interpersonal relationships among partners of a collaborative governance network. Thirdly, 'capacity for joint action' refers to the creation of new institutional arrangements and the sharing of resources that build the basis for taking collaborative action. This general research question is broken down into the following three sub-research questions:

In which way is 'principled engagement' expressed by stakeholders of the Nusa Penida MPA network, particularly 'discovery', 'definition', 'deliberation', and 'determination'?

To what extent is 'shared motivation' present among stakeholders of the Nusa Penida MPA network, including 'mutual understanding', 'shared commitment', 'trust', and 'internal legitimacy'?

What 'capacity for joint action' has been developed in the Nusa Penida MPA, including 'procedural and institutional arrangements', 'leadership', 'knowledge', and 'resources'?

Answering these research questions will generate knowledge about the extent to which these twelve elements are present in the Nusa Penida MPA governance network. Moreover, these questions offer insights into the importance of each individual element for collaborative action. Lastly, answering these questions will increase the understanding of the interrelationship between the three components 'principled engagement', 'shared motivation' and 'capacity for joint action' of the collaboration dynamics. The three components and their respective elements will be introduced in the theoretical framework chapter of this thesis.

1.7. Thesis Outline

This thesis encompasses six chapters. The current chapter has provided an introduction to the topic and presented the problem statement, research objective, and research questions. In the next chapter the theoretical framework will be introduced which is the core of this study and which will be referred to throughout the entire thesis. The methodology chapter describes the case study approach and the collection of data and their analysis. In the results section opinions and perceptions of stakeholders concerning the collaborative governance approach in Nusa Penida MPA are presented. An assessment of the collaboration dynamics and collaborative action in the Nusa Penida MPA network is given in the discussion chapter. Furthermore, the applicability of the theoretical framework in practice and the interrelation between the individual concepts is analyzed. Finally, the conclusion will answer the research question, reflect on the theoretical framework, and address the objectives of this thesis.

2. Theoretical Framework

2.1. Collaborative Governance

Governance in general is referred to as *“the steering and control of society and the economy through collective action that aims to achieve common goals”* (Torfing, 2012, p.2). Graham *et al.* (2003) have a more detailed definition of governance: *“The interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken and how citizens or other stakeholders have their say”* (Graham *et al.*, 2003, p.2). In its traditional sense governance was assumed to relate to formal, legal steering through the state and governmental regulations (Torfing, 2012).

There has been a shift over the last years from the traditional, centralized understanding of governance to a more recent, decentralized understanding of governance (Graham *et al.*, 2003). Several forms of decentralized governance have emerged with four main types being identified by IUCN: governance by government, shared governance, private governance, and governance by indigenous peoples and local communities (Borrini-Feyerabend *et al.*, 2013). Collaborative governance is a sub-type of shared governance and can be defined as: *“A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets”* (Ansell and Gash, 2008, p.2).

This definition highlights the six characteristics of collaborative governance: First, collaboration is initiated by public institutions; second, none-state actors are included in the process; third, stakeholders are directly involved in the decision-making process and are not merely consulted; fourth, the forum is formally organized and partners meet collectively; fifth, the decision-making process is consensus-oriented; sixth, collaboration focuses on public management or public policy (Ansell and Gash, 2008). In conclusion, the specific characteristic of collaborative governance is that all relevant stakeholder groups must be included in decision-making on multiple levels – from international frameworks to national regulations to regional decision-making, and to private mechanisms (Borrini-Feyerabend *et al.*, 2013).

Yet, collaborative governance does not only refer to formal decision-making and official laws, but also to informal processes and customary laws. Thus, it is *“not only about who holds authority de jure, but also who makes decisions de facto; and about how these decisions are made”* (Borrini-Feyerabend *et al.*, 2013, p. 11). ‘De jure’ refers to the protocols and procedures that are determined by law, while ‘de facto’ refers to the implementation of these protocols in practice. Hence, governance is not only about what is defined on paper, but also what is actually happening in real life.

In this perspective, governance differs from the related task of management in steering environmental and societal processes. Governance is seen as the more inclusive term considering the values to be attained and the discussion of what constitutes good practice. Management is seen as a more instrumental approach focusing on the practical dimensions of its implementation, such as the means and actions to achieve objectives (Kooiman *et al.*, 2008). *“The governance concept thus invites a meta-debate rooted in ethics on what constitutes good goals and practices in fisheries and coastal governance, whereas the management concept is more instrumental and tool-oriented”* (Jentoft *et al.*, 2007, p. 612).

2.2. Collaborative Governance Framework

The theoretical framework of this study is derived from the collaborative governance framework by Emerson *et al.* (2012) (Figure 7). They define collaborative governance in a broad sense as “the processes and structures of public policy decision-making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished” (Emerson *et al.*, 2012, p.2).

In their integrative framework they write that collaborative governance networks are influenced by a large number of factors, including the legal, environmental, political, and socioeconomic environment. These factors create a ‘system context’ in which collaborative governance unfolds. ‘Drivers’ emerge from this system context, such as interdependence, uncertainty, consequential incentives, and leadership which lead to the establishment of a ‘collaborative governance regime’ (CGR). Once a CGR is initiated, ‘collaboration dynamics’ are set in motion. The collaboration dynamics consist of three interrelated components, namely principled engagement’, ‘shared motivation’, and ‘capacity for joint action’. These three components reinforce each other in a virtuous cycle and propel ‘collaborative action’ by the CGR. Collaborative action will then have ‘impacts’ on the natural and social environment in which the CGR unfolds. Finally, there is the possibility of ‘adaptation’ for the CGR as well as of the whole system context. For a CGR to be sustained over time it needs to adapt to the level and the kind of impacts that results from collaborative action (Emerson *et al.*, 2012).

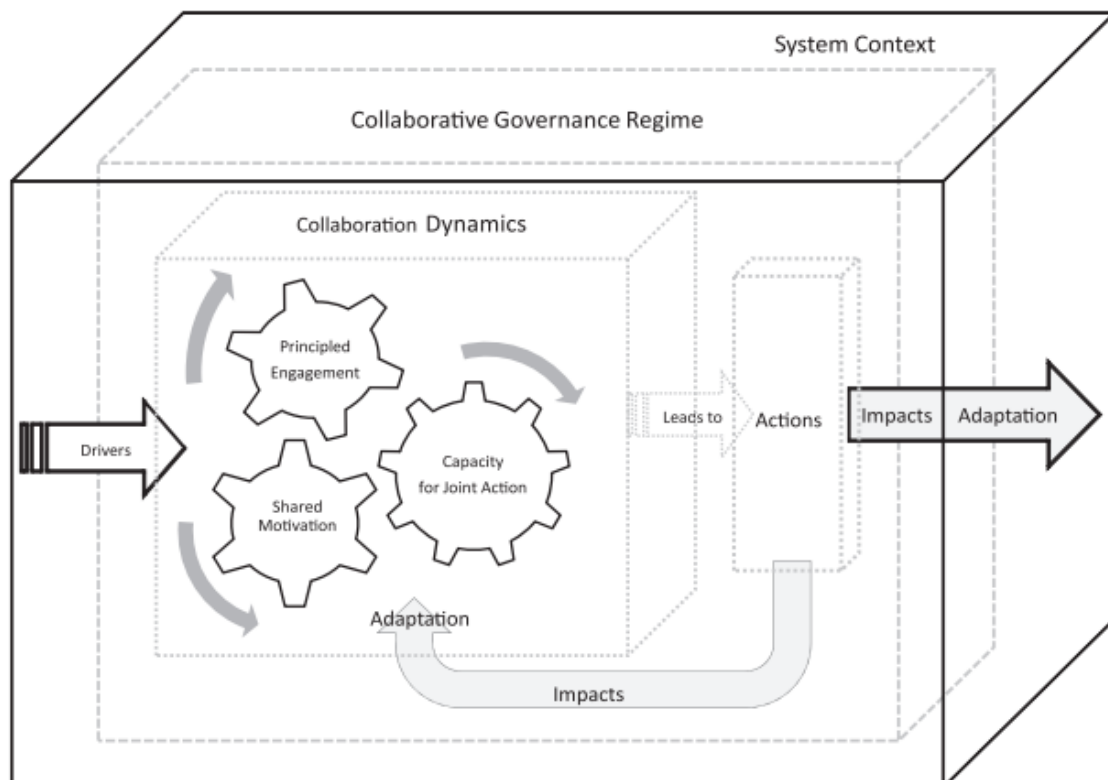


Figure 7. The Integrative Framework for Collaborative Governance (Emerson *et al.*, 2012)

2.3. Theoretical Framework for Analysis

Based on the existing theory, a framework was created which will be used as a guide in the analysis of social processes within Nusa Penida MPA. This theoretical framework is derived from Emerson *et al.* (2012) and focuses on the complex social dynamics within a collaborative governance setting. The three concepts 'principled engagement', 'shared motivation', and 'capacity for joint action' will be under closer scrutiny and their relation to 'collaborative action' investigated (Figure 8).

The first concept, '*principled engagement*' refers to the way stakeholders work together across their institutional boundaries to reach common goals. It is the function of the four elements 'discovery', 'definition', 'deliberation', and 'determination'. The second component, '*shared motivation*', or social capital, relates to the interpersonal relationships among partners of a collaborative governance network. It can be split into the four elements: mutual understanding, shared commitment, trust, internal legitimacy. The third concept, '*capacity for joint action*' refers to the creation of new institutional arrangements and the sharing of resources that build the basis for taking collaborative action. It can be described by the four elements 'procedural and institutional arrangements', 'leadership', 'knowledge', and 'resources'.

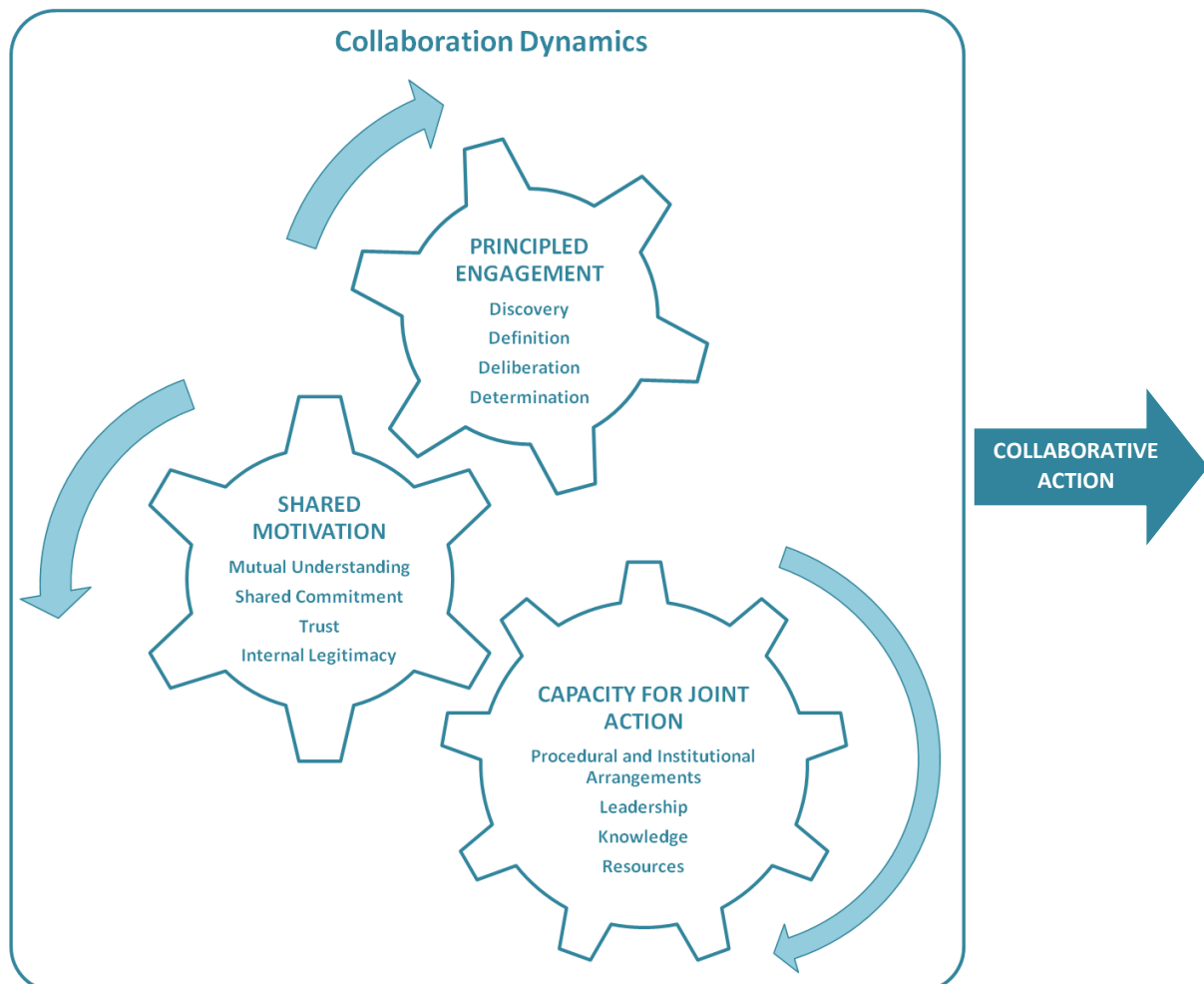


Figure 8. Theoretical Framework of this study.

In this framework ‘principled engagement’ is the first “wheel” of the collaboration dynamics that starts turning. This will then set ‘shared motivation’ in motion which eventually generates ‘capacity for joint action’. Once turning, the three components of the collaboration dynamics will reinforce each other in a virtuous cycle and, if successful, lead to ‘collaborative action’.

Collaboration dynamics are non-linear and iterative, and hence, they are represented in a cycle. However, this representation of collaborative governance processes in a cycle is a simplification of complex social interactions in reality. Yet, it draws attention to the way in which the feedbacks from early steps in collaboration can have a positive or negative influence on any future collaborative endeavors (Ansell and Gash, 2008).

In the following sections all concepts and their respective elements presented in this framework will be introduced and discussed. A summary of the three components and their respective elements is given in Table 2 at the beginning of the results chapter.

2.4. PRINCIPLED ENGAGEMENT

‘Principled engagement’ refers to the way stakeholders work together across their institutional boundaries to reach common goals. Typically it includes different partners at different time points in development of a collaborative governance regime. It can take place in public or private meetings and via direct or virtual formats. Stakeholders bring with them a set of individual values, interests, and attitudes in addition to the missions and mandates of the organizations they represent. Emerson *et al.*, 2012 write that *“through principled engagement, people with differing backgrounds and objectives work across their respective institutional, sectoral, or jurisdictional boundaries to solve problems, resolve conflicts, or create value”* (Emerson *et al.*, 2012). Interpersonal communication creates an awareness of varying interests among partners and a shared understanding of common goals which eventually leads to ‘shared motivation’ (Margerum, 2001).

Principled engagement is the function of the four elements: discovery, definition, deliberation, and determination.

2.4.1. Discovery

‘Discovery’ relates to the revealing of individual and shared values, interests, and concerns (Emerson *et al.*, 2012). Different user groups are likely to have distinct worldviews in which they frame the goals of the MPA (Christie *et al.* 2003). They bring with them different sets of professional and organizational languages, cultures, and values which increases the potential for misunderstanding (McCay and Jones, 2011). National and local governments, scientists, international NGOs, and resource users have varying worldviews and social constructions of the ocean that will likely result in conflict if not considered in MPA development and implementation (Christie and White, 2007).

Discovery of these diverse worldviews creates the basis for collaboration. This is because shared interests and differing but complementary interests can both create the basis for a wise agreement (Fisher *et al.*, 2011). A wise agreement is *“one that meets the legitimate interest of each side to the extent possible, resolves conflicting interests fairly, is durable, and takes community interests into account”* (Fisher *et al.*, 2011, p.4). Hence, discovering shared interests is required as a first step in reaching a wise agreement among collaborating partners.

While discovery tends to be focused on revealing shared interests at the outset of collaboration, it might be focused more on analytic investigation and joint fact-finding at later stages of collaboration (Emerson *et al.*, 2012).

2.4.2. Definition

‘Definition’ refers to the clarification of tasks and expectations of one another. This includes agreeing on terminology and concepts partners will use to describe and discuss issues and possibilities. ‘Definition’ is also characterized by the continuous efforts of partners to create shared meaning by articulating common goals and objectives (Emerson *et al.*, 2012).

In order for collaborative governance to be effective, it is fundamental that the aims of collaboration are defined. Furthermore, an operating principle for taking collaborative action needs to be made explicit, if stakeholders want to implement policies jointly (Emerson *et al.*, 2012). Therefore, Thomson and Perry (2006) argue that *“decentralized administrative structures still require a central position for coordinating communication, organizing and disseminating information, and keeping partners alert to the jointly determined rules that govern their relationship”* (Thomson and Perry, 2009, p.26).

However, oftentimes objectives change or differ among collaborating partners (Christie and White, 2007). According to Huxham *et al.* (2000) reporting structures are often unclear and many stakeholders are not certain who partners are or what they represent. The lack of clarity about who else is a member is likely caused by the complexity of collaborative settings in practice (Huxham, 2003). Moreover, everything is continuously changing. The picture painted is one of confusion which is often expressed by those involved (Huxham *et al.* 2000).

2.4.3. Deliberation

‘Deliberation’, or reasoned communication, is indispensable for successful collaboration. According to Ansell and Gash (2008) collaboration is built on direct dialogue between partners. Face-to-face dialogue allows for ‘thick communication’ which is required so that partners can identify possibilities for mutual gain. Deliberation is the first step in generating trust, mutual understanding, respect, and commitment to collaboration (Ansell and Gash, 2008). Also Ostrom (1998) writes that communication is essential for individuals to increase their trust in the reliability of others.

Also Emerson *et al.* (2012) argue that *“hard conversations, constructive self-assertion, asking and answering challenging questions, and expressing honest disagreements are part and parcel of effective communication across boundaries”* (Emerson *et al.*, 2012, p.12). Collaborative governance asks for the thoughtful investigation of issues, considering the perspectives of others, and reaching agreement on what represents the common good (Emerson *et al.*, 2012).

According to Emerson *et al.*, (2012) the *“quality of deliberation, especially when participants have differing interests and perspectives, depends on both the skillful advocacy of individual and represented interests and the effectiveness of conflict resolution strategies and interventions”* (Emerson *et al.*, 2012, p.12).

2.4.4. Determination

‘Determination’ refers to the “*process of making enumerable joint determinations, including procedural decisions (e.g., setting agendas, tabling a discussion, assigning a work group) and substantive determinations (e.g., reaching agreements on action items or final recommendations)*” (Emerson *et al.*, 2012, p.12). Procedural decisions are essential as they have a direct effect on how collaborative agendas are formed and implemented (Huxham *et al.*, 2000). Oftentimes substantive determinations are considered to be outcomes or final results of collaborative governance. In an ongoing collaborative governance setting, however, many substantive determinations are made at different points of time. Therefore, they are included in the social dynamics of the theoretical framework as a repeating element and not in the final collective action (Emerson *et al.*, 2012).

2.5. SHARED MOTIVATION

‘Shared motivation’ or social capital, relates to the interpersonal relationships among partners of a collaborative governance network (Emerson *et al.*, 2012). Social capital is not only essential for reaching agreement but also for supporting the implementation of the management plan (Margerum, 2001). ‘Shared motivation’ is set in motion by ‘principled engagement’ and thus, it can be considered as an intermediate outcome; however, once ‘shared motivation’ is initiated it will also accelerate and reinforce ‘principled engagement’ in a virtuous cycle.

‘Shared motivation’ is defined by four elements: mutual understanding, shared commitment, trust, and internal legitimacy.

2.5.1. Mutual Understanding

Margerum (2001) writes that partners must have a ‘mutual understanding’ of the management goals, a shared perception of the issues at stake, and an awareness of interests of the different stakeholders. Only if there is mutual understanding of aims, problems and possible solutions, can commitment to implementation be achieved (Margerum, 2001). Similarly, Tett *et al.* (2003) argue that, if MPA governance is to be effective, stakeholders must have a mutual understanding of “*how they are constructing partnership and collaboration*” (Tett *et al.*, 2003, p.49).

The diversity of organizational and individual goals tends to make an agreement for joint purpose for collaboration difficult. Partners might have varying aspirations and interests – some of which may be conflicting – which need to be either satisfied or compromised. Even with the best will in the world, misunderstandings are likely to occur due to diversity in language, culture, and values between professional groups (Huxham *et al.*, 2000).

In collaborative governance arrangements, partners will often start out with an adversarial relationship to each other, but the goal is to eventually transform these into more collaborative ones (Ansell and Gash, 2008).

2.5.2. Shared Commitment

The degree of ‘shared commitment’ is a critical factor when it comes to success or failure of natural resource management (Ansell and Gash, 2008). Shared commitment enables stakeholders to “*cross the jurisdictional, sectoral, and organizational boundaries that previously separated them and*

commit to a shared path" (Emerson et al., 2012 p. 14). Magerum (2001) writes that shared commitment of a wide range of stakeholders is required in order to implement collaborative approaches to MPA governance successfully. Thus, NGOs, community groups, private entrepreneurs, and all levels of government alike must engage and show long-term commitment to reach collaborative action (Mills et al., 2010).

In practice however individual stakeholders often show a willingness to work in a collaborative manner only if other stakeholders show the same willingness. Thomson and Perry (2006) call this tit-for-tat reciprocity or 'I will if you will' mentality which is *"based on the perceived degree of obligation, such that partners are willing to bear initial disproportional costs because they expect their partners will equalize the distribution of costs and benefits over time out of a sense of duty"* (Thomson and Perry, 2006, p.27).

According to Margerum (2001) many collaborative governance endeavors do not reach commitment from all stakeholders to implement and enforce the regulations and actions they have agreed on. This statement is supported by Yaffee and Wondolleck (2003) who found that a particular problem to collaboration is the weak commitment of public agencies.

2.5.3. Trust

'Trust' is a critical element of collaborative governance (Ansell and Gash, 2008; Margerum, 2001; Thomson and Perry, 2006). Thomson and Perry (2006) define trust as the *"common belief among a group of individuals that another group will make good-faith efforts to behave in accordance with any commitments both explicit and implicit, will be honest in whatever negotiations preceded such commitments, and will not take excessive advantage of another even when the opportunity is available"* (Thomson and Perry, 2006, p.28).

Reality has shown, however, that oftentimes collaboration starts out with suspicion among stakeholders, rather than trust. In most cases stakeholders cannot choose the people to work with (Margerum, 2001). Moreover, partners are aware of the fact that conflicts may arise between self-interest – reaching individual goals – and collective interests – reaching collaboration objectives and maintaining accountability to partners. If individual objectives of stakeholders conflict with collaboration objectives, it often happens that individual missions win over collaboration missions (Thomson and Perry, 2006).

Therefore, trust building is one of the most important aspects in the early stages of the collaboration process although it is time-consuming and difficult to achieve (Thomson and Perry, 2006). Trust develops as partners work jointly over a longer period of time and prove to one another that they are dependable, reasonable, and predictable. If trust is achieved it *"enables people to go beyond their own personal, institutional, and jurisdictional frames of reference and perspectives toward understanding other peoples' interests, needs, values, and constraints"* (Emerson et al., 2012, p13).

2.5.4. Internal Legitimacy

According to Take (2013) 'internal legitimacy' is defined by six factors, namely representativeness, equality, transparency, monitoring, sanctioning, and acceptance. Representativeness means that all relevant stakeholders must be included in the decision-making processes and they all must have equal participation rights. Also Ansell and Gash (2008) write that the collaboration process *"must be*

open and inclusive [...] because only groups that feel they have had a legitimate opportunity to participate are likely to develop a commitment to the process” (Ansell and Gash, 2008, p.555f). A key reason for the failure of collaboration is the exclusion of relevant stakeholders. Moreover, partners *“often enter into the collaborative process in a skeptical frame of mind [being] sensitive to issues of equity, concerned about the power of other stakeholders and alive to the possibility of being manipulated”* (Ansell and Gash, 2008, p.557). Therefore, part of internal legitimacy is the perception of partners that their concerns and interests are being respected and considered (Ansell and Gash, 2008). Also transparency of processes and structures is essential for the identification of responsible organizations and individuals. Monitoring refers to the external surveillance by an independent third-party and a monitoring system for rule-addressees. Sanctioning relates to the establishment of detailed complaint procedures open to all collaborators which apply to rule addressees and to organizations themselves. Furthermore, the potential for applying sanctions and an adequate capacity for punishments are crucial for effective governance. Lastly, acceptance of the system is needed from both, internal and external actors (Take, 2013).

2.6. CAPACITY FOR JOINT ACTION

Successful collaboration will *“generate a new ‘capacity for joint action’ that did not exist before and sustain or grow that capacity for the duration of the shared purpose”* (Emerson *et al.*, 2012, p.14). Furthermore, it refers to the creation of new institutional arrangements and the sharing of resources that build the basis for taking collaborative action. The required capacity building is initiated in the first steps of collaboration, namely during principled engagement. The goals and interests of partners are likely to influence the scale and scope of the created ‘capacity for joint action’ (Emerson *et al.*, 2012). As Emerson *et al.* (2012) write ‘capacity for joint action’ can be considered an intermediate result of the collaboration dynamics.

‘Capacity for joint action’ is defined by four elements: procedural and institutional arrangements, leadership, knowledge, and resources.

2.6.1. Procedural and Institutional Arrangements

‘Procedural and institutional arrangements’ refer to the whole range of organizational structures and process protocols needed to govern longer term interactions. Large, complex, and long-lived collaborative endeavors – like that of an MPA – require explicit protocols and structures for the administration and management of tasks (Emerson *et al.*, 2012). According to McCay and Jones (2011) effective governance is dependent – among other things – on a strong legal framework.

Ansell and Gash (2008) suggest that a clear definition of roles is essential for effective governance. Similarly, Margerum (2001) writes that contractual approaches are crucial for the definition of roles and relationships of the various institutions so that stakeholders are aware of limitations and expectations. Management actions and goals need to be identified listing organizations which are responsible for implementation. Furthermore, plans and protocols for surveillance can ensure that involved organizations comply with regulations they have agreed on. These activities need to be defined so that organizations have the possibility to change administration, staff, and direction (Margerum, 2001).

A drawback of contractual strategies is that they are often not enforceable, so that implementation is often dependent on other commitment variables. Margerum (2001) found that

management plans that were wish lists rather than a precise list of actions which partners were not able to implement. While action plans and contracts are more formal approaches to setting out objectives and goals, agreements that govern collaborative networks may also be informal norms of reciprocity or codes' of conduct (Thomson and Perry, 2006).

2.6.2. Leadership

Leadership is an essential ingredient in *"bringing parties to the table and for steering them through the rough patches of the collaborative process"* write Ansell and Gash (2008, p.554). Leadership is fundamental for exploring mutual gains, building trust, facilitating communication, and establishing clear ground rules. Moreover, *"leadership is important for embracing, empowering, and involving stakeholders and then mobilizing them to move collaboration forward"* (Ansell and Gash, 2008, p.554).

In a collaborative governance arrangement there are many opportunities for leadership, such as the leadership role of a facilitator, a representative of institutions or organizations, a science translator, a sponsor, or a public advocate. Some of these roles are crucial at the onset of collaboration while others are more essential for implementation, or during moments of deliberation and conflict (Emerson *et al.*, 2012). Particularly facilitative leadership is fundamental for bringing stakeholders to the table and motivating them to engage in a collaborative spirit.

In cases where incentives to participate are weak collaboration is more likely to be successful if there is a strong leader who commands the respect and trust of partners (Ansell and Gash, 2008). If stakeholders have different perceptions of who has the responsibility to take initiative successful implementation is at stake as no one will start taking action (Kooiman *et al.*, 2008).

2.6.3. Knowledge

According to Emerson *et al.* (2012) knowledge is the currency of collaboration. Collaborative endeavors require the generation of new, shared knowledge and the reassembly, separation, and aggregation, of scientific data. Incomplete knowledge needs to be enhanced and balanced with new knowledge, and also contested knowledge must be fully considered.

"Knowledge is information combined with understanding and capability: it lives in the minds of people [...]. Knowledge guides action, whereas information and data can merely inform or confuse" (Emerson *et al.*, 2012, p.16). In the theoretical framework of this study the term 'knowledge' relates to *"the social capital of shared knowledge that has been weighed, processed, and integrated with the values and judgments of all participants"* (Emerson *et al.*, 2012, p.16).

It is argued that effective collaborative governance requires the generation of new knowledge and institutional capacity. In modern times institutional arrangements become more and more interdependent and knowledge becomes more and more specialized. This increase in complexity demands for a growing number of collaborative endeavors since individual actors cannot solve problems on their own (Ansell and Gash, 2008).

2.6.4. Resources

Resources are an essential determinant of institutional involvement in most collaborative governance approaches (Margerum, 2001). According to Emerson *et al.* (2012) *"resources may*

include funding, time, technical and logistical support; administrative and organizational assistance; requisite skills for analysis or implementation; and needed expertise, among others" (Emerson *et al.*, 2012, p. 16) Through collaboration these resources can be shared and redistributed in order to reach the common objectives of stakeholders (Emerson *et al.*, 2012). The way in which these administrative resources are marshaled and configured is seen by many scholars as critical for collaboration success (Emerson *et al.*, 2012).

Resource disparities among stakeholder groups are often found in cross-cultural settings, where culture, customs, and language often pose barriers to successful collaboration. Resource and power imbalances will affect the willingness of stakeholders to come to the table. Ansell and Gash (2008) write that *"the problem of power imbalances is particularly problematic where important stakeholders do not have the organizational infrastructure to be represented in collaborative governance processes"* (Ansell and Gash, 2008, p. 551). Only if these imbalances are successfully addressed will stakeholders perceive the collaboration process as fair and legitimate.

2.7. COLLABORATIVE ACTION

Collaborative actions are at the heart of any collaborative governance arrangement. According to Emerson *et al.* (2012) *"collaborative governance propels actions that could not have been attained by any of the organizations acting alone"*. If the three components 'principled engagement', 'shared motivation', and 'capacity for joint action' are successfully achieved within the governance structure of the MPA new mechanisms for collaborative action are the likely outcome. Such actions may include educating the public, enacting policy measures (new laws or regulations), marshalling external resources, deploying staff, carrying out new management practices, monitoring implementation, and enforcing compliance (Emerson *et al.*, 2012).

Collaborative actions can be carried out by all stakeholders together, by individual partners alone, or by external authorities responding to directions and recommendations (Emerson *et al.*, 2012). A fundamental precursor to taking joint action is the definition of common objectives and goals. Additionally, trust is essential for creating a positive collaborative spirit among stakeholders and allowing individuals to act autonomously (Huxham *et al.*, 2000).

Huxham (2003) writes that *"the common practice, however, appears to be that the variety of organizational and individual agendas that are present in collaborative situations make it difficult to agree on aims in practice"* (Huxham, 2003, p.404). Moreover, neither trust nor understanding are easy to achieve and practitioners often express frustration at the lack of a sense of direction and mutual support for heading there (Huxham *et al.*, 2000). Many scholars write that the key to achieving collaborative action is a combination of administrative capacity for giving direction and organizing coordination and social capital for building relationships (Thomson and Perry, 2006).

3. Methodology

3.1. Case Study

In order to reach the objective of this thesis a case study approach was chosen. Thomas (2011) defines case studies as “*analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically by one or more methods*” (Thomas, 2011, p.513). Case studies are essential to test theories in practice, particularly in contexts where social interactions are non-linear (Ansell and Gash, 2008). In this research project a case study was conducted to provide in-depth knowledge of the complex dynamics and social interactions in the Nusa Penida MPA network.

The study area covers the sub district of Nusa Penida, Indonesia, which includes the three islands Nusa Lembongan, Nusa Ceningan, and Nusa Penida. Nusa Penida MPA was selected as a study site due to its strategic location within the Coral Triangle which is one of Indonesia’s priority regions to develop effective management strategies for MPAs (IUCN, 2014). Moreover, Nusa Penida MPA is an official learning platform for training and field visits for national and international government representatives, donors, and practitioners from a variety of organizations (CTC, 2012). Therefore, investigating the collaborative governance approach in Nusa Penida MPA seems to be of high relevance as it is a showcase and a learning site for other MPA networks.

Since Nusa Penida is a relatively young MPA – established in 2010 – not many studies have been undertaken on its institutional and social capacities so far. While the theoretical framework on collaborative governance is frequently debated in the literature, the collaborative approach in Nusa Penida MPA has not yet been studied exhaustively. Therefore, this study aims at generating knowledge about the collaboration dynamics within the local context of Nusa Penida MPA.

Moreover, the aim of this thesis is to provide knowledge that is transferable to a broader context and which can be applied in other MPAs as well. According to Flyvbjerg (2006) a single case can be paradigmatic in that it provides a model, like an ‘ideal type’ which can be applied in a broader context and from which others can learn. Furthermore, sophisticated learning about social life is not achieved via rule-based general principles, but via context-dependent understanding of what is going on in real life (Green and Thorogood, 2014).

3.2. Data Collection

In order to investigate the collaborative governance approach in Nusa Penida MPA eight weeks of field work were conducted. For the collection of data three qualitative methods were used, namely document analysis, stakeholder interviews and participant observation. In order to explore the research questions empirically both, primary and secondary data were collected.

An extensive literature review was the basis for the background of this case study. Secondary data related to the *theoretical framework* of this thesis were obtained from scientific articles. In order to yield a comprehensive overview of the topic, articles concerning ‘collaborative governance’, the ‘politics of MPA’, and ‘governance networks’ were reviewed. Secondary data related to *management of Nusa Penida MPA* were obtained from documents, such as the action plan and the zoning plan of the MPA. These management documents were provided by the CTC and the National Ministry of Marine Affairs and Fisheries.

Primary data were collected via participant observation and twenty-two semi-structured interviews with key stakeholders. Interviews were chosen over a survey in order to yield a ‘thick’

description of the situation. The advantage of interviews is that respondents have the opportunity to elaborate on their opinions and perceptions (Jansen, 2010). Interviewees were questioned about their perception of 'principled engagement', 'shared motivation', and 'capacity for joint action' in the Nusa Penida MPA governance network. Key stakeholders include representatives from local and district government, local NGOs, local resource users, like seaweed farmers and fishermen, and tourism-related business owners, such as tour operators and hotel owners. Snowball sampling was applied which includes the selection of key stakeholders on the recommendation of other informants. Table 1 lists the representatives of organizations and agencies that participated in the interviews and their respective governance function. Interviews were recorded if respondents agreed. In case of language barriers a translator was present during the interviews. Interviews lasted about 30 minutes on average and were transcribed afterwards. Table 4 in the Appendix lists the representatives of organizations and agencies that participated in the interviews, the date of the interview, and the location.

At the same time participant observation was performed. Participant observation includes paying attention to what is happening, asking questions, and listening to people's accounts over a longer period of time. It is a *"route to 'knowing people' rather than 'knowing about them'"* (Green and Thorogood, 2014, p.152). According to Green and Thorogood (2014) participant observation produces the most valid data on social behavior and allows measuring the completeness of data collected with the help of other methods. Joining the patrol team on their monthly patrol in Nusa Penida MPA is one example of participant observation that was performed in this study. It created the opportunity to see monitoring and enforcement of MPA regulations through the eyes of the collaborating partners.

It needs to be recognized that due to the limited time frame of this study only a relatively small number of stakeholders could be interviewed. Furthermore, most interviewees were from Nusa Lembongan as it is the main tourist destination within Nusa Penida MPA and thus, most stakeholders are based there. This means, however, that opinions prevalent on Nusa Lembongan might be stronger represented than opinions from either Nusa Penida or Nusa Ceningan. For the interviews stakeholders were chosen that are representatives for their organization. Yet, it cannot be said with certainty that the opinions presented here are representative for any organization or stakeholder group.

Table 1. List of key stakeholders participating in the interviews.

Sector	Agency/Organization	Governance Function in the MPA
Government (public sector)	Government of Jungut Batu Village	Involved in public consultations, socializing information to communities
	Government of Lembongan Village	Involved in public consultations, socializing information to the communities
	Ministry of Marine Affairs and Fisheries, Republic of Indonesia	Approval of regulations and budget allocation
	Technical Implementation Unit - Klungkung Fishery Office	Joint Patrol Team, official Management Unit of the MPA
Non-Governmental Organizations (interest groups)	Aquatic Alliance	Awareness raising, generating scientific data, reef monitoring, education
	Coral Triangle Center	Capacity building, awareness raising, working group, joint patrol team, education, management, surveys
	Friends of Lembongan	Clean-up projects, waste management, education, capacity building
	Lembongan Marine Association	Association of dive operators that engage in reef monitoring and awareness raising
	Nusa Ayu	Protest against dumping place in the mangroves, clean-up project
Tourism Industry (private sector)	Bali Eco Deli (restaurant)	Trash management, awareness raising
	Big Fish Diving (dive operator)	
	Blue Corner Dive – Jungut Batu (dive operator)	Reef monitoring, awareness raising
	Blue Corner Dive – Mushroom Beach (dive operator)	Reef monitoring, awareness raising
	Dive Concepts (dive operator)	Reef monitoring, awareness raising
	Lembongan Dive Center (dive operator)	Reef monitoring, awareness raising
	Sugriwa Fast Boat (fast boat business)	Awareness raising
	World Diving (dive operator)	Reef monitoring, awareness raising
Local Resource Users	Fisherman and Seaweed Farmer in Jungut Batu Village	Involved in public consultations, awareness raising
	Fisherman and Seaweed Farmer in Nuda Ceningan	Involved in public consultations
	Seaweed Farmer in Lembongan Village	Joint patrol team, communication between local government and NGOs
Scientists	Marine Biologist PhD	Generating scientific data
	Marine Biologist MSc	Reef monitoring, awareness raising, education

3.3. Data Analysis

In order to analyze the data collected via interviews a framework analysis approach will be applied. Framework analysis is defined as *“a content analysis method which involves summarizing and classifying data within a thematic framework”* (Green and Thorogood, 2014, p.218). Framework analysis, developed by the National Center for Social Research in the UK, is intended to generate knowledge that will have a positive and direct influence on policy and practice.

The first step of framework analysis is the same as for any type of qualitative analysis involving interview data, namely thematic content analysis (Green and Thorogood, 2014). Hsieh and Shannon (2005) define thematic content analysis as *“research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns”* (Hsieh and Shannon, 2005, p.1278). The aim of qualitative content analysis is to reduce the complexity of interviewees' accounts by looking for patterns, or themes in the data. Green and Thorogood (2014) define themes as *“recurrent concepts which can be used to summarize and organize the range of topics, views, experiences or beliefs voiced by participants”* (Green and Thorogood, 2014, p.210).

For the purpose of this thesis the collected interview data were first transcribed and then coded. The concepts of the theoretical framework and their respective elements served as codes for the collected data (see 2.3). Data obtained from stakeholder interviews and management documents were sorted into these distinctive categories. In reality, all of these elements are overlapping and cannot be easily separated into boxes. For the purpose of this study, however, findings were put into categories in order to allow for the analysis of complex social interactions within the collaborative governance setting of Nusa Penida MPA.

Framework analysis differs from thematic analysis in that sense that it includes an additional step, namely the analysis of the interrelationships between the individual codes (Green and Thorogood, 2014). Thus, to analyze the relationship between the three concepts 'principled engagement', 'shared motivation' and 'capacity for joint action' a framework analysis approach was chosen. It was investigated how these components reinforce each other and, eventually, facilitate or hamper 'collective action'.

Framework analysis can be used in both, inductive and deductive analysis approaches. In a deductive approach *“themes and codes are pre-selected based on previous literature, previous theories or the specifics of the research question”* (Gale et al., 2013, p.3), while in an inductive approach *“themes are generated from the data through open (unrestricted) coding, followed by refinement of themes”* (Gale et al., 2013, p.3). In a deductive approach theories are 'tested' against data (Green and Thorogood, 2014). Hence, to test the applicability of the collaborative governance framework by Emerson et al. (2011) in practice, a deductive approach was used in this study.

4. Results

In this chapter the findings of the case study research are presented. Table 2 summarizes the concepts and their respective elements of the theoretical framework that was applied in this study. The main issues discussed by interviewees are presented for each of the elements. Opinions representing the respective stakeholder group are used to underpin arguments and explanations. The findings for each of the concepts and elements will be analyzed further in the discussion chapter.

Table 2. Concepts and Elements of the Theoretical Framework of this study.

Concept	Element	Description
PRINCIPLED ENGAGEMENT	Discovery	Identification of individual and shared interests, concerns, and values
	Definition	Clarification and adjustment of tasks and expectations
	Deliberation	(Reasoned communication): Hard conversations, asking and answering challenging questions, and expressing honest disagreements
	Determination	Procedural decisions (e.g. setting agendas, assigning a work group) and substantive determinations (e.g., reaching agreements on actions)
SHARED MOTIVATION	Mutual Understanding	Ability to understand and respect others' positions and interests even when one might not agree
	Shared Commitment	Continuous engagement of all stakeholders
	Trust	Parties prove to each other that they are reasonable, predictable, and dependable
	Internal Legitimacy	Collaboration process must be representative, fair, transparent, accepted and allow for monitoring and sanctioning
CAPACITY FOR JOINT ACTION	Procedural and Institutional Arrangements	Clear definition of roles and relationships and identification of organizations responsible for implementation
	Leadership	Taking initiative, giving direction
	Knowledge	Awareness raising, generation of new, shared knowledge
	Resources	Sharing and leveraging scarce resources like funding, time, and staff
COLLABORATIVE ACTION		New mechanisms for collaborative action, such as educating the public, enacting policy measures (new laws or regulations), marshalling external resources, deploying staff, carrying out new management practices, monitoring implementation, and enforcing compliance

4.1. PRINCIPLED ENGAGEMENT

'Principled engagement' is the starting point of the collaboration dynamics. In terms of discovery of interests and concerns, partners in the Nusa Penida MPA network are aware of differences between them. While these values are made explicit, clarification is lacking when it comes to the management structure of the MPA. Foreign stakeholders seem to be unclear about current management actions while local entrepreneurs seem to have a clearer picture. Furthermore, a lack of communication, particularly across institutional boundaries, is seen as a major issue. Lastly, while a working group has

been established for the development of the collaborative governance setting, current procedural decisions seem to be lacking.

4.1.1. Discovery

Different user groups in the Nusa Penida MPA network have distinct worldviews and they bring with them different sets of professional and organizational languages, cultures, and values. Yet, partners are aware of these differences and individual and shared interests are made explicit. Many stakeholders share the interest to curb illegal fishing, unregulated tourism activities, and marine pollution, those drivers that have led to the establishment of the MPA.

Many business owners, NGOs, and dive operators alike are concerned about environmental pollution: *“Trash in the water is massive [...]”* (Local NGO) is the notion of a local NGO and *“Trash is a big problem [...]”* (National Government) is the statement of a representative of the national government.

Also unregulated tourism is recognized as a big issue by dive operators and biologists: *“Too much tourism, unregulated; it’s booming [...] it’s too many boats on sites, it’s too many people around the animals.”* (Local NGO) and *“[...] the dive pressure is just wrecking the reef”* (Marine biologist). Most dive operators have a vested interest in protecting the marine ecosystem as it is essential for their business: *“I think the practice of all the dive centers here is pretty good. Because it’s in our vested interest to protect coral reefs; and they get that”* (Dive operator). Also some local people are worried that more and more foreigners will come to the island, buy land from locals, and build hotels. On the other hand some business owners are not concerned about the booming tourism; they want more tourists to visit the MPA to increase their revenue.

Illegal fishing is another factor that raises concern among partners: *“The reason why we haven’t seen any big fish is because everybody is fishing them on the outside and then they can’t come in”* (Dive operator). However, many interviewees mention that fishermen themselves do not have the same perception of the problem and that it is very difficult to make them understand why they should not fish in certain areas anymore: *“[...] one of the problems are the traditional fishing grounds - fishermen have been using them forever - how can you tell them now that they cannot fish there anymore!?”* (Dive operator).

Discovery of these diverse worldviews creates the basis for collaboration. Even though worldviews vary among different stakeholders, concerns and interests are made explicit which is the first step to yield a strategic agreement.

4.1.2. Definition

Definition refers to the clarification of tasks and expectations of one another. Among foreign business owners, interest groups, and scientists there appears to be a lack of clarification of the overall management structure of the MPA. Most of the individuals are not clear who else is a member or what they represent and reporting mechanisms are unclear. Local entrepreneurs on the other hand seem to have a clearer picture of the management structure.

“I am not sure what exactly is going on at the moment [...]” (Local NGO) and *“I don’t really know anything exactly [...]”* (Dive operator) are only two examples of many reactions of the interviewees. In the Nusa Penida MPA there appears to be a general lack of clarification which is emphasized by the expression of another stakeholder: *“I remember sitting in this [...] meeting and saying ‘well, it*

looks like there is a lack of clarity around authority'; who is in charge of what, who has what responsibility, what are the lines for communication?" (Marine biologist).

Furthermore, also the Zoning System of the MPA seems to be unclear among foreign dive operators: *"Yeah, it's a mess. If there is a zoning system like this and if it's official [...] you should have a map here and all the structure of where to go, when to go, where not to go."* (Dive operator). Interviewees also have questions about monitoring of illegal activities: *"[...] there was no clear instruction what to do [...] what kind of information needs to be reported and what happens after reporting? So there was a lot of discussion about who actually has the authority to do anything and what is an effective response?"* (Marine biologist). Also enforcement of the MPA leaves some open questions: *"There are still a lot of questions; some of the questions in my mind are: How will it be enforced? How will it be funded?"* (Dive operator). The management plan of the MPA is not publically available yet which might be one reason for a lack of clarity and expectations among *foreign* interest groups and business owners.

However, *local* dive operators, entrepreneurs, and fishermen seem to have a better understanding of the current management setting of the MPA. Several interviews with local entrepreneurs and seaweed farmers imply that local communities have been in closer contact with the CTC than *foreign* entrepreneurs. This is underpinned by the fact sheet which states that 16 additional meetings were held with village leaders and community (CTC, 2012). This might explain the difference in clarification among locals and foreigners.

In order for collaborative action to work it is fundamental to be clear about the aims of collaborative action if partners are to work together to operationalize policies. While *foreign* stakeholders express their confusion about management, *local* partners are well informed about the zoning system and enforcement. One explanation for this might be the closer contact between the communities and the CTC. Another explanation could be that locals have a better understanding of how decentralized governance in Indonesia works in general.

Making the management plan publically available could be one possibility to overcome this apparent lack of clarification. Overall, it seems like there is no central position for coordinating communication, organizing and disseminating information, and keeping partners alert to the jointly determined rules that govern their relationship.

4.1.4. Deliberation

Among partners of the Nusa Penida MPA network a lack of communication, particularly across institutional boundaries, is seen as a major issue. Moreover, not only frequency of communication appears to be an issue, but also the quality of deliberation seems to vary among different stakeholder groups. While foreign entrepreneurs are seen and see themselves as a demanding front, local people show a less assertive way of deliberation.

One dive operator comes straight to the point: *"Yes, that is the biggest problem, really, communication"* (Dive operator). Also a representative of the local government of Lembongan Village sees a problem in that there is a lack of communication across boundaries, namely the local and district government. He wants people to come to his office so he can listen to other peoples' perspectives and wants to work together with everyone. Also between the dive operators and the CTC there seems to be a lack of continuous deliberation which is explained by one of the interviewees as follows: *"[...] I guess, from the CTC's perspective there is a lot of groups to lobby [...] and they may think it is more important to talk to fishermen about cyanide fishing and dynamite fishing rather than how close can you get to a mola"* (Marine biologist).

Effective communication requires hard conversations and constructive self-assertion among partners. The Lembongan Marine Association (LMA)¹ as a group does not hesitate to ask challenging questions and express disagreement: *"[...] the dive operators are quite demanding. If they gonna be charging us then we want to see enforcement. And I think we have seen that we are not afraid to kind of step up against the government"* (Dive operator). According to some stakeholders deliberation does not have the same level of assertiveness from both sides of the table: *"[The CTC] rocked up and everyone was going 'why don't you...?' and 'why is this...?'"* *"[A person from the CTC] sat in this LMA meeting as the only one Indonesian [...]* and it might be a little bit intimidating to be that person" (Marine biologist). One interviewee suggests that cultural differences might be the reason for local people being less demanding: *"In the Hindu religion it is not costume to tell people what to do"* (Marine biologist) and *"[...] the CTC are Indonesians; you know, they are confronted with a body of foreigners who are from another culture and much more assertive... and in these sorts of issue they would be like a massive front to confront"* (Marine biologist).

In conclusion, both frequency and quality of communication appear to be an issue among various stakeholders of the Nusa Penida MPA. The quality of deliberation, especially when participants have differing interests and perspectives, depends on both the skillful advocacy of individual and represented interests and the effectiveness of conflict resolution strategies and interventions. However, neither interventions nor conflict resolution strategies seem to be present in the collaborative governance structure of the MPA.

4.1.5. Determination

Determination refers to the process of setting agendas, scheduling a discussion, or assigning a work group as well as reaching agreements on action items or final recommendations. In order to develop a collaborative governance network in Nusa Penida MPA a working group was established. Other procedural decisions, however, seem to be lacking at the moment, e.g. there is no association of snorkeling boat captains and the LMA does not schedule meetings on a regular basis.

In order to establish the zoning system of the MPA as many as 33 meetings were conducted with all relevant stakeholders. This early step resulted in the establishment of a working group to develop a collaborative management approach.

Most of the dive operators on Nusa Lembongan are part of the LMA which started out with scheduling monthly discussions. Lately however, meetings have been scheduled rather irregularly: *"We do not meet monthly, for a while we were meeting monthly, but it kind of goes up and down in waves. So it has been a while since we have gotten together to talk"* (Dive operator). Furthermore, there appears to be a lack of procedural decisions at the LMA meetings: *"[...] no action points [...] no follow-up email, no one emailed and said 'these are the points we discussed'"* (Marine biologist). Procedural decisions are important because they affect the way collaborative agendas are formed and implemented.

There was a Snorkeling boat captain association on the island before, but there is no association at the moment. The reason for that is that they do not have the official papers from the government. Another problem is that there are more and more local people start a snorkeling boat business which is stated by one interviewee: *"Yeah, pretty much anyone who can afford to build a boat builds a boat and takes people snorkeling. There used to be an association but I think just everyone started building boats and then it just fell apart... yeah, too many..."* (Marine biologist)

¹ The LMA is an organization that has been set up by dive operators on Nusa Lembongan to safeguard the local marine area.

Overall, tabling discussions or setting agendas seem to be currently missing for effective decision-making. While there is no official snorkeling association at the moment, the LMA is not meeting regularly to discuss action plans and problems within the MPA. However, these substantive determinations and procedural decisions are needed to propel action forward.

4.2. SHARED MOTIVATION

‘Shared motivation’ or social capital, relates to the interpersonal relationships among partners of a collaborative governance network. All collaborating partners of the Nusa Penida MPA network seem to have a shared perception of the problem and a mutual understanding of the needs and aspirations of others. Moreover, many stakeholders within Nusa Penida MPA are highly committed to sustainable development and nature conservation. However, continuous engagement seems to be lacking from the district government. Trust among collaborating partners seems to be critical, and particularly fueled by unclear communication. Good efforts are being made when it comes to internal legitimacy which is shown by the widespread acceptance of the MPA by interest groups. However, factors like equality, monitoring, and sanctioning still need to be addressed.

4.2.1. Mutual Understanding

Partners within the Nusa Penida MPA network show sensitivity to the aspirations, needs and constraints of others; e.g. many interest groups understand that fishermen need to find an alternative livelihood if they are to stop fishing in their traditional fishing grounds. Partners also recognize that differences in culture, language and values need to be considered and barriers must be overcome in order to yield effective collaboration.

One dive operator tells a story of how a local person reached mutual understanding among foreign business owners: *“A dive master [...] gave a briefing and he said ‘hey guys, please be careful when you are diving because I want to protect my reef’. He said the word ‘my’ and it was amazing... it had so much power; just to say the words ‘my reef, my home’ and we were like ‘dude, of course I want to help you, I don’t want to destroy your land’ (Dive operator). Also the conflict between everyone being able to enjoy nature and unregulated tourism is recognized by some: “We shouldn’t just say ‘you cannot come here’; of course not; we don’t own it. We want everybody to enjoy the ocean [...] I just want to make sure that it’s safe for everybody and environmentally friendly – that’s the most important thing” (Dive operator).*

As far as the awareness of interests is concerned, dive operators understand that fishermen need to find a different way to make their livelihood in order to stop illegal fishing within the MPA: *“I mean you have to find another source of income for those fishermen.” (Dive operator) and “What’s the incentive for them to fish somewhere else [...]” (Dive operator).* Also from the side of the fishermen there is a shared perception of the problem. According to one interviewee fishermen release mantas and molas if they catch them since they know that tourists come here to see these flagship species.

Furthermore, there is mutual understanding among local NGOs that cultural and language barriers need to be considered: *“So we have done lots of things; but we try to disseminate most of the things through the CTC because most of that information is better coming from an Indonesian person to an Indonesian person. So for us, whilst we have some knowledge and skills we feel it’s better to go through some people, who already have relationships, speak the language that can pass it over in a more acceptable manner than we probably have the skills to do” (Local NGO).*

Overall, all collaborating partners with the Nusa Penida MPA network seem to have a shared perception of the problems and a mutual understanding of the needs and aspirations of others. Even though language, culture, and values vary among professional groups they are aware of the interests of the different stakeholders. Mutual understanding is fundamental for constructing partnership and collaboration as it can transform adversarial relationships into more collaborative ones.

4.2.2. Shared Commitment

There are many stakeholders within Nusa Penida MPA, including local resource users, NGOs, dive operators, scientists, and the local government, who are highly committed to sustainable development and nature conservation. These members are engaging in various projects and are combining forces to improve the environmental situation on the island and at sea. On the other hand commitment and continuous engagement seems to be lacking from the district government of Klungkung.

“I think, in theory, people are very committed and concerned. Everyone here seems to have the environment at heart” (Dive operator) is the opinion of one interviewee. In fact, local interest groups are highly committed to marine conservation. The CTC is focusing on capacity building in local communities and on education of local people about environmental pollution and the protection of coral reefs. They are involved in all management activities within the MPA and act as facilitator between the different stakeholder groups. Aquatic Alliance, another local NGO, is building a database on manta rays and they are giving weekly talks for tourist about exceptional marine life. Moreover, they developed a coloring book about waste education for school children and they give training for dive centers about good behavior in the water. Another local NGO, the Friends of Lembongan, are focused on sustainable development on land; they initiated trash projects by distributing trash bins on the island and organized waste collection and processing. They also try to cut out plastic bags from the island by distributing canvas bags to local restaurants and school kids.

Also the new head of Lembongan village is interested in marine conservation and wants people to come over to talk about ideas. He supports the trash project of the Friends of Lembongan. Every Saturday and Sunday he talks to local people at the morning market and explains them they should put waste into the bins. He wants tourists to enjoy market without rubbish lying around everywhere.

Also many of the dive operators show commitment to conservation: *“I have even told people in other dive groups and lifted them from the corals and signaled them ‘give it some space”* (Dive operator). The dive operators conduct coral monitoring surveys of popular dive sites together with the CTC and check if corals have been damaged by anchors and intensive diving tourism.

However, there is one member who does not seem to share the same level of commitment. The local district government of Klungkung, the responsible authority for the MPA, is seen by many people as not being committed enough: *“We have been living here for [...] years and we don’t see any sign of the government taking much interest”* (Dive operator). A notion from the national government in Jakarta: *“They do not prioritize the MPA because I think the Klungkung area is mainly based on agriculture; so they want to focus more on that [...]”* (National Government). Another interviewee explains: *“They were one of the strongest opponents to the Dutch government and they maintain that strength against change”* (Dive operator).

The weak commitment of public agencies is known to be a particular problem in collaborative endeavors. However, the level of commitment to collaboration of authorities is a critical variable when it comes to success or failure of natural resource management. If not everyone shares commitment *“there is too much drag for the individual to make any numerals”* (Marine biologist).

The Friends of Lembongan had to experience this with their cleaning project: “[...] we have had great success cleaning up the island but we had very little success in keeping it clean. It has been kind of one step forwards, two steps backwards [...]” (Local NGO).

Therefore, NGOs, community groups, private entrepreneurs, and all levels of government alike must engage and show long-term commitment to reach collaborative action. While many local entrepreneurs and interest groups do what they can the lack of commitment by the district government seems to be one factor that is hampering collaborative action in the Nusa Penida MPA.

4.2.3. Trust

In the Nusa Penida MPA network trust between collaborating partners seems to be a critical issue. Several incidences, such as the building of a community center, the replacement of moorings, and the provision of a boat for patrolling have led to a rather tense relationship between some partners.

One incident that has been causing some tension among resource users is the fact that a community center was built on Nusa Penida while at the same time there is no budget for patrolling more than once a month. Especially private entrepreneurs on the island think that the priority should lie on effective monitoring and enforcement rather than building a community center before the MPA is effectively managed. One interviewee tries to explain the situation as follows: *“I think we are running into cultural issues again because for Indonesians that is super important, to have that big fancy building; because if you have that little shack on the beach no one is gonna respect you”* (Marine biologist).

Another incidence might indicate a lack of trust within the governance network of the MPA. Currently there are temporary moorings – made of canisters – distributed at dive sites at sea. Putting up permanent moorings will be the task of the park authority but for now there is no budget for putting up better moorings. However, many of the temporary ones are broken and need to be repaired or replaced. The Lembongan Marine Association was thinking about hiring a consultant to put up moorings correctly rather than letting the park authority do it: *“[...] we can raise money and buy the moorings. It’s just that we want to make sure that they will be put in the ground correctly... Someone who knows how to put professional moorings down”* (Dive operator).

Also from the other side of the table there seems to be a lack of trust. Since the patrol team does not have their own patrol boat yet and their budget is only sufficient for renting a boat once a month, they had the idea that they could borrow a boat from the diving schools; since there are 12 diving schools, each dive center could provide their boat once a year and patrolling would then be possible once a month without having to pay for the rented boat. While the CTC had the perception that the dive centers’ support for this idea was lacking, none of the dive operators interviewed seemed to have heard of the idea. Hence, miscommunication seems to be causing a lack of trust in this case.

Overall, it seems that stakeholders believe that the other party will act in their own self-interest rather than supporting the collective interest. These trust issues among collaborators in the Nusa Penida MPA seem to be fueled by unclear communication. Thus, trust building appears to be one of the most prominent aspects that need to be addressed as distrust is the enemy of collaboration.

4.2.4. Internal Legitimacy

Legitimacy is characterized by six factors, namely representativeness, equality, transparency, monitoring, sanctioning, and acceptance. While the establishment of the MPA was an overall inclusive process, current management is less so. Also equality between local people and the tourism sector seems to be an issue. In terms of transparency all partners agree that information must be disclosed; yet, the management plan is not publically available. Monitoring and sanctioning are still in their early stages of implementation and require further development. Despite all these issues, Nusa Penida MPA is widely accepted by collaborators.

Representativeness

The planning process of Nusa Penida MPA included the consultation of all relevant stakeholders in order to reach agreement about the concept of MPA and the zoning plan, with specific attention directed to each user group's context. Stakeholders that were included in the decision-making process are local community groups, fishermen, and seaweed farmers, the fishery department of the district government of Klungkung, and private sector dive operators.

In total, 33 meetings were conducted with these stakeholders including 15 focus group discussions with the different user groups, 16 village meetings with leaders and community, and meetings at the subdistrict and district level in the presence of Provincial and National government representatives. This early step resulted in the establishment of a working group to develop a collaborative management approach. Thus, the early establishment process of the MPA appears to be open and inclusive.

However, there appears to be an issue with inclusiveness when it comes to the consideration of suggestions. The dive operators were asked to give feedback to the diver code of conduct; they made the suggestion that the prohibition of blue water hunt should be included. Blue water hunt refers to the practice of herding marine animals into the reef in order to show tourists. According to one interviewee these suggestions were not considered which caused some frustration: *"well, what's the point of consulting if nothing transpires!?"* (Marine biologist).

Equality

As far as equality is concerned dive operators do not seem to be equally involved in the working group mentioned above. The answers of several dive operators to the question whether they are involved in management of the MPA: *"No, the CTC is fundamentally involved in all things to do with the MPA"* (Dive operator) and *"Absolutely not. We know about it and the CTC but nothing is happening yet, nothing for us to help"* (Dive operator). Furthermore, local fishermen and seaweed farmers seem to know more about the zoning system than dive operators. This might be because there have been 16 additional village meetings with leaders and community where foreign dive operators were not involved.

Currently, there also seem to be inequalities concerning the sharing of benefits. A staff member from the national government sees a problem in that: *"[...] only the private actors will get the benefit, always rich people"* (National government). However, the CTC wants to create a system to share benefits from the tourism industry equally so that fishermen can stop fishing and get an alternative livelihood; currently there is no compensation available for fishermen.

Transparency

Transparency of processes and structures is crucial in order for external actors to identify responsible organizations and individuals and hold them accountable. All interviewees agree that information

about management of the MPA need to be disclosed: “[...] I think it has to be very publically managed” (Dive operator) and “If it can be transparent and audited by a third party to make sure that that money is being collected properly and its then being allocated towards enforcement, towards education; which is possible” (Dive operator).

However, there are also skeptic voices that see transparency as a big issue within the political context of the MPA: “Of course like with everything in Indonesia you get a little bit pessimistic because there is corruption at every level of government. So, will any of the collected fees end up at the monitoring and monthly enforcement?” (Marine biologist) and “Yeah with money here... you don’t know where it goes anyway” (Dive operator).

Monitoring

Effective monitoring is one goal listed in the Nusa Penida management plan. Monitoring of the coral reefs is done by the CTC together with the dive operators. However, partners have observed a lack of monitoring when it comes to boat control at dive sites and good practice at sea: “[...] I know that there has been a lot of tension to put systems in place; so far there doesn’t seem to be many actually functioning in terms of boat control” (Local NGO) and “At the [...] meeting there was lots of discussion about how to monitor dive operator behavior and also what can be done; both, in a reporting kind of sense, when people see that the code of conduct is not being respected... who do you tell, what is the chain of command?” (Marine biologist).

The patrol team is engaging in two activities at the moment: Firstly, joint patrol, during which they educate fishermen on the zoning system within the MPA; and secondly, resource use monitoring, where all the boats and their activities within the MPA are registered. However, patrolling is currently performed once a month only due to a lack of budget which is perceived by many as not being an effective way of monitoring: “I don’t see the point of patrolling once a month; it’s pointless, isn’t it? You need a daily patrol. They tell the fishermen to leave but then the next day they come again and they have another month of fishing” (Dive operator).

Also for other tourism activities there appears to be a lack of monitoring on the island: “There is more and more business in the mangroves for one year now; which is normally supposed to be forbidden because it is government land. You don’t have the right to be there. But the government never comes here” (Business owner). Also the building of more and more hotels seems to be unregulated: “[...] with people building and you know, looking at budgets and nothing really being enforced – they are meant to have proper septic systems if they don’t have bio-systems but I know that some of them don’t which is a shame” (Local NGO).

Sanctioning

Currently there are no sanctioning mechanisms in place for illegal activities, such as fishing in no-take zones. Since the zoning system is not implemented yet sanctioning cannot be applied. There have been discussions at the LMA meeting what kind of sanctioning could be effective: “So there was a lot of discussion about who actually has the authority to do anything and what is an effective response to wrong behavior in the water, such as grounding the boat for the dive operator for a week – but then they just rent another boat [...] In this area you can get around almost anything by either bribing or not doing what you are told [...]” (Marine biologist). Another interviewee recognizes the difficulty of sanctioning: “[...] if it doesn’t go through the right steps, though the right channel, then it [...] didn’t happen; the record departments don’t communicate. So if you skip the middle man, it never happened” (Dive operator).

Another interviewee talks about the idea of putting fines in place: *“I mean you are kind of looking into if we should put fines in place. Fines have certainly worked in the Western world. I would love to think that we can do it without going down the, you know, fine road; and that would become totally corrupt anyway; so, it’s not necessarily the best option.”* (Local NGO)

Acceptance

Nusa Penida MPA is widely accepted among stakeholders. Positive statements are made by many partners: *“I think there are good plans in place, there are good zones in place and things like that; it’s just about moving forward with the enforcement and incentives”* (Dive operator). Many interviewees are hopeful for future management to be successful: *“I still have faith in this marine park since it is so close to a major tourism centre like Bali; then the government is under international microscope [...] So I think the enforcement and the actual management will be kind of good because they’ll use it as sort of showcase to other marine parks”* (Marine Biologist).

In conclusion, the establishment of the MPA can be described as an overall inclusive process where all relevant stakeholders were involved in the decision-making process. The ongoing management on the other hand does not include either private entrepreneurs or local NGOs in decision-making. Also equality appears to be an issue since there is no system for sharing benefits of the tourism sector yet. As far as transparency is concerned all stakeholders agree that it is fundamental to foster trust and support; yet, the management plan is not publically available which is likely to contribute to the lack of clarification. In terms of monitoring, effective coral reef monitoring is in place while monitoring of unsustainable tourism activities and illegal fishing are still missing. Sanctioning mechanisms are not in place yet which is due to the fact that the zoning system has not been implemented yet. Lastly, acceptance of the MPA is widespread, and partners are hopeful for effective management in the future.

4.3. CAPACITY FOR JOINT ACTION

Successful collaboration will generate a new ‘capacity for joint action’ that did not exist before. In Nusa Penida MPA management actions and goals are identified and organizations responsible for implementation are in place. Yet, many stakeholders do not seem to be clear about roles and relationships. Furthermore, leadership and direction appear to be lacking on several levels within the governance network. In terms of knowledge, a low environmental awareness among some tour operators makes it difficult to curb unsustainable tourist activities. While there are many education projects in place, language and cultural barriers between locals and tourists are still hampering environmental education. When it comes to the sharing of resources there are good ideas in place. Yet, practical implementation of these ideas seems to be hindered by miss-communication and slow government processes.

4.3.1. Procedural and Institutional Arrangements

A clear definition of roles and relationships and the identification of organizations responsible for implementation are essential for successful governance. While the management plan of Nusa Penida MPA lists all responsible organizations and their tasks (Figure 9), the fact that it is not publically

available to all stakeholders hampers clarification. Many collaborating partners express their confusion about management actions and organizational structures.

Fishery Department

The Fishery Department is part of the district government of Klungkung. Their task is to provide direction and advice on the annual and 5 year management plan in accordance with the 20 year management plan of Nusa Penida MPA, to be implemented by the Technical Implementation Unit.

Technical Implementation Unit

The task of the Technical Implementation Unit is to draft the short-term (1 year) and medium-term (5 year) management plans. If the management plans are approved by the Collaborative Board the Technical Implementation Unit has the mandate to implement these in accordance with the long-term (20 year) management plan. Furthermore, they are responsible for providing mid-term and long-term reports about the progress of implementation of the management plan. The Technical Implementation Unit is authorized to manage Nusa Penida MPA daily according to the management plan approved by the Fishery Department.

Collaborative Board

A Collaborative Board shall be established which the management team should report to. The Collaborative Board should act as an external monitoring system to audit implementation and enforcement of the management plan. The board should consist of: representatives of the local government, local community representatives, and local tourism organizations.

Community Forums

Community forums are in place that shall give feedback to the management processes and input for potential improvements. These community forums involve traditional village heads, local governments, fishermen, seaweed farmers, and tourism entrepreneurs.

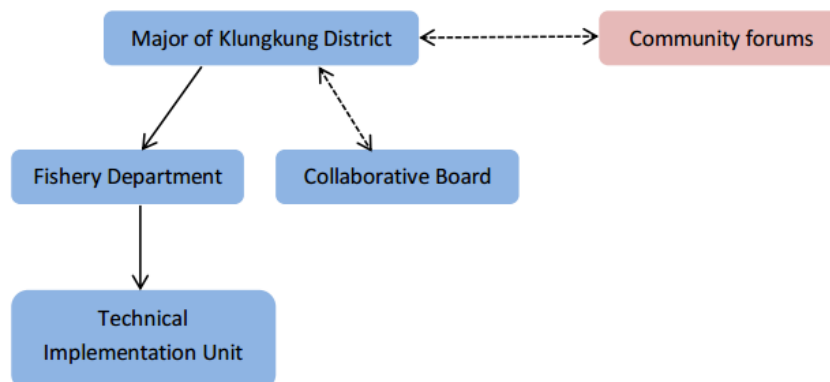


Figure 9. Governance structure of the Nusa Penida MPA (Yunitawati, 2013)

Coral Triangle Centre (CTC)

The CTC (formerly part of The Nature Conservancy) is an NGO located on Bali mainland which is fundamentally involved in all management activities of the MPA due to its higher capacity in human resources and financing. They have coordinated and funded activities to develop Nusa Penida MPA, such as public outreach, capacity building, surveys and monitoring, installing mooring buoys and temperature loggers. The CTC also produced several planning documents including the zoning plan,

the MPA profile, fishery profile, marine tourism profile, and socio-ecological baseline data. The main focus of the CTC is the facilitation process between local communicates and the government.

Roles and Relationships

The definition of roles and relationships between different organizations is essential for collaboration which is recognized by one interviewee: *“This is fundamental to making anything work, defined roles and responsibilities”* (Marine biologist). However, there appears to be a lack of clarification about roles and relationships and who is responsible for what among local NGOs, dive operators, and foreign business owners within the MPA: *“I don’t really know who is doing what exactly, who is working with who, and what are they doing, what is being done!?”* (Dive operator).

Neither dive operators nor local NGOs are directly involved in management of the MPA and they assume that the CTC is the managing authority. The answer of several interviewees to the question whether they are involved in management of the MPA: *“No, not at all; that is part of the CTC”* (Local NGO) and *“No, the CTC is fundamentally involved in all things to do with the MPA”* (Dive operator). In fact however, the CTC is not the official Implementation Unit but they are trying to facilitate the process. Many people on the island however, seem to have a different perception of the situation.

In theory, there are protocols and structures for the administration and management of tasks within the MPA. Management actions and goals are identified and organizations responsible for implementation are listed. In practice however, many stakeholders do not seem to be clear about roles and relationships. Many interviewees do not know about the Implementation Unit and assume that the CTC is the managing authority. Without the management plan being publically available to all collaborating partners, confusion about roles and relationships are likely to remain.

4.3.2. Leadership

Leadership and initiative appear to be lacking on several levels within the Nusa Penida MPA network. Stakeholders have the impression that direction from the local government is missing. Moreover, most partners seem to be unclear about who actually has the authority as well as responsibility for taking initiative. Also within some of the organizations there is no strong leader who could propel action forward.

One interviewee recognizes the general lack of leadership within the governance structure of the MPA as follows: *“[...] when it comes to action, then – I think – there is a lack of leadership on the island. So even if people would follow and help out and be part of something they need someone to take the initiative”* (Marine biologist). While the CTC expects the LMA to come up with a plan of how to contribute to MPA management the LMA in turn expects the CTC to present the management plan and give clear instructions of what is going to happen concerning enforcement and implementation.

At the same time stakeholders would like to see more direction coming from the local government: *“[The head of village] said ‘I’ll do whatever I need to do, just tell me what to do’ but he was clueless”* (Local NGO) and *“[...] there is no leader right now”* (Dive operator).

There also seems to be a lack of initiative among the dive operators themselves which is addressed by one interviewee as follows: *“Yeah, but who is gonna spearhead the idea and do it? There are solutions... but who does it, who takes the time?”* (Marine biologist). Another respondent argues that the full time schedule of private entrepreneurs is a reason for the lack of initiative: *“[...] the dive operators on a day-to-day basis have so much going on and they are running a business and*

[...] the competition is growing every year, there is more and more dive operators [...] So, I think it's becoming more and more of a struggle to make a living" (Marine biologist).

Not only does the busy time schedule seem to be a reason for a lack of initiative, but also partners seem to be unclear about whose responsibility it is to take action: *"I mean, we want to help but we can also not just go there to make it happen; it's not really our job"* (Dive operator). On the other hand dive operators want to be careful with taking the lead. They do not see themselves in the position to tell locals what to do: *"It's gonna come from the top; that's the way I see it. And we are not in the position to tell everybody else [...]. If they think that we are telling the locals what to do they won't like that... that's why it has to be through the locals."* (Dive operator).

Overall, leadership and taking initiative are essential factors for steering parties to the rough patches of the collaboration process. However, both seem to be missing in the Nusa Penida MPA network. Currently, partners are uncertain about whose responsibility it is to take the first step and foreigners do not feel they are in the place to tell locals what to do. Furthermore, taking the lead takes time and engagement and it is difficult to find a volunteer to start. Also a lack of direction from the top is perceived by many stakeholders as a problem.

4.3.3. Knowledge

Concerning scientific knowledge there are some scientific studies conducted within Nusa Penida MPA that aim at providing evidence for unsustainable tourism activities and monitoring of flag ship species. When it comes to local knowledge many fishermen are not aware of over-fishing as a tremendous problem. Therefore, many local NGOs started education projects in order to curb marine and land pollution and to educate locals and tourists about marine conservation. However, the language barrier between many locals and tourists make it difficult for them to raise environmental awareness.

Scientific Knowledge

"I don't feel that there is a lot of science on this island to try and answer some of the concerns and questions [...]" (Marine biologist) is the perception of a marine biologist on the island. Some studies are being conducted within Nusa Penida MPA: The dive operators perform reef monitoring together with the CTC in order to assess damage that has been done to the corals by intense diving activities and anchoring of boats; the CTC also did a study on nutrient levels in the water which suggested that many hotels still dump their wastewater in the ocean without proper treatment; Aquatic Alliance is working on photo identification of manta rays aiming at monitoring their behavior; also research on ocean sunfish is conducted which is a flagship species and a popular attraction for divers in the area.

Currently, there is no online database to share the results of scientific studies but one objective of the management plan is to establish a database that is accessible to everyone.

Local Knowledge

Many local people have a clearly defined worldview which may vary significantly among individuals: *"[...] each of them will say something different but they will say it equally convinced"* (Marine biologist). Some local seaweed farmers are convinced that seaweed is not growing well anymore due to the pollution of seawater by petrol from boats and wastewater from hotels. Other seaweed farmers think that the overall decline of seaweed farming over the last years has a negative impact on their own seaweed: in former times when there was enough seaweed fish would only eat little plants while now they also seem to be eating bigger plants. It is also believed by some that water

from swimming pools containing chlorine is dumped in the ocean. However, according to hotel owners pool water is never dumped in the sea since there is a shortage of water on the island and maintaining a pool is very expensive.

Many local fishermen do not share the understanding of over-fishing as a massive problem. When the CTC told fishermen about the no-take zones within the MPA many local fishermen did not understand why they should not fish at locations with abundant fish stocks; their general belief is that the fish will come back tomorrow. The CTC then tried to explain over-fishing by putting plastic fish in a swimming pool which the fishermen had to fish; this way they showed that there is a limited amount of fish available and fish stocks which crash if they do not get the chance to recover.

Education

Many people see the lack of education as one problem for plastic pollution in the area. A restaurant owner told his local staff many times that they should not use candy wrapped in plastic for the ceremony – ‘the Gods need candy’ – but they still use Mentos wrapped in plastic. He also told them to separate the waste; as long as he is around they separate it but when he leaves they don’t anymore. He sees all kinds of trash in the bin that goes to the dumping place in the mangroves. Another interviewee explains the situation as follows: *“In the Hindu culture the mountain is the holiest place; and the opposite of the mountain is the sea so the least holy place. So the rubbish ends up in the sea”* (Dive operator).

Aquatic Alliance, the CTC, and Friends of Lembongan are all involved in education of local people and tourists. Aquatic Alliance gives weekly talks for tourists and they developed a coloring book about waste education which was distributed in the schools on Nusa Lembongan. Furthermore, the Friends of Lembongan have a local trash project: *“Our first step is to get these new rubbish bins out, educate people how to use them and we hope that tourists will know [...] so, it’s more education of the local people; explaining the danger of burning fires and the reasons why we need to recycle, why trash shouldn’t go in the ocean, why it shouldn’t be thrown on the ground; all of these things which we are fortunate through our own education to know and they are not”* (Local NGO).

Moreover, the CTC started a marine education project in which they are teaching locals how to dive. Every village of the 47 villages on Nusa Penida got an invitation for one person to do an open-water dive course. Locals should understand why they need to protect coral reefs and they will be able to join coral reef monitoring in the future. A local dive operator acknowledges that: *“Yes, education [is required]; they don’t understand about the coral reef. Unless you have been a diver you don’t have any ideas”* (Dive operator).

Awareness

In general there appears to be a lack of awareness that the MPA exists: *“[...] many people don’t know about the MPA* (Dive operator) and *“I don’t think any of the fishermen has a clue what an MPA is”* (Dive operator).

A member of the CTC recognizes that many local people do not have the same amount of environmental awareness as foreign dive operators. A story from a marine biologist on the island underpins this statement: *“When we first got here the neighbors caught a sea turtle and they were all excited to come over and sell it to us; and we said: ‘No we don’t want it, let it free!’ and then they kept in a little tiny bucket for days and we said: ‘You have to release it!’ and they said: ‘No, no, pay us if you want it to be released’ and then finally we got our local dive master to go over and shout at them about the importance and all that kind of stuff... and eventually they released it”* (Dive operator).

However, according to a local NGO there are also foreign dive centers that do not raise awareness among tourists about the marine code of conduct: *"Still a lot of people are not telling their clients how to behave in the water"* (Local NGO). Another interviewee sees it as the responsibility of these operators to educate the tourists: *"Because it's not necessarily the tourists' fault when they go and book a fishing trip and they trust the captain to take them where they can catch the fish. I was actually yelling at a tourist in manta bay who was spear fishing 'what the hell are you doing here!?' and he said 'the captain brought me here so it's fine!'"* (Dive operator).

The language barrier between foreigners and local people is another problem that hampers the curbing of destructive tourism activities. Many local people take tourists snorkeling but they don't speak English while the tourists do not understand Balinese. Thus, they cannot educate tourists about the marine code of conduct and good behavior in the water which is recognized by one interviewee: *"The problem with the snorkeling captain is that most of them don't speak English. So they don't brief the tourists and they do what they want. It's big business"* (Business owner). One respondent thinks that there is another issue why local people do not educate their customers about the danger of touching the animals or standing on the corals: *"In the Hindu religion it is not costume to tell people what to do"* (Marine biologist).

Taken together there are many efforts to educate locals as well as tourists within Nusa Penida MPA. Also establishing a database for sharing scientific knowledge is part of the management plan. However, cultural and language barriers make it difficult for many locals tour operators raise environmental awareness among tourists; many tourists are not aware of the fact that standing on the corals and touching animals can have detrimental impacts on the marine ecosystem.

4.3.4. Resources

In the Nusa Penida MPA governance setting there are many potential ways for sharing resources including funding, time, technical and logistical support, and administrative and organizational assistance: While the patrol team is waiting for the allocation of their own patrol boat they are hoping to get support from dive operators who could provide their boats in the meantime. Also for the establishment of the entrance fee administrative assistance from boat companies would be required who would need to check whether tourists obtained a valid entrance fee ticket. Also monitoring of illegal activities is currently dependent on the help of dive operators who act as citizens on patrol.

Financing

A member of the CTC explains that effective management of Nusa Penida MPA is still missing since the current budget is not sufficient for implementation and enforcement. Current management costs of the MPA are estimated to be about USD 400,000 per year. According to the business plan USD 1 million per year would be required in order to yield effective management. Also among dive operators the importance of adequate financing is recognized: *"Money is absolutely the thing that will hold up all of this, the enforcement, the incentives to keep people to fishing in wrong places [...]"* (Dive operator).

Patrolling around the MPA and monitoring of fishing and tourist activities is currently performed once a month only due to a lack of sufficient funding. The patrol team is voluntary for now and they need to rent a boat for patrolling which costs about USD 350 per day. The CTC sent a proposal to the national government to obtain funding for an own patrol boat and they are currently waiting for

approval. One idea of the CTC was to leverage resources in the meantime, namely borrow boats from dive centers for patrolling. Dive operators have varying opinions on providing a boat; while some support the idea, others, e.g. those who only own one boat, would prefer to donate. In this case, sharing resources requires deliberation and a detailed plan of how stakeholders could contribute considering their context and preferences.

In order to increase the budget for MPA management an entrance fee shall be established. Aquatic Alliance did an economic survey about the economic value of the MPA: *“One of the questions we asked was: would you be willing to pay an entrance fee. And almost across the board most people were willing to pay between USD 5 to 10”* (Local NGO). The CTC and the district government of Klungkung are currently debating how much the entrance fee shall cost. With more than 200,000 tourists visiting the MPA each year an entrance fee of USD 5 would already yield more than USD 1 million per year for MPA management. The entrance fee is supposed to be a one-time payment. 70% of the money shall be used for implementation of the MPA while 30% will go back to the district government. As far as logistics are concerned, office stations shall be positioned at every harbor from where tourists can go to the island. One idea was that logistical support could come from the boat companies that bring tourists to the island; only tourists with a valid entrance fee ticket shall be allowed to enter a boat. There are, however, skeptic voices about the entrance fee since the government needs to invest first before they will get benefits from it: *“I think it will be difficult because you have to wait for the government [...]”* (National Government representative)

One partner argues that financing of MPA management will not be a problem if implementation and enforcement can be noticed by stakeholders as well as tourists: *“Yeah, I think on the funding side of things – if you can actually see that enforcement is taking place – I think funding would be easy. People are willing to donate to something if they can see the effects of it”* (Marine biologist).

Staff

Currently, the Technical Implementation Unit of Nusa Penida MPA has only one staff member which has been trained by the CTC; new staff members are being introduced. One difficulty is that the staff changes when a new government is elected. The current staff member is already the third person that the CTC has trained. Moreover, the current Technical Implementation Unit is still waiting for its legal status from the Klungkung government.

In order to support the patrol team the idea is that dive operators could act as citizens on patrol. If anyone sees illegal activities happening they should take pictures of the boat, note down time and location and forward the information to members of the patrol team. However, the whole system does not seem to be entirely elaborated yet: *“I think we need to get better at the citizens on patrol thing... but that’s where my staff were asking about the spear fishermen and ‘are they allowed to do it or are they not allowed to do it?’ I mean the citizens on patrol could be a very effective means”* (Dive operator).

One benefit of collaboration is the potential for sharing and leveraging scarce resources in order to yield the common goals of the MPA. There are many good ideas within the Nusa Penida MPA governance structure of how to provide logistical support; administrative and organizational assistance, and requisite skills for analysis or implementation. However, since Nusa Penida is a relatively young MPA these ideas are not fully elaborated yet. In order for MPA management to move forward coordinating and marshalling these resources would be an important step as resources are a critical factor of collaboration success.

4.4. COLLABORATIVE ACTION

If ‘principled engagement’, ‘shared motivation’, and ‘capacity for joint action’ are successfully generated within the collaborative governance setting of Nusa Penida MPA, ‘collaborative actions’ should be the outcome. There are many individual projects on the island that shall be combined to yield a greater impact in the future. However, some stakeholders do not perceive collaborative action as successful at the moment.

Some stakeholders have not noticed much collaborative action taking place over the last years: *“It’s about two years that I’m here and after two years it was supposed to be like open in an official way. Sometimes people come from the CTC; but I don’t think they really have news about anything”* (Dive operator). Another answer to the question whether anything has been enforced yet: *“Not since I’m here. I just hear some things and then one year later people ask me about it and I say ‘yes, I heard that last year’...”* (Dive operator). One interviewee explains the apparent lack of collaborative actions as follows: *“There are so many different people involved, that’s the problem [...]”* (Dive operator).

One dive operator suggests that a set of different actions would be required in order to yield effective outcomes: *“I suppose it will take effect when it starts to be detrimental. Yesterday we went diving and we saw rubbish in the water and what we need to do is not collect the rubbish – although we did – but to take photos of the rubbish and send it to the tourism department. That’s the kind of thing when it starts to hurt people coming here* (Dive operator). Another interviewee argues that collaborative action needs to move forward: *“I think the MPA is in a place where it could go either direction, I mean we are right at that stage where it needs to move into enforcement and fundraising to keep it going”* (Dive operator).

There are, however, many individuals and interest groups that carry out measures to improve the environmental situation within the MPA which is appreciated by interviewees: *“I think there is a lot of individual efforts going on which is great [...]”* (Local NGO). Furthermore, these groups are planning to involve more stakeholders in the future in order to yield a greater impact: *“You know if you can get people together and get some ideas and get them to agree to that would be great...”* (Dive operator) and *“[...] having everyone working on the same project would be fantastic”* (Local NGO). Moreover, local NGOs show a great work ethic: *“Our perspective is kind of working with everybody to help each other; so we pull things that work for us from other places, we pass them on to where we think people might find them helpful”* (Local NGO).

One local NGO summarizes the situation as follows: *“There is no reason why we can’t get it right; you know, it’s an 8 km² island... If we can’t get it right here what hope leaves that for any other third world country...”* (Local NGO).














Currently, some stakeholders within Nusa Penida MPA have the perception that not enough collaborative action is taking place. However, there are many individual efforts on the island that shall be combined to greater projects in the future.

5. Discussion

5.1. Collaborative Governance in Nusa Penida MPA

The findings of this case study allow for the assessment of the individual elements of the theoretical framework and their occurrence in the Nusa Penida MPA network. Table 3 summarizes the results and gives an assessment of the concepts and their respective elements. The color code relates to the extent to which the elements are present in the collaborative governance setting. 'Green' represents a high degree of occurrence, 'yellow' a moderate level, and 'red' a low level. The assessment and how the individual elements scored will be discussed further in the next sections.

Table 3. Assessment of the elements of the theoretical framework and their occurrence in the Nusa Penida MPA network. The color code refers to the extent to which the elements are present: green – high level; yellow – medium level; red – low level.

Concept	Element	Level	Results
PRINCIPLED ENGAGEMENT	Discovery		Individual and shared interests are revealed
	Definition		Lack of clarification of the management structure among foreign interest groups while local people have a better understanding
	Deliberation		Lack of communication across institutional boundaries; no central position for coordinating communication
	Determination		Working group has been established but other procedural decisions seem to be lacking
SHARED MOTIVATION	Mutual Understanding		Partners have mutual understanding of the needs and aspirations of others and recognize differences in culture, language and values
	Shared Commitment		High level of commitment from most stakeholders, but apparent lack of engagement from district government
	Trust		Trust issues among partners fueled by miss-communication
	Internal Legitimacy		Wide acceptance of MPA; partners agree on transparency of process; equality, monitoring, and sanctioning still need to be addressed
CAPACITY FOR JOINT ACTION	Procedural and Institutional Arrangements		Organizations responsible for implementation are in place but many stakeholders are not clear about roles of and relationships between institutions
	Leadership		Lack of direction and leadership on several levels, no one takes initiative
	Knowledge		Education projects are in place; but low environmental awareness among some tour operators allows unsustainable activities to continue
	Resources		Lack of capacity for implementation of the management plan; ideas for sharing of resources are in place but realization of ideas hampered by miss-communication and slow governmental processes
COLLABORATIVE ACTION			Reef monitoring and monthly patrols are in place; but the lack of intermediate outcomes causes some sort of collaborative inertia

5.1.1. PRINCIPLED ENGAGEMENT

‘Principled engagement’ is the starting point of the collaboration dynamics and it involves different stakeholders each with a set of individual values, interests, and attitudes in addition to the missions and mandates of the organizations they represent (Emerson *et al.*, 2012).

Different user groups in the Nusa Penida MPA network have distinct worldviews and they bring with them different sets of professional and organizational languages, cultures, and values. Yet, and individual and shared interests are revealed and partners are aware of the differences between user groups. Hence, a high level of ‘discovery’ can be found in the Nusa Penida MPA governance network (Table 3).

While individual interests are made explicit, there is a lack of clarification when it comes to the management structure of the MPA. Foreign stakeholders seem to be unclear about who else is a member or what mechanisms for management have been implemented. Local entrepreneurs on the other hand seem to have a clearer picture of the management structure. Thus, ‘definition’ is still required for foreign partners and yields medium level effectiveness at the moment (Table 3).

Furthermore, a lack of communication, particularly across institutional boundaries, is seen as a major issue. Not only frequency of communication appears to be a problem, but also the quality of deliberation which seems to vary among different stakeholder groups. While foreign entrepreneurs are seen and see themselves as a demanding front, local people show a less assertive way of deliberation. Overall, ‘deliberation’ seems to be missing within the Nusa Penida MPA governance network and is therefore marked in red (Table 3).

In terms of procedural decision-making a working group was established in order to develop a collaborative governance network in Nusa Penida MPA. However, other substantive decisions, like the scheduling of regular meetings with all stakeholder groups seem to be lacking at the moment. Furthermore, there is no snorkeling boat association which would be highly necessary to address unsustainable tourism activities. Therefore, ‘determination’ is assessed as having a medium level effectiveness (Table 3).

In conclusion, ‘principled engagement’ in the Nusa Penida MPA network is present to a moderate degree. Currently, clarification is an issue and conflicts are not resolved due to an overall lack of communication. It appears that a central position is missing for coordinating communication, organizing and disseminating information, and keeping partners alert to the jointly determined rules that govern their relationship. Without conflict resolution strategies the success of the Nusa Penida MPA is at stake. Only if these factors are improved will people with different backgrounds work jointly across their institutional boundaries to reach common goals (Emerson *et al.*, 2012).

5.1.2. SHARED MOTIVATION

‘Shared motivation’ or social capital, relates to the interpersonal relationships among partners of a collaborative governance network (Emerson *et al.*, 2012). Social capital is important not only for reaching consensus among partners but also for supporting the implementation of the management plan (Margerum, 2001).

All collaborating partners with the Nusa Penida MPA network seem to have a shared perception of the problem and a mutual understanding of the needs and aspirations of others. Partners recognize that differences in culture, language and values need to be considered and barriers must be overcome in order to yield effective collaboration. Therefore, ‘mutual understanding’ is marked in green in the assessment table (Table 3).

Furthermore, many stakeholders within Nusa Penida MPA are highly committed to sustainable development and nature conservation. These members are engaging in various projects and are combining forces to improve the environmental situation on the island and at sea. On the other hand continuous commitment seems to be lacking from the district government of Klungkung. Since engagement from all stakeholders is required for successful collaborative governance, 'commitment' yields a moderate level of effectiveness (Table 3).

In the Nusa Penida MPA network trust between collaborating partners seems to be a critical issue. It appears that several stakeholders do not believe that the other party will act in the best collective-interest but rather in their personal self-interest. Hence, the overall level of 'trust' within the Nusa Penida MPA network is assessed as being low (Table 3).

In terms of legitimacy, some factors show a high level of effectiveness while others still need to be addressed. While the establishment of the MPA was an overall inclusive process, current management is less so. As far as equality is concerned, there is no system in place to share the benefits of the tourism sector with the local community. When it comes to transparency all partners agree that information must be disclosed; yet, the management plan is not publically available which impedes transparency and accountability. Monitoring and sanctioning are still in their early stages of implementation and require further development. Despite all these issues, Nusa Penida MPA is widely accepted by collaborators. Hence, 'internal legitimacy' scores a medium level of effectiveness (Table 3).

Overall, it seems that there is a moderate level of 'shared motivation' in the collaborative governance setting of Nusa Penida MPA. Mutual understanding is present to a great extent which is fundamental for constructing partnership as it can transform adversarial relationships into more collaborative ones (Ansell and Gash, 2008). Yet, trust among partners is still an issue which seems to be fueled by unclear communication. Trust building would be required as it is essential for reducing transaction costs, improving investments and stability in relations, and stimulating learning, knowledge exchange, and innovation (Emerson *et al.*, 2012). When it comes to commitment many local entrepreneurs and interest groups do what they can while the lack of engagement by the district government seems to be one factor that is hampering collaborative action. Improving the level of 'shared motivation' would be essential for increasing support on the implementation of the management plan and hence, yielding a successfully governed MPA.

5.1.3. CAPACITY FOR JOINT ACTION

If collaborative endeavors are successful, they will generate new 'capacities for joint action' which were not present before (Emerson *et al.*, 2012).

In Nusa Penida MPA procedures and protocols for the administration of tasks have been developed, management actions and goals are identified and organizations responsible for implementation are listed. In practice however, many stakeholders are unclear about roles and relationships. Two factors seem to be the origin for this: first, the management plan is not publically available and second, there appears to be a lack of reasoned communication among some stakeholder groups. Thus, 'procedural and institutional arrangements' show a moderate level of effectiveness (Table 3).

Leadership appears to be missing on several levels within the Nusa Penida MPA governance arrangement: first, stakeholders have the impression that direction from the local government is missing; second, also within institutions themselves there seems to be a lack of leadership and initiative; third, partners are uncertain about whose responsibility it is to take the first step; and

fourth, foreign stakeholders do not feel they are in the place to tell locals what to do. Thus, 'leadership' in the Nusa Penida MPA governance structure is currently present to a low degree (Table 3).

In terms of knowledge there are many efforts within Nusa Penida MPA to educate local people as well as tourists. Also establishing a database for sharing scientific knowledge is part of the management plan. However, cultural and language barriers make it difficult for many local tour operators to raise environmental awareness among tourists. Overall, 'knowledge' is present to a moderate level at the moment and thus, is marked in yellow (Table 3).

Concerning resources, there is a lack of capacity for implementation and enforcement of the management plan. There are ideas in place within the Nusa Penida MPA governance network about how to provide organizational and administrative assistance and logistical support. However, since Nusa Penida is a relatively young MPA these ideas are not fully elaborated yet. Therefore, 'resources' are also marked in yellow in the assessment table (Table 3).

In conclusion, 'capacity for joint action' is the component which would require most attention from collaborators of the Nusa Penida MPA network. While management actions and goals are identified and organizations responsible for implementation are in place, many stakeholders do not seem to be clear about roles and relationships. Furthermore, leadership and direction appear to be lacking on several levels within the governance network. In terms of knowledge, a low environmental awareness among some tour operators makes it difficult to curb unsustainable tourist activities. While there are many education projects in place, language and cultural barriers between locals and tourists are still hampering environmental education. When it comes to the sharing of resources there are good ideas in place. Yet, practical implementation of these ideas seems to be hindered by miss-communication and slow government processes.

5.1.4. COLLABORATIVE ACTION

If 'principled engagement', 'shared motivation', and 'capacity for joint action' are successfully generated within a collaborative governance setting, 'collaborative actions' should be the outcome. There are many individual projects within Nusa Penida MPA that shall be combined to yield greater impacts in the future. Yet, collaborative action is perceived as not being successful at the moment by many stakeholders.

According to Ansell and Gash (2008) collaboration often seems to depend on achieving a virtuous cycle between the collaboration dynamics and outcomes. Intermediate outcomes are fundamental for building the momentum that can lead to effective collaborative governance. Therefore, only if 'small wins' from collaborative action are achieved can the iterative cycle be propelled forward, encouraging a virtuous cycle of 'principled engagement', 'shared motivation', and 'capacity for joint action' (Ansell and Gash, 2008). On the contrary, if partners



Figure 10. Tourists surrounded by trash in the ocean in Nusa Penida MPA (Pumphrey, 2015).

do not see any tangible intermediate outcomes, understanding, trust and commitment are likely to fade which will impede successful collaboration.



Figure 11. Building of new hotels in Lembongan village
(source: author)

So far, none of the problems that have led to the establishment of Nusa Penida MPA has improved: beaches are still covered in trash and tourists find themselves swimming between plastic bags and bottles (Figure 10); tourism is turning into mass tourism with an increase in number of visitors every year; entire forest areas are being logged to make space for new resorts and hotels (Figure 11); illegal fishing cannot be sanctioned since the zoning system is not enforced yet. Since partners do not see any short-term success within Nusa Penida MPA they doubt whether collaborative governance is effective. Moreover, this apparent lack of tangible outcomes seems to have led to kind sort of collaborative inertia among some stakeholders

within the Nusa Penida MPA network. Collaborative inertia can be the result when *“the output from collaborative arrangements appears to be negligible or the rate of output to be extremely slow”* (Huxham, 2003, p.403). It appears that the lack of improvement of the environmental situation has resulted in collaborative inertia among some partners. This can be observed insofar that many stakeholders do not take the initiative to engage in collaborative action but rather in individual projects.

The danger of collaborative inertia is that partners may eventually withdraw from collaboration, if there are no ‘small wins’ achieved (Thomson and Perry, 2006). According to Ansell and Gash (2008) the *“incentives to participate depend in part upon stakeholder expectations about whether the collaborative processes will yield meaningful results, particularly against the balance of time and energy that collaboration requires”* (Ansell and Gash, 2008, p.552). Incentives increase if partners see a direct influence of their participation on concrete, tangible, effectual policy outcomes; on the contrary, incentives decrease if partners perceive their own input to be merely advisory or largely ceremonial (Ansell and Gash, 2008). Hence, it is fundamental to improve social capital within Nusa Penida MPA network to overcome collaborative inertia and sustain collaborative governance over time.

5.2. Theoretical Framework Analysis

The theoretical framework of this thesis is based on the collaborative governance framework by Emerson *et al.* (2012) and focuses on the collaboration dynamics and their effect on ‘collaborative action’ (see 2.3). The three concepts ‘principled engagement’, ‘shared motivation’, and ‘capacity for joint action’ and their respective elements were analyzed in a case study approach, namely in the collaborative governance setting of Nusa Penida MPA. Based on the findings of this study the integrative framework by Emerson *et al.* (2012) can be assessed on its applicability in practice and conclusions can be drawn about the interrelationships between the individual components.

5.2.1. Importance of Individual Elements

Emerson *et al.* (2012) write that *“although [the collaborative governance] framework encompasses many interactive components and elements, we do not mean to suggest that all are necessary all the time or at the same level of quality or to the same extent. [...] researchers need to identify where, when, and why which components are necessary, and to what degree, for collaborative success.”* (Emerson *et al.* 2012, p.22). Therefore, the importance of the individual elements has been under closer scrutiny in this research project.

In the scope of this study, the three components ‘principled engagement’, ‘shared motivation’, and ‘capacity for joint action’ and their respective elements have all been found to be important to achieve effective action. Yet, while all elements are important to reach *action*, some are absolutely indispensable to yield *collaborative action*, and thus a greater impact. Both, this study and literature suggest that without the three elements ‘deliberation’, ‘trust’, and ‘commitment’ collaboration will not be sustained over a longer period of time. The significance of each of the three elements for collaboration will be discussed in the following paragraphs.

‘Common wisdom’ implies that any collaborative governance effort requires communication among partners. This is also acknowledged by many scholars who write that reasoned communication is at the heart of any collaboration approach (Ansell and Gash, 2008; Margerum, 2001; Ostrom, 1998; Thomson and Perry, 2006). Communication is so important because all other elements are based on it. The ‘discovery’ of individual and shared interests is only possible if stakeholders talk to each other; the same holds for the ‘definition’ of expectations and tasks. Also trust building is not possible if partners do not have the chance to ask challenging questions and express honest disagreement. This is also acknowledged by Ansell and Gash (2008) who write that partners can only build trust, respect, and commitment to the process if they engage in interpersonal communication. Thus, ‘deliberation’ is the basis for initiating any collaborative endeavor and also for sustaining it over time.

Second, ‘trust’ has long been recognized as a precondition for successful collaborative governance (Ansell and Gash, 2008; Emerson *et al.*, 2012; Huxham, 2003; Thomson and Perry, 2006). It has been proven to be fundamental *“in reducing transaction costs, improving investments and stability in relations, and stimulating learning, knowledge exchange, and innovation”* (Emerson *et al.*, 2012, p.13) Trust is crucial because ‘discovery’, ‘definition’, and ‘mutual understanding’ alone are not enough for stakeholders to engage in successful collaboration; even if partners define their expectations, share their concerns and values, and respect each others’ positions, they might still believe that other parties will act in their personal self-interest and not in the collective interest (Ansell and Gash, 2008). Only if partners believe that they can rely on each other, will they engage in joint projects and work together to reach a bigger impact.

Third, shared commitment to the process from all stakeholders is fundamental for achieving collaborative action (Thomson and Perry, 2006). Commitment to the process is achieved if partners believe that *“good faith bargaining for mutual gains is the best way to achieve desirable policy outcomes”* (Ansell and Gash, 2008, p.559). In the Nusa Penida MPA governance network many stakeholders seem to be highly committed to curb environmental degradation but they seem less committed to the collaboration process itself. This poses a problem because stakeholders are more willing to engage in individual projects rather than combining efforts to bigger projects. Hence, shared commitment to the process is fundamental to combine individual action to collective action. This is supported by Margerum (2002) who found that ‘member commitment’ is the most important factor facilitating collaboration.

It is easy to see now why the three elements ‘deliberation’, ‘trust’, and ‘shared commitment’ are so important for collaborative action: ‘Deliberation’ is the starting point for any kind of collaborative endeavor, the basis for generating social capital, and the key to maintaining collaboration over time; ‘trust’ is the only element that can create confiding relationships and strong social bonds among partners; lastly, ‘shared commitment’ motivates stakeholders to cross organizational and sectoral boundaries to engage in joint efforts, rather than only individual projects. While all other elements of the collaboration dynamics, such as ‘leadership’, ‘resources’, ‘internal legitimacy’, and ‘procedural and institutional arrangements’, are essential for any action to happen, only with ‘deliberation’, ‘trust’, and ‘shared commitment’ can collaborative action be achieved.

In the Nusa Penida MPA governance network ‘deliberation’ and ‘trust’ have been found to be only present to a low extent, while ‘shared commitment’ shows a moderate level (Table 3). This explains why there have been no major intermediate outcomes so far and partners have entered some stage of collaborative inertia: Due to the low level of reasoned communication, partners do not get the chance to ask challenging questions and express honest disagreement. This, in turn, has hampered the building of mutual trust and confiding relationships. Finally, stakeholders do not seem to believe that they can rely on each other and prefer to engage in individual projects rather than investing time and energy in collaborative action. In conclusion, if collaborative governance in the Nusa Penida MPA network is to yield successful collective action in the future it is indispensable to address the above-mentioned issues. Only if ‘deliberation’, ‘trust’, and ‘shared commitment’ are improved, can collaborative inertia be overcome and collaborative action be achieved.

5.2.2. Interrelationship between the Collaboration Dynamics

Emerson *et al.* (2012) also write that *“the framework itself would benefit from critical applications to cases and examples of collaborative governance. It would be useful to closely examine the components and their interrelationships to describe their strengths and weaknesses, limits of applicability [...]”* (Emerson *et al.* 2012, p.22). Therefore, the interrelationship between the three components of the collaboration dynamics, namely ‘principled engagement’, ‘shared motivation’, and ‘capacity for joint action’, has been analyzed in this thesis.

Emerson *et al.* (2012) write that ‘shared motivation’ must be generated before ‘capacity for joint action’ is achieved. They say that commitment, trust, understanding and internal legitimacy – the elements of ‘shared motivation’ – need to be developed first before resources are leveraged, knowledge is shared, regulations are made, and a leader is assigned – the elements of ‘capacity for joint action’. In this study it has been found, however, that ‘shared motivation’ is not necessarily the precursor for ‘capacity for joint action’. In fact, the causal relationship between these two components depends on the type of collaborative governance arrangement that is applied in the individual setting.

According to Charlie *et al.* (2012) there are two types of collaborative governance networks: First, action-oriented networks where the initiative comes from private institutions or the community who engage with the objective to yield collaborative action for tackling problems; second, policy and planning networks where public institutions or the government initiate collaboration by coordinating relationships with other stakeholders such as NGOs, business owners and local communities with the objective to develop and implement action plans. While the action-oriented network is voluntary and self-regulating, the policy and planning network is rather mandatory and regulatory (Charlie *et al.* 2012). In the next paragraphs it will be discussed how the type of collaborative governance arrangement influences the causal relationship between the collaboration dynamics.

‘Principled engagement’ is the ‘wheel’ that starts turning first in both types of collaborative governance networks. Only if partners communicate, identify shared interests, and make their expectations explicit, can collaboration be initiated. Hence, ‘principled engagement’ is the component of the collaboration dynamics that is set in motion first, no matter in which collaborative governance setting. Which ‘wheel’ starts turning next, however – whether ‘shared motivation’ or ‘capacity for joint action’ – depends of the type collaborative governance approach (see 2.3).

In an action-oriented network, ‘shared motivation’ needs to be generated before ‘capacity for joint action’ can be achieved. This is, because collaboration is voluntary and stakeholders need to develop mutual understanding, trust, and commitment before they are willing to share resources and before a leader can be assigned. In a policy and planning network on the other hand, where participation is mandatory, rules and regulations might be formulated before engagement from stakeholders is achieved. Thus, ‘capacity for joint action’ might be the ‘wheel’ that starts turning before ‘shared motivation’ is set in motion. Yet, also in a policy network motivation and commitment are essential elements to yield stakeholders support and sustain collaboration over time.

According to Charlie *et al.* (2012) the collaborative governance setting in Nusa Penida MPA is a policy and planning network. Collaboration was initiated by the CTC and the objective is to implement and enforce the management plan jointly with all user groups (Charlie *et al.* 2012). The first step in the establishment was the socialization of the idea of Nusa Penida MPA. Thirty-three meetings were conducted by the CTC involving all relevant stakeholders to reach agreement and mutual understanding about the concept of the MPA (CTC, 2012). Thus, the first collaboration dynamic that was set in motion in the policy network of Nusa Penida MPA was ‘principled engagement’.

In the second step, the management plan was developed, the Implementation Unit created, and the zoning system introduced (CTC, 2012). All of these regulations and protocols belong to the component ‘capacity for joint action’ of the collaboration dynamics. Yet, while these management actions were being implemented, partners just started getting to know each other and did not have the chance to develop trust and mutual understanding. Hence, in the Nusa Penida MPA governance network ‘capacity for joint action’ was set in motion by ‘principled engagement’ and only then did the wheel of ‘shared motivation’ start turning.

In conclusion, the collaboration dynamics within the collaborative governance framework by Emerson *et al.* (2012) are not interacting in the same way for all collaborative governance arrangements. It depends on the nature of the network, e.g. whether it is action-oriented or policy-oriented, in which way the three concepts ‘principled engagement’, ‘shared motivation’, and ‘capacity for joint action’ are interrelated. Yet, these three components are constantly reinforcing each other in an iterative and interactive way and hence, once generated ‘shared motivation’ will also enhance and sustain ‘capacity for joint action’ and vice versa in a ‘virtuous cycle’, even in a policy network.

5.3. Limitations of the Case Study

In this chapter aspects are mentioned that are specific for Nusa Penida MPA in order to allow for the transferability of the results of this case study to other settings. Transferability refers to the question of what is context specific and what can be extrapolated from the findings (Green and Thorogood, 2014).

One specific characteristic of Nusa Penida MPA is the geographic separation between the MPA and its administrative authority, namely the district government of Klungkung. The district

government is located on Bali mainland and thus, the MPA is geographically separated from its legislative authority. This physical separation is thought to be a major reason for the low level of commitment from the district government as they are more concerned about issues on Bali mainland. This geographic separation between the MPA and the responsible government is a limitation of this case study.

Another particularity of this case study is that the denomination of the majority of people on the island is Balinese Hinduism. Local people are strongly attached to their culture and ceremonies are a daily ritual (Figure 12). Officially, there are 16 villages with formal leaders from the local government within Nusa Penida MPA; at the same time the area is divided into 40 traditional villages called 'desa pekramen' each with their own traditional leader 'adat' (Yunitawati, 2013). Next to the official law communities need to follow customary laws called 'awig-awig'. Governance of Nusa Penida MPA might be challenged by the complex dynamic these two different law systems present. Whether a management plan can be implemented or not may also depend on approval by the affected traditional village. Therefore, understanding of this complex legal and institutional constellation is required for successful MPA governance (Wardana, 2015). The challenge of having to consider two different legislative systems is a limitation of this MPA and may not be present in other MPAs.



Figure 12. Balinese Hindu ceremony in a family temple (source: author).

The third particularity of Nusa Penida MPA is the large gap between the rich and the poor. The region in general is an undeveloped rural area, with low quality infrastructure, particularly energy, water, and transportation (Yunitawati, 2013). While many local people live in poorly built shacks without proper sanitary installations, luxury dive resorts are built all over the island, mostly owned by foreigners (Figure 13). These inequalities between local people and tour operators are likely to provoke hostility among locals and might lead to conflicts in the future if not adequately addressed (Sekhar, 2003). Within the collaborative governance setting of the MPA these aspects need to be considered by the responsible management authority.



Figure 13. Left picture: Shack without sanitary instalments in Jungut Batu village; right picture: Tourist bungalow park in Jungut Batu village (source: author).

Fourth, tourism has been exploding over the last years which drastically worsens the environmental situation and increases pressure on marine and land ecosystems. New hotels are built continuously and water is used for pleasure rather than for basic needs. Yet, water reservoirs are already limited and a shortage of water during dry season is common. Due to poor water management the whole Bali area is predicted to face a water crisis by 2025 (Wardana, 2015). If these issues are not addressed fights over water reservoirs are likely to be encountered in the near future. This is another factor which needs to be specifically addressed within the Nusa Penida MPA governance network and which might not be present in other MPAs.

Lastly, Nusa Penida MPA is a relatively new MPA, established in 2010, and officially declared in 2014. Hence, it is still in its beginning stages of development. Implementation and enforcement need time and collaborative governance might look different once the zoning system is enforced. The issues found in this study are referring to an MPA that has been established only recently and might not be encountered in other MPAs that have been running for a longer time.

Even with these case-specific characteristics, however, this research does provide conclusions that can be relevant for the larger discussion of collaborative governance of MPAs.

6. Conclusion

This thesis aims to offer insights into the way social dynamics impact collective action in collaborative governance arrangements, particularly in the context of MPAs. This topic was inspired by both, governance literature and the problems that have been found in the Nusa Penida MPA governance network: First, governance literature suggests that collaborative governance frameworks need to be tested on their applicability in practice; second, previous studies identified three major problems in the collaborative governance setting of Nusa Penida MPA – the potential for conflicts and misunderstandings due to differences in language and culture between professional groups, a lack of commitment to the process by some stakeholders, and the lack of adequate resources for the implementation of the management plan. In order to address the need for testing collaborative governance theory in practice and the need for investigating social dynamics in the Nusa Penida MPA network, the following research question was identified:

How does collaborative governance, and particularly the collaboration dynamics ‘principled engagement’, ‘shared motivation’ and ‘capacity for joint action’ affect collaborative action in the Nusa Penida MPA network?

In order to answer this research question the collaborative governance framework by Emerson *et al.* (2012) was used to analyze the social interactions in the Nusa Penida MPA governance network. Applying this collaborative governance framework in practice has shown that achieving effective action is highly dependent on the successful generation of all twelve elements of the collaboration dynamics (Table 2). Yet, while all elements are important to reach *action*, the three elements ‘deliberation’, ‘trust’, and ‘commitment’ are absolutely indispensable to yield *collaborative action*, and sustain collaboration over a longer period of time. This is, because ‘deliberation’ creates the basis for generating social capital, ‘trust’ is indispensable for building confiding relationships and social bonds, and ‘shared commitment’ motivates stakeholders to cross organizational and sectoral boundaries to engage in joint efforts. Only if these three elements are successfully generated, will partners combine their efforts and engage in joint projects rather than individual ones. While all other elements of the collaboration dynamics, including ‘leadership’, ‘resources’, ‘internal legitimacy’, and ‘procedural and institutional arrangements’, are essential for any action to happen, only with ‘deliberation’, ‘trust’, and ‘shared commitment’ can successful collaborative action be achieved. This analysis allowed to reach the first objective of this thesis, namely to understand how social dynamics within a collaborative governance arrangement impact collaborative action in the local context of MPAs.

The second objective of this study is to assess the applicability of the collaborative governance framework of Emerson *et al.* (2012) in practice. With the help of a second framework, namely the governance network theory of Charlie *et al.* (2012), the interrelation between the three collaboration dynamics could be analyzed. In the scope of this thesis it was found that the way in which the three components ‘principled engagement’, ‘shared motivation’ and ‘capacity for joint action’ interact, depends on the *type* of collaborative governance network. There are two types of collaborative governance networks, action networks and policy networks. In an action network, collaboration is voluntary and stakeholders need to develop mutual understanding, trust, and commitment before they are willing to share resources and before a leader can be assigned. In a policy network on the other hand, where participation is mandatory, rules and regulations might be formulated before

engagement from stakeholders is achieved. Hence, in a voluntary action network 'shared motivation' needs to be generated before 'capacity for joint action' is achieved, while in a mandatory policy network it is likely to be the other way around. In conclusion, the collaboration dynamics of the collaborative governance framework by Emerson *et al.* (2012) are interacting differently, dependent on the type of collaborative governance setting. The question that arises is which one of the two governance networks holds the better chance to generate effective collaborative action? It appears that action-oriented networks are more likely to achieve collective action; this is, because collaboration is voluntary and thus, the network will only be established if stakeholders show commitment to the process. Hence, if stakeholders decide to go the way of collaboration, it is due to partners' commitment to yield collective action. Policy-oriented networks on the other hand impose regulations without necessarily having achieved stakeholder commitment beforehand. Thus, in a policy network the initiation of collaboration does not necessarily mean that stakeholders will show commitment and engagement in the end. This creates a social dilemma: On the one hand public agencies or institutions are often needed to initiate collaborative endeavours and to guide stakeholders through the process; waiting for stakeholders to engage in collaboration by themselves might take a long time and action is needed sooner rather than later. On the other hand imposing regulations on user groups without building trust among them may result in collaborative inertia; if partners do not trust each other and are not committed to the process implementation is problematic and the success of the governance setting at stake.

Collaborative inertia has happened in the collaborative governance arrangement of Nusa Penida MPA. Nusa Penida MPA network is a policy network and hence, regulations for governing the MPA were formulated before stakeholders had the time to get to know each other and develop trust. Furthermore, partners do not see any improvement of the environmental situation at the moment which makes them doubt whether collaborative governance is effective. The lack of trust and tangible outcomes has led to collaborative inertia among some stakeholders. In order to overcome this collaborative inertia and to resolve conflicts in the Nusa Penida MPA arrangement, this thesis has a third objective; it aims to generate knowledge that may help to achieve the mission of the Nusa Penida MPA management plan to foster collaborative governance among stakeholders. In the following, five suggestions will be made that might help improve collaboration among partners: First, regular meetings should be scheduled with all stakeholders since face-to-face dialogue consistently enhances cooperation in social dilemmas. Personal communication will help clarifying misunderstandings and allow talking about ideas that have already been proposed but not yet been discussed any further, e.g. the provision of a boat for patrolling by dive operators. Second, the management plan should be made publically available in order to increase transparency. This would also help eliminating the confusion about who is responsible for what and who actually holds responsibility and authority. Third, partners should engage in trust building if they want to yield effective collective action in the future. Trust is generated by proving to each other that partners are dependable, reasonable, and predictable. Also for building trust reasoned communication is required and the expression of honest disagreement; stakeholders must show that they are willing to make good-faith efforts to act in the best collective interest. Fourth, local leadership should be stimulated and supported. Local governments, associations, and NGOs should step up and take the initiative for collective action. There are many ideas of how to share resources within Nusa Penida MPA network, e.g. the citizens on patrol initiative. Now stakeholders need to try out these ideas and inspire others to follow their path. Lastly, a central position is needed for coordinating communication, organizing and disseminating information, and keeping partners alert to the jointly determined rules that govern their relationship. The CTC is the main facilitator in the governance network of Nusa Penida

MPA and they are already engaging in disseminating information. Yet coordinating communication among different stakeholder groups would require some more attention. In conclusion, considering the above-mentioned suggestions could help the Nusa Penida MPA governance network to improve factors that are currently provoking conflict and impeding effective governance. Only if collaborative inertia is overcome will partners actively engage in collaborative action and only then can the environmental situation in Nusa Penida MPA be improved.

The last objective of this thesis is to support UNEP's core strategic effort to develop innovative approaches and capacities for the implementation of collaborative governance in MPAs. In order to develop innovative approaches for collaboration two steps are required: First, it is necessary to find out what exactly the challenges and obstacles to collaboration are; and second, it is essential to develop a blueprint for the best possible approach to collaborative governance. Therefore, in a first step, this thesis provided a greater insight into the complex social dynamics of collaborative governance arrangements that may lead to conflict and impede collective action in MPAs; in a second step, this thesis aimed to understand and assess a theoretical framework that will have a real, positive and direct influence on collaborative governance practice and might serve as a blueprint for future governance endeavors. The collaboration dynamics of the collaborative governance framework of Emerson *et al.* (2012) have been proven to be essential for achieving good governance practice. Hence, this framework could help partners to focus on elements that need to be improved in their individual context and guide them through the rough patches of collaboration. More case studies are needed in order to identify challenges in different governance settings and in different contexts. Yet, this thesis is another step in the process of finding a blue print for successful collaboration in MPAs which eventually will have a real and positive impact on collaborative action.

"The term 'collaborative governance' promises a sweet reward. It seems to promise that if we govern collaboratively, we may avoid the high costs of adversarial policy making, expand democratic participation, and even restore rationality to public management" write Ansell and Gash (2008, p.561). Reality has shown, however, that collaborative endeavors are inherently fragile systems. They are fragile because they depend on the development of trust, understanding, and commitment while at the same time creating complex social dynamics. According to Thomson and Perry (2006) *"there is a fine line between gaining the benefits of collaborating and making the situation worse"* (Thomson and Perry, 2006, p. 28). Moreover, collaboration is costly; the most costly resources of collaboration are not money but the investment of energy and time. Hence, collaborating for the sake of collaboration will most likely result in failure. Yet, despite all these challenges, collaborative governance is currently one of the most promising governance mechanisms to ensure sustainable management of MPAs. It is worthwhile to study the complex social dynamics within collaborative governance networks in order to generate effective collaborative action. Why is collaborative action so important? It is so important because *"no society can exist without collective action. Collective action is not an instance of politics [...] but what makes politics possible"* (Medina, 2009, p.249). One example is the success of ozone regime in the 1980s. Chlorofluorocarbons (CFCs), which were widely used in refrigeration, air-conditioning, and aerosol sprays, caused a depletion of the stratospheric ozone layer and an associated increase in risk of skin cancer and cataracts. CFCs were a global problem and yet international politics managed to almost entirely curb the production and consumption of CFCs by 2006. This ozone regime owes a large part of its success to the fact that countries were working collaboratively to tackle this problem (Zerefos *et al.*, 2009). Thus, while action alone can merely make small changes, collaborative action *"can accomplish mighty goals that would otherwise be unthinkable"* (Medina, 2009, p.249). Also Ostrom (1998) writes that collaborative action is needed because *"national governments are too small to govern the global commons and too*

big to handle smaller scale problems” (Ostrom, 1998, p.17). If we want to tackle the vast amount of problems that are currently threatening our oceans we must engage in collaborative action. In order to curb plastic pollution, halt climate change, stop biodiversity loss, and stem the destruction of marine ecosystems we need to repeat the collaborative action approach that was so successful in the ozone regime. The aim of collaborative governance is to accomplish desired goals together which could not be achieved by the individuals acting alone. Hence, we must act collectively in order to create change, not only for our sake but also for the sake of future generations.

***“Coming together is a Beginning;
Keeping together is a Progress;
Working together is Success!”***

Henry Ford

7. References

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8. Appendix

Table 4. List of key stakeholders participating in the interviews with the respective date and location.

Sector	Agency/Organization	Date of Interview	Location of Interview
Government (public sector)	Government of Jungut Batu Village	9 February 2015	Jungut Batu, Nusa Lembongan
	Government of Lembongan Village	19 March 2015	Lembongan Village, Nusa Lembongan
	Ministry of Marine Affairs and Fisheries, Republic of Indonesia	12 March 2015	Jakarta, Java
	Technical Implementation Unit - Klungkung Fishery Office	26 February 2015	Nusa Penida
Non-Governmental Organizations (interest groups)	Aquatic Alliance	2 February 2015	Jungut Batu, Nusa Lembongan
	Coral Triangle Center	27 January 2015	Denpasar, Bali
	Friends of Lembongan	2 March 2015	Lembongan Village, Nusa Lembongan
	Lembongan Marine Association	2 February 2015	Jungut Batu, Nusa Lembongan
	Nusa Ayu	2 February 2015	Jungut Batu, Nusa Lembongan
Tourism Industry (private sector)	Bali Eco Deli (restaurant)	22 February 2015	Jungut Batu, Nusa Lembongan
	Big Fish Diving (dive operator)	14 February 2015	Jungut Batu, Nusa Lembongan
	Blue Corner Dive – Jungut Batu (dive operator)	9 February 2015	Jungut Batu, Nusa Lembongan
	Blue Corner Dive – Mushroom Beach (dive operator)	31 January 2015	Jungut Batu, Nusa Lembongan
	Dive Concepts (dive operator)	1 February 2015	Jungut Batu, Nusa Lembongan
	Lembongan Dive Center (dive operator)	5 February 2015	Jungut Batu, Nusa Lembongan
	Sugriwa Fast Boat (boat business)	11 February 2015	Jungut Batu, Nusa Lembongan
	World Diving (dive operator)	31 January 2015	Jungut Batu, Nusa Lembongan
Local Resource Users	Fisherman and Seaweed Farmer in Jungut Batu Village	19 February 2015	Jungut Batu, Nusa Lembongan
	Fisherman and Seaweed Farmer on Nusa Ceningan	18 February 2015	Jungut Batu, Nusa Lembongan
	Seaweed Farmer in Lembongan Village	23 February 2015	Lembongan Village, Nusa Lembongan
Scientists	Marine Biologist PhD	18 March 2015	Jungut Batu, Nusa Lembongan
	Marine Biologist MSc	27 February 2015	Jungut Batu, Nusa Lembongan