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**ACHIEVING MORE EFFECTIVE
GOVERNANCE IN MULTI-
JURISDICTIONAL MARINE
PROTECTED AREAS IN
VIETNAM**

Thesis submitted by

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February 2011

**For the degree of Doctor of Philosophy in the
School of Earth and Environmental Sciences,
James Cook University**

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Abstract

Marine protected areas (MPAs) have been developed as a tool for conservation and natural resource management. A number of tangible and intangible benefits of MPAs, across spatial, temporal and social boundaries, have been identified by a diverse body of research in the natural and social sciences. Important international conventions have called for the establishment of MPAs, but the scale and speed of MPA establishment, as well as their governance and management effectiveness, are of concern to stakeholders around the world. In Vietnam, a national network of fifteen MPAs has been proposed and approved to be completely established by 2020. However, a significant number of existing MPAs have been reported as not effectively established, governed and managed. Institutions and their governance are seen as potential targets to improve the effectiveness of MPAs. In addition, there are problems relating to the multilevel jurisdictional nature of marine protected areas in Vietnam. This thesis aimed to develop an understanding of how multilevel institutional development, social interactions and contextual causes have affected establishment, governance and management of MPAs and to identify reforms that would produce more effective governance and management in multi-jurisdictional MPAs in Vietnam.

Three marine areas in Vietnam at Con Dao, Nha Trang Bay and Halong Bay were selected as major study sites for this research. They were selected as representatives of three regions of Vietnam based on their specific geographic, socio-economic and cultural characteristics. These sites have multi-stakeholder conflicts and multi-jurisdictional issues. Two additional MPAs – Culaocham and Phu Quoc, in other regions were also examined by the researcher to enrich data for generalization of research results.

This research combines critical ethnography with case study research. A multilevel analytical framework was developed based on theories and concepts relating to institutional analysis, effective governance, organizational structures, social learning and common-pool resource management. This framework was used to guide the collection, analysis and interpretation of data. A number of methods (e.g. document reviews, focus group discussions, semi-structured interviews and participant observation) were used to collect data across local communities, provincial structures and national levels. Three data categories relating to (i) formal institutions, (ii) interagency collaborative governance and (iii) contextual conditions and informal institutions, were classified for data analysis. Data interpretation was undertaken by combining the conceptual framework, contextual conditions, observation of the environmental values,

culture, belief and behaviour of MPA actors, and critical reflection by the researcher. Triangulation strategies (e.g. through data sources, methods, investigators), critical reflexivity and peer debriefings enhanced the rigour of the research.

Three main groupings of variables were identified as being important barriers to the development of effective governance and management of MPAs in Vietnam. The first group illustrated the complexity and dynamics of formal institutions as key restraining forces on effective governance and management of MPAs. These were (i) implicit and inconsistent MPA-related policies and strategies across institutional levels, (ii) overlaps in allocation of responsibility among agencies responsible for governance of marine protected areas and related sectoral strategies and policies, (iii) unstable organizational structures responsible for marine protected area governance, (iv) MPAs established based on insufficient information and for external interests, (v) incongruence between rules-on-paper and rules-in-use, and (vi) insufficient staffing and capacity building programs relating to MPA management.

The second group included perceived barriers to interagency collaboration through poor inter-individual collaboration. These were (i) differences in personal strategies and perceptions of staff from different agencies, (ii) weak inter-personal relationships, and (iii) inadequate personal characteristics and leadership approaches. The inter-organizational collaboration was also impeded by (i) difference in agency management type, (ii) power conflicts, and (iii) lack of incentive sharing mechanisms.

A set of causal variables relating to socioeconomics and informal institutions that affected the participation of local communities was the third and final group. These consisted of (i) low awareness of local communities about MPA objectives, goals and approaches (ii) economic difficulties, low financial support and lack of a benefit sharing mechanism and (iii) weak social capital because of diverse origins among local people, the influence of family relationships and diminished traditional culture, norms and taboos. This research also revealed three additional variables that influence the relationships between state and non-state actors in the conduct of social activities and interactions occurring within the governance and management of MPAs. These were a lack of (i) mutual trust, (ii) interactive communication and (iii) reciprocity.

It is concluded that the existing institutions and political organizational structure in Vietnam has made MPAs and the national MPA network unique and isolated from the government management system and civil society. This research demonstrates that institutions formed inconsistently and implicitly over various levels and sectors of the government have contributed to ineffective governance and management practices. In addition, strong political

will on the part of state actors is essential for effective governance and management of MPAs, as is mutual trust, regular interactive communication and reciprocity between and within state and non-state actors. Some specific recommendations from this research include, among others, a suggestion to undertake adaptive co-management to improve the effectiveness of governance and management of MPAs in Vietnam.

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CHAPTER 1: INTRODUCTION.

This research on marine protected areas (MPAs) in Vietnam arose from my own experience. As a Coordinator of the Hon Mun MPA pilot project and involved with the Nha Trang Bay MPA and other marine conservation projects, I identified a concern that MPAs have not been as successful as intended, despite attempts to establish and maintain these MPAs. The effectiveness of management and governance of MPAs, in Vietnam, therefore, became a focus for this research. This thesis describes a novel approach that examines institutions and governance together to understand the nature of inherent interactions and accumulative influences of the multilevel institutions and contextual conditions on the governance and management of MPAs. The purpose of this research is to understand the possible impacts of these factors on the effective governance of the MPAs that could help develop processes to improve the overall management of MPAs. This study has not only reinforced past research, but also contributed original and innovative applications and implications for the theory and practices related to effective governance and management of MPAs as social-ecological systems. These include: (i) developing and testing a multilevel analytical framework based on a diverse array of social-science disciplines, theories and concepts; (ii) applying various qualitative data collection methods and instruments to examine the complexity of institutional formulation and development, institutional functioning, enforcement and decision-making; and contextual factors manifesting in the governance and management of MPAs studied; and (iii) constructing an operational framework of interactive institutions and governance, by synthesizing research findings, to contribute to further understanding to contribute to the development of more effective governance and management of social-ecological systems.

1.1 Research context

1.1.1 International protected area and marine protected area conventions and research trends

“In this changing world, we need a fresh and innovative approach to protected areas and their role in broader conservation and development agendas... We see protected areas as providers of benefits beyond boundaries—beyond their boundaries on a map, beyond the boundaries of nation-states, across societies, genders and generations.”

The Durban Accord – World Parks Congress 2003

Significant benefits of protected areas in general, and marine protected areas in particular, are well established. The benefits of marine protected areas (MPAs) have been explored and confirmed by a diverse body of research in the natural and social sciences. These include increases in caught biomass and population size, inside (Roberts and Hawkins, 2000, Côté *et al.*, 2001, Gell and Roberts, 2003, Halpern, 2003, Palumbi, 2004) and outside of MPAs (Kramer and Chapman, 1999, Tupper and Juanes, 1999, Roberts *et al.*, 2001, Gell and Roberts, 2003, Russ *et al.*, 2004), as well as increased genetic biodiversity (Bergh and Getz, 1989). These biological benefits may contribute to improved socioeconomic conditions at large (Russ *et al.*, 2004, Pomeroy *et al.*, 2005). The benefits of protected areas including MPAs can extend beyond the limits of spatial, temporal and social boundaries of protected areas. This viewpoint was agreed by most policy makers, managers, scientists and other participants across 154 countries and territories, who attended the World Parks Congress 2003 (The Durban Accord). However, not all protected areas have been effectively established and managed (Kelleher *et al.*, 1995, Mora *et al.*, 2006). The concept of a “Paper Park” has persisted for some protected areas (Hockings *et al.*, 2000, Roberts and Hawkins, 2000). In addition, Coad *et al.* (2009) reviewed the status of MPAs around the world and claimed that a target of 10% MPA coverage is unlikely to be achieved by 2012, as agreed in the Convention on Biological Diversity (CBD) framework. This target would not be met until 2047 – 35 years later, if the current mean growth rate of 4.6% per annum remains for marine protected area networks (Wood *et al.*, 2008). MPA-related stakeholders around the world are concerned not only with the scale and speed of MPA establishment, but also their governance and management effectiveness. Some questions that emerge are “what are the causes of this MPAs’ status and how can these causes be resolved?”

At the World Parks Congress – 2003 in South Africa, the Durban Accord called for “... a fresh and innovative approach to protected areas and their role in the broader conservation and development agenda” towards sustainable development. Governance has been identified as “... central to the conservation of protected areas throughout the world” (WCPA 2003, p 33). “Governance, participation, equity and benefit sharing” and three other principal programs¹ were developed for the Programme of Work on Protected areas, at the seventh meeting of the Conference of the Parties toward the Convention on Biological Diversity (CBD), held in Kuala Lumpur in February 2004 (CoP7). Of these, the governance program was identified as an underlying factor significantly affecting the other programs. Similarly, governance has also been realized as a fundamental factor affecting the ability of protected areas to attain their goals

¹ These include (i) Direct actions for planning, selecting, establishing, strengthening, and managing, protected-area systems and sites; (ii) Governance, participation, equity and benefit-sharing; (iii) Enabling activities; and (iv) Standards, assessment, and monitoring.

and objectives (Dearden *et al.*, 2005). Governance can help integrate protected areas into their broader land and waterscapes for a more ecologically integrated system (Borrini-Feyerabend *et al.*, 2008). Studies about governance and the forces that influence it are thus essential for improving effective establishment and management of protected areas and for the integration with broader social and ecological perspectives.

There is an extensive literature on the shift from an administrative state to a collaborative state (Koontz and Thomas, 2006) or from hierarchical government to multilevel governance (Rhodes, 1997, Dwyer, 1998, Davis and Rhodes, 2000, Pierre and Peters, 2000, Considine, 2001, Peters and Pierre, 2001, Banner, 2002, Newman *et al.*, 2004) of environmental issues. This is especially so for marine protected areas where there is a range of actors and stakeholders across the different levels and scales possessing various, but often conflicting, powers and interests (Brown *et al.*, 2001). Participatory and collaborative forms of governance have been expected to provide more equitable access rights to stakeholders (Pomeroy, 1995), more symmetrical distribution of powers to actors (Williams, 2004), more transparent and democratic decision-making (Moote *et al.*, 1997, Warburton, 1997, Plein *et al.*, 1998, Mason, 2000, Kapoor, 2001, Bulkeley and Mol, 2003) that in turn lead to more effective improvement of environmental quality (Newig and Fritsch, 2009) and sustainable development (Osmani, 2008). Within this trend, researchers have developed variables and principles to measure and demonstrate characteristics of collaborative and participatory processes (Lind and Tyler, 1988, Gray and Wood, 1991, Wondolleck and Yaffee, 2000, Platteau, 2008, Newig and Fritsch, 2009). Other studies have examined contextual conditions (Gray and Wood, 1991, Huxham *et al.*, 2000, Kalegaonkar and Brown, 2000, Wondolleck and Yaffee, 2000) towards effective governance (Costanza *et al.*, 1998, Adger *et al.*, 2003, Borrini-Feyerabend, 2003, Graham *et al.*, 2003). More studies, however, remain to be undertaken to link these variables to illustrate a cause-effect relationship between the variables, contextual conditions and outputs.

In addition, there is a very close relationship between institutions and governance. Governance can only become effective if institutional structures and economic resources are available for enforcing the institutions (Roy and Tisdell, 1998) to ensure that all the rules are generally followed by all the actors (Dietz *et al.*, 2003). Studies and analyses of institutions, in general, have been carried out by a number of researchers (Ostrom, 1986, North, 1990, Ostrom, 1990, Knight, 1992, Crawford and Ostrom, 1995, Scott, 1995, Agrawal, 2001, Costanza *et al.*, 2001, Brunckhorst, 2002, Ostrom *et al.*, 2002, Young, 2002b, Young, 2002a, Young, 2003, Anderies *et al.*, 2004, Furubotn and Richter, 2005, Young, 2006). A number of institutional analytical frameworks have also been developed and applied in natural resource management by others (Oakerson, 1990, Ostrom, 1992, Thomson, 1992, Imperial, 1999a, Imperial, 1999b, Gibson *et*

al., 2000a, Noble, 2000, Olsson and Folke, 2001, Hagedorn *et al.*, 2002, Dolsak and Ostrom, 2003a) and specifically for marine resources (Pomeroy, 1995, Pido *et al.*, 1997, Juda and Hennessy, 2001, Tompkins *et al.*, 2002, Rudd *et al.*, 2003, Hidayat, 2005, Hilborn *et al.*, 2005, Hanna, 2006). However, few studies integrate or connect variables and principles related to institutions and governance to exemplify or understand their cumulative influences, including internal and external, on governance and management effectiveness in MPAs.

In summary, more research is needed to better understand the effectiveness of institutions, governance and management of protected areas, including marine protected areas, and their reciprocal influences in a specific context. There is a need to identify innovative approaches and solutions which can constructively contribute to biodiversity conservation and sustainable development.

1.1.2 Marine biodiversity, environmental governance and management in Vietnam:

Vietnam has a coastline of 3260 km stretching over 13 degrees of latitude with a variety of biogeographic features. According to Spalding *et al.* (2007), the coastal area of Vietnam belongs to the Central Indo-Pacific (Biogeographic) Realm including the South China Sea and the Sunda Shelf province (No. 25 and 26, respectively). Based on the distinction in species composition and ecosystems determined by oceanographic and topographic features, this national marine area has been classified into two eco-regions, namely, the Gulf of Tonkin (No. 112) and Southern Vietnam (No. 116) (Spalding *et al.*, 2007). The large range of geographic characteristics has partially contributed to the high diversity in species composition and ecosystems for these marine and coastal areas. There are not only typical tropical ecosystems, such as coral reefs, seagrass beds and mangroves, but also other coastal ecosystems with high bio-productivity, for example, tidal marshes, lagoons, river mouths, tidal mudflats, wetlands or up-welling areas (Hoi *et al.*, 2000). These ecosystems contain approximately 350 hard-coral species and 120 soft-coral species; 15 seagrass species; 35 mangrove species; 334 species of gastropods and 356 species of bivalves; 2108 fish species; 5 sea-turtle species and 15 marine mammal species including whale, dolphin and dugong (Vinh and Yet, 1998).

Marine and coastal areas have also become important for the economic development of Vietnam thanks to the high value of these diverse marine resources and a large Exclusive Economic Zone (EEZ) of more than 1 million km² - threefold the mainland area. Marine dependent industries have contributed significantly to the GDP of Vietnam, for example, oil

exploration, fisheries, marine-environment-based tourism and maritime transport. Of these, the fisheries industry is one of the fastest growing in Vietnam, particularly since 1990. Yearly average growth rates of this industry are 9.26% and 18.01% for the total yield caught and product value, respectively². This industry has also employed a considerable number of workers (approximately 270,600 employees in 1990 and 540,000 employees in 2000, respectively) (Long, 2001).

In addition, a rapid increase in population of coastal communities because of biological and physical reasons has been recorded. Most fisheries villages in Vietnam are small. A high proportion of local residents make a living from small-scale fishing activities (Long, 2001). The local fishers perceive an advantage in having many children for self-supply of labour to traditional fishing activities. Moreover, many young people from the inland have moved to these fisheries communities to seek employment. Therefore, many socio-economic and environmental issues have occurred increasingly because of the population increase in these communities (Long, 2001, Thong, 2005).

A rapid increase in population in Vietnam, in general, and marine-resource-based economic development, have brought even more severe challenges for management and governance of marine resources and sustainable development for this country. A number of destructive fishing methods, including small-mesh-size net gear, dynamite and cyanide fishing practices, have still been recorded in most coastal areas (Long, 2004). Fishing pressure has increased considerably since 1980. The number of boats and their engine capacity has increased 3.2 times and 10.5 times respectively from 1981 to 2007 (28,021 boats and 553,915 Hp in 1981; and approximately 90,000 boats and 5,800,000 Hp in 2007). The total catch per year has increased approximately fourfold during this period (approximately 418,000 tonnes and 1,900,000 tonnes in 1981 and 2007, respectively). This tendency has caused a continuous decline in fishing efficiency over time³. Moreover, marine resources of near-shore waters (shallower than 50m depth) have been quickly depleted due to a high proportion of small fishing boats (84%) operating in this area. As a result, over-exploitation at near-shore waters has occurred in this country since 1991 when the total catch reached 599,675 tonnes exceeded the estimated Maximum Sustainable Yield (MSY) of 582,000 tonnes. In addition, there are conflicts in fishing grounds between users of different fishing gears because a high percentage of offshore-

² Source: General Statistic Office of Vietnam – 3/2010

(<http://www.gso.gov.vn/default.aspx?tabid=390&idmid=3&ItemID=8732>)

³ As reported by DECAFIREP, 2009 that Catch per Unit of Effort (CPUE) has declined from 1.12; 0.9; to 0.35 and then 0.3 tonnes/Hp/year over the time from 1985; 1991; 2005 to 2007, respectively.

fishing boats (63%) are operating at near-shore areas⁴. The erosion of marine resources has also been recognized by fishers in fisheries communities surveyed, for example, Halong, Quang Binh, Thua Thien – Hue, Vung Tau, and My Tho provinces where an annual catch of the same fishing-boat type has declined 2-3 times over the last 20 years (Thong, 2005). In other words, the degradation of marine resources have been reported by marine-related agencies and civil society. It is essential to seek innovative solutions, appropriate governance approaches and management tools for protecting marine environments and attaining biodiversity conservation in this country.

The Government of Vietnam has committed itself to environmental protection and biodiversity conservation through a range of actions, in terms of policy making and practical implementation, across different levels and scales. This government has joined international communities in environmental protection by signing and complying with a series of important international conventions. For example, the World Heritage Convention, the Convention on Wetlands of International Importance especially the Waterfowl Habitat (the Ramsar Convention), Convention on International Trade in Endangered Species of Wild Fauna and Flora, Vienna Convention for the Protection of the Ozone Layer, United Nations Convention on the Law of the Sea, United Nations Framework Convention on Climate Change, Convention on Biological Diversity. Furthermore, other substantial legislative documents related to environmental protection and biodiversity conservation at national level were concurrently approved and issued by the National Assembly. For example, the Ordinance on Aquatic Resource Protection and Development was approved in 1989, and the first Environmental Protection Law was issued in 1993.

In parallel to these institutional commitments, a number of programmes of biodiversity conservation and natural resource management have been implemented for both terrestrial and marine ecosystems with the participation of local people. Initial conservation programmes with terrestrial protected areas began in the 1960's. The first protected area – Cuc Phuong National Park, was established in 1962. Prior to the 1980's, some protected areas related to coastal and marine ecosystems, such as, Ca Mau Cape, Bac Lieu Nature Reserves were established to conserve mangroves. The marine component of Cat Ba National Park was also approved for protection in this period (UP-MSI *et al.*, 2002). Furthermore, based on comprehensive biodiversity and socioeconomic surveys conducted by national research institutions with

⁴ Source: Technical report of National Directorate of Capture Fisheries and Fisheries Resource Protection (DECAFIREP), 2009.

financial support from international organisations, such as ADB and WWF⁵, a list of 15 marine protected areas was assessed and introduced to form a national marine protected area network in Vietnam in 1998 (Hoi *et al.*, 1998, Ministry of Fisheries, 2006).

A range of MPAs in this network have been established under different jurisdictions. Of these, several sites were formed by extending the marine component of existing National Parks, such as Cat Ba and Con Dao. These are under jurisdiction of the Ministry of Agriculture and Rural Development (MARD). Meanwhile, the first two MPAs - Nha Trang Bay and Culaocham, were established in the early 2000's and shared the same institutional model under administrative jurisdiction of the Provincial People's Committee and technical supervision of the Ministry of Fisheries (MoFi). Both these were financially supported by international organisations⁶ with a strong commitment by the Government of Vietnam through Ministry of Fisheries. Subsequently, Phu Quoc MPA was established as a demonstration site funded by the United Nations Environmental Program (UNEP) and then supplemented by technical and financial support of DANIDA through a project "Supporting Marine Protected Area Network of Vietnam". This MPA is under the jurisdiction of a provincial-sectoral department – Department of Agriculture and Rural Development. In addition, some other small MPAs, such as Ran Trao, Phu Long, were formed based on initiatives of the local authorities and communities with technical and financial support of local NGOs, such as Marine Conservation and Community Development (MCD).

In addition to the ecological MPA network mentioned above, a social MPA network was developed by NGOs and MPA-related stakeholders to connect people to share visions, resources and lessons learned, and to review the status of MPAs for successfully establishing the national MPA network. The social network consists of practitioners, managers, research institutions, governmental officials and NGOs, who directly or indirectly work with or are interested in MPAs. In 2006, the first meeting of this network was organized at Nui Chua National Park, Ninh Thuan Province and a coordination committee of the network was also formed (Hien, 2006). However, this network has been ineffective because it lacks a maintaining mechanism for the system and active effort of the coordination committee⁷.

⁵ "Coastal and Marine Environmental Management in the South China Sea", Project ADB TA 5712-REG, Phase 2

⁶ World Bank/Global Environmental Funds, Danish International Development Assistance (DANIDA) and IUCN Vietnam

⁷ Personal communication with P34, P35

A number of marine protected areas (as presented above) was approved by the Government of Vietnam for establishment, amongst other related activities, as necessary actions to help reverse the degradation of marine resources and attain sustainable development⁸. These have been designed under different national, provincial and local jurisdictions, with different objectives, rules and governance approaches. The complications in these institutional structures have created some dysfunctional governance processes. Problems or challenges related to institutions and governance for successfully establishing the national protected area network have also been partly reported in scholarly documents. ICEM (2003) stated that *“(T)here are few wetlands and marine protected areas in Vietnam, and many potential fisheries benefits have not yet been realised. The government has set a target of formally establishing 15 MPAs by 2010, but the lack of a legal and institutional framework is a major challenge”*. Furthermore, the Protected Area Resource Conservation project (PARC) has reviewed existing policies and institutions related to natural conservation and protected areas in general and elaborated that *“(I)nstitutional arrangements for protected areas are complex, overlapping and inconsistent. Inter-sectoral coordination is weak; Local authorities do not have the resources and capacities to effectively take on their role as Protected Area (PA) caretakers; PA Management Boards are not given the authority and support required to effectively carry out their duties; There is no adequate process for management planning according to conservation priorities...”* (PARC-project, 2006). This report has also indicated some problems with collaboration between agencies across levels for management and governance of protected areas. However, these reviews have concentrated only on terrestrial protected areas. Research or reviews on marine-conservation-related institutions and governance is still a vacuum.

In summary, this study grew out of a combination of the current context, scholarly documents and personal interests related to problems of multilevel institutions, effective governance and management of marine protected areas in Vietnam. Three key considerations helped foster the research: (i) different MPAs are under the jurisdictions of different Ministries at the national level that have different regulations, strategies and points of view about MPA management objectives and approaches; (ii) at the provincial level, there are some constraints and conflicts in collaboration among existing government departments and the MPA management authority – a newly-established agency; and (iii) at the local level, local mass organisations have been established at some MPAs to link local people with the MPA management authority for MPA management and governance. However, the roles of these organisations in management and governance of the MPAs are vague because of a lack of decentralized authority and capacity.

⁸ Vietnam National Action Plan on Biological diversity Approved by the Prime Minister Decision No.845/TTg, on 22 December 1995

Research on marine resources and environmental institutions, governance and management in Vietnam has been much neglected to date and is indeed essential.

1.2 The research aim, question and objectives:

This research aims to develop a better understanding of the nature of social interactions and accumulative influences of multilevel institutions and social interactions, and contextual causes on the governance of MPAs, that helps facilitate to achieve more effective governance and management of the MPAs. This research deals with a guiding research question: ***“How is the governance of MPAs in Vietnam jointly affected by multilevel institutions, social interactions related to the exercise of power, and socio-political contextual influences?”*** Four research objectives have been identified to achieve the research aim as follows:

1. To establish theoretical grounding relating to natural resource institutions, governance and management.
2. To develop a conceptual analytical framework that can illustrate and provide guidance on the inter-influences between institutions, governance, contextual factors and management outcomes.
3. To undertake empirical investigations of the institutions and interactions of actors involved in decision making, governance and management of MPAs in Vietnam based on the developed framework.
4. To provide policy makers, managers and practitioners with an operational tool for better understanding the accumulative influences of multilevel institutional development, change, operation and contextual conditions on the outcomes of MPA governance, and insightful recommendations to improve the effective governance and management of individual MPAs and MPA networks.

As a guide to achieve the above objectives, more-focused research questions were developed as follows:

1. How have the multilevel formal institutions related to MPAs been formed and what factors or variables may help develop and operate this institutional structure within the specific socio-political context of the MPA system? if so, in what way?

2. What are the social interactions and relationships of the actors or players in the organisational structure and how do these social interactions and relationships affect the governance of the MPAs?
3. How do local people interact with each other in governance processes of MPAs and what contextual conditions, customary regulations hinder (or motivate) local communities to become involved in these processes? And what pre-conditions are necessary for a potential community self-governance model of MPAs within the socio-economic and institutional context of Vietnam?
4. How do existing institutions and social interactions within the specific context jointly influence the effective governance of the MPAs and how can identified drawbacks of the organisational structure be solved to achieve a more adaptive and effective national MPA network?

1.3 Research sites:

This research was primarily carried out in three marine protected areas located at three regions of Vietnam - Con Dao, Nha Trang and Halong, as representatives of the Southern, Central and Northern regions, respectively. Additionally, two other sites including Culaocham and Phu Quoc MPAs were also visited by the researcher to enrich the data and better understand the study problems (see more in **Section 2.1.6**). All of these sites are marked by different colours and shape symbols in **Figure 1.1**.

1.3.1 Halong Bay World Heritage Area

Halong Bay is situated to the Northeast of Vietnam, within Quang Ninh province (**Figure 1.2**). It was recognized as a Historical & Cultural Relict and National Scenic Spot, in 1962, by Decision No. 313/VH of the Ministry of Culture and Information. Halong Bay spans an area of 155,300 ha, including 1,969 islands and islets, of which 989 are named (United Nations Environmental Program and World Conservation Monitoring Center, 2008). This site was inscribed as a World Heritage Area (WHA) by the UNESCO World Heritage Commission for its universal values of landscapes and geology, in 1994, and geomorphology, in 2000,

respectively⁹. Furthermore, in 1995, Halong Bay, along with adjoining Cat Ba island, was proposed as a marine protected area by Hai Phong Institute of Oceanography (Nguyen Huy Yet & Vo Si Tuan, 1995 cited by BirdLife International in Indochina and Ministry of Agriculture and Rural Development, 2004). In 2002, the Halong Bay Heritage Area was established by the Prime Minister of Vietnam (Decision No 142 TTg).



Figure 1.1: Locations of case studies and other proposed MPAs in Vietnam.

⁹ Information supplied by Halong Bay Management Authority

Halong Bay is not only well known because of its spectacular seascape of pristine limestone pillars and islands. It also contains a high diversity of geology, archaeology and biology, especially marine species. In particular, this site has been reported as having a diverse geological composition resulting from different geological eras. There are very old rocks from the Ordovician period. There are benthic areas formed of ten layers, including abundant graptolites, brachiopods, fishes, corals, foraminiferas, radiolarians, bivalves and flora that were gradually built up during the Phanerozoic period. Limestone karsts have developed since the Miocene. The present Halong Bay contains islands of undercut limestone cliffs of 2,280 to >40,000 years old. Most of them were formed by transgressions in the Middle Holocene (Tran *et al.*, 2000 cited by United Nations Environmental Program and World Conservation Monitoring Center, 2008).

In addition, high biodiversity values within Halong Bay have been recorded. There are various ecosystems, including tropical forest, mangrove, seagrass, and coral reef. Of these, the tropical forest ecosystem is composed of 499 limestone-adapted plants, 14 mammals, 40 birds, 4 amphibians and 8 reptiles. Aquatic ecosystems are home to almost 1,000 species of fish and marine animals. Specifically, 232 coral species, 81 snail species, 130 molluscs, 57 crabs, 55 sand worms and 19 newly-identified-species of sponge have been found on the hard-bottom and coral-reef ecosystems. In addition, 5 seagrass species, 141 seaweeds, 29 molluscs, 3 sand worms and 9 crustaceans have been identified on soft-bottom areas¹⁰.

There are four fishing communities of over 1,600 people, residing within the Halong Bay WHA. They are named Cua Van, Cong Tai, Vong Vieng and Ba Hang villages, belonging to Hung Thang Ward, Halong City. The local people here live on bamboo rafts and houseboats. Their main livelihoods are fishing and aquaculture¹¹. Some local people have recently become involved in tourist-service activities. Tourism is a rapidly growing industry of the Halong Bay WHA. The number of visitors has increased more than 5 times over almost a decade. There were approximately 236,000 visitors, in 1996, and this figure reached 1.5-1.8 million visitors in 2005¹². Maritime transport and mining are also important economic activities operating within this area. In the past, Halong Bay was a significant port on the trade routes between China, Japan and other Southeast Asian countries. It is now a major domain of industrial and

¹⁰ Report of Institute of Ecology and Biological Resources of Hanoi, Halongcruisejunk, 2008, cited by UNITED NATIONS ENVIRONMENTAL PROGRAM & WORLD CONSERVATION MONITORING CENTER (2008). Protected areas and world heritage.

¹¹ Information supplied by Halong Bay Management Authority

¹² Information supplied by Halong Bay Management Authority

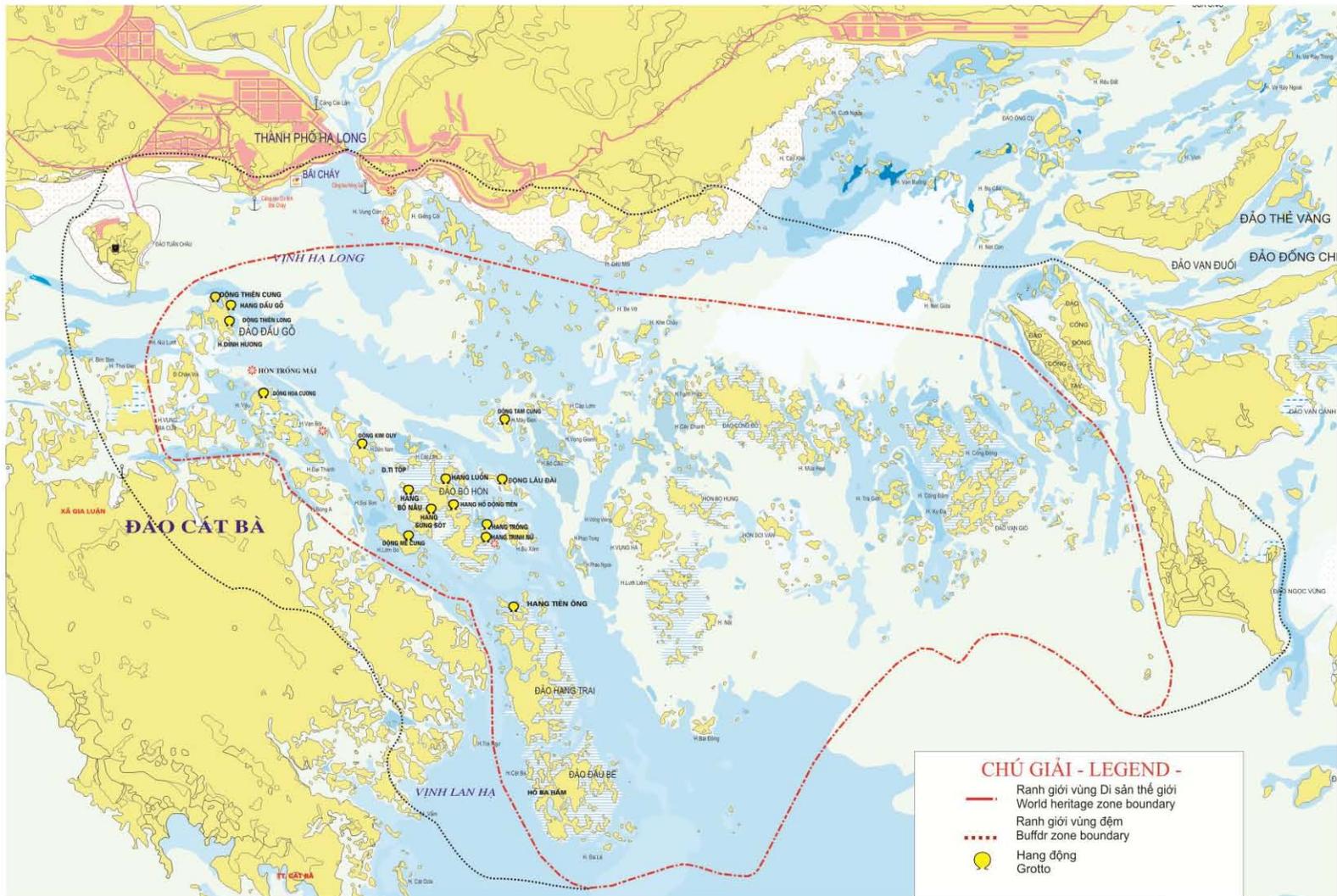


Figure 1.2: Map of Halong Bay Heritage Area (Source: Halong Bay Management Authority)

residential transport, including coal mines, tourism and local residents (United Nations Environmental Program and World Conservation Monitoring Center, 2008). These rapid socio-economic developments also contain concealed threats to the value management of the bay.

1.3.2 Nha Trang Bay Marine protected area:

In 2001, the first comprehensive marine protected area of Vietnam was launched at Nha Trang City, Khanh Hoa Province by the Ministry of Fisheries (at that time), The World Conservation Union (IUCN) and Khanh Hoa Provincial People’s Committee (PPC). Hon Mun Marine protected area Management Authority was formed under Decision 2471/QĐ-UB of Khanh Hoa PPC. This authority has been collaborating with other Provincial Departments, Vinh Nguyen Commune and local communities to manage the MPA using a co-management approach. In 2004, when Nha Trang Bay was adopted as one of the 29 most beautiful bays of the world the MPA changed its name to Nha Trang Bay MPA by Khanh Hoa PPC (Decision No. 40/2004/QĐ-UBND). This MPA covers approximately 16,000 ha, of which 3,800 ha is land area and the surrounding water area is 12,200 ha (Ministry of Fisheries, 2006) (**Figure 1.3**).

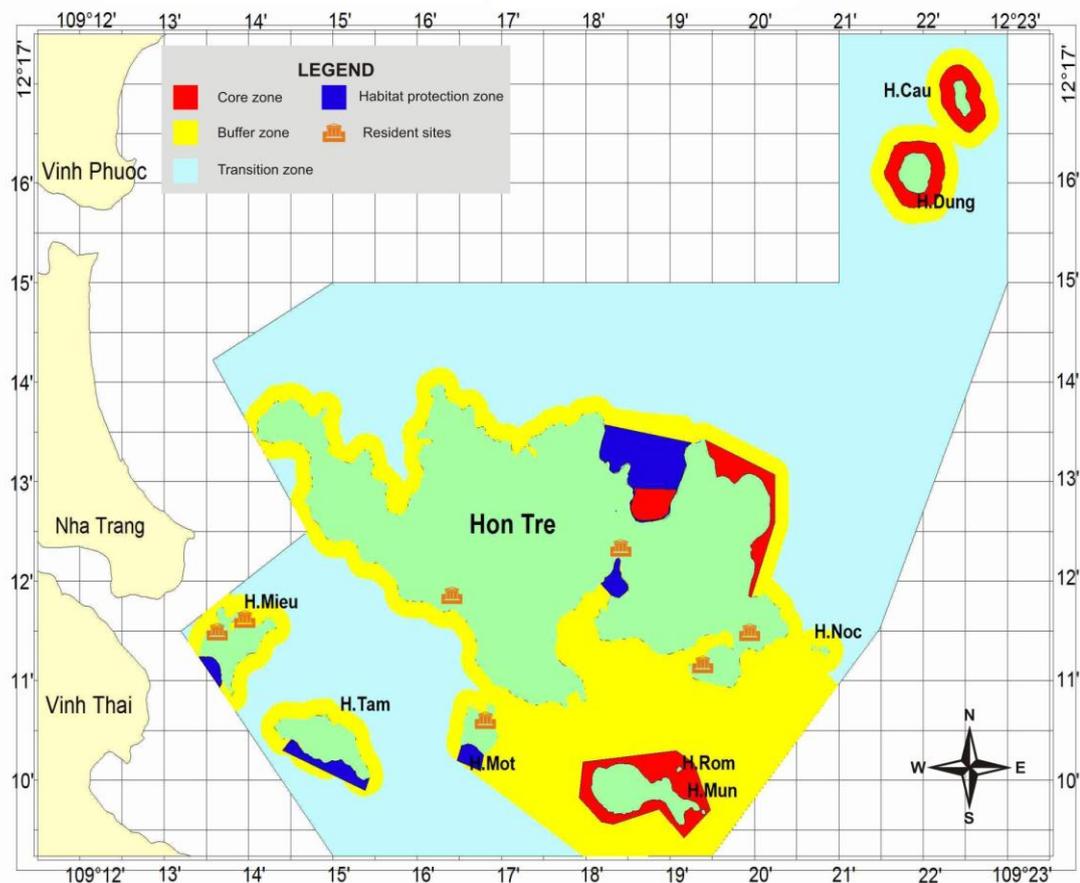


Figure 1.3: Map of Nha Trang Bay MPA (Source: adapted from a map provided by Nha Trang Bay MPA Management Authority)

Nha Trang Bay MPA has been recognized as one of the areas that contain the highest marine biodiversity values in Vietnam. In 2002, a comprehensive biodiversity survey carried out by an international specialist and other scientists of Nha Trang Institute of Oceanography reported that there are three important ecosystems in this bay, including 20 ha mangroves (14 species), 7 ha seagrass beds (7 species) and internationally significant coral reefs. Approximately 350 reef-building species have been identified in these waters. These represent more than 40% of global (800) species and nearly half of known species of the Indo-Pacific region. In addition, 220 species of demersal fishes (102 genera, 38 families), 106 mollusc species, 18 echinoderm species and 62 algae and seagrass species were also recorded at this area¹³.

Nha Trang Bay MPA encompasses nine islands, three of which are inhabited by approximately 5,300 people, clustered into 5 villages. Socio-economic activities operated by local people and outsiders have been identified as challenges for the management of the MPA. Approximately 79 percent of local people live on fishing or fisheries-related activities. This results in high pressure on the marine resources of the MPA¹⁴. Furthermore, this area is a tourism site for both domestic and foreign visitors. Tourism has increasingly developed within and nearby Nha Trang Bay MPA, especially resorts and marine-related recreational activities. These developments have negatively affected local marine resources and habitats. For example, tourism development on Hon Tre Island, located inside the MPA, was reported as a likely reason for the major loss of a significant seagrass bed (at Dam Gia site). While infrastructure developments on islands and along the beach and port dredging have both been marked as major causes for the increase in silts on coral reefs at near-shore islands (Hon Mieu, Hon Tam)¹⁵. In addition, lobster cage aquaculture development within the MPA has decreased water quality and marine resources. Specifically, almost all lobster juveniles supplied for lobster cage aquaculture have been collected from the wild. Trash fish, including molluscs, small fish, crabs and other by-catch marine organisms, have been used as food for cultured lobsters. The uneaten feed and aquaculture rubbish have been discharged directly to the surrounding waters¹⁶. Oil spills are also potential threats to water quality because there is a large range of boats and ships

¹³ Biodiversity assessment report 2002 – Hon Mun MPA pilot project – IUCN Vietnam.

¹⁴ Socio-economic assessment report 2002 – Hon Mun MPA pilot project – IUCN Vietnam.

¹⁵ Source: Biodiversity Reassessment report 2002-2005 – Hon Mun MPA pilot project – IUCN Vietnam, News on Khanh Hoa Television and local Newspapers.

¹⁶ Water quality monitoring report and Biodiversity Assessment report 2002-2005 – IUCN Hon Mun MPA pilot project.

operating at this area. These include tourism boats and cruise ships, fishing boats, maritime transport and port activities.

1.3.3 Con Dao National Park:

Con Dao National Park is located in the South of Vietnam, approximately 185 km east from the mainland (**Figure 1.4**). This site is part of Ba Ria - Vung Tau Province. In 1984, it was approved by the Chairman of the Council of Ministers (Decision No. 85/HDBT) to be a Special-use forest site. It covers a forest area of 5,400 ha and a marine buffer zone up to 4km from the shore. This site underwent a name change to a National Park, in 1993, based on Decision No. 135/TTg by the Prime Minister. The area was recently enlarged to 15,400 ha, including 6,400 ha land and 9,000 ha marine area (Ministry of Fisheries, 2006). In 1998, this National Park was approved by Ba Ria - Vung Tau Provincial People's Committee to be enlarged to an area of 19,998 ha through a revised investment plan. It is comprised of 5,998 ha land area and approximately 14,000 ha marine area (Anon. 1997 cited by BirdLife International in Indochina and Ministry of Agriculture and Rural Development, 2004). Additionally, there is a surrounding marine buffer zone area of 20,500 ha. This National Park also encompasses 16 islands and islets.¹⁷

Con Dao National Park is well known for its high biodiversity values, which include pristine tropical forests and marine ecosystems, such as: coral reefs, seagrass beds and mangroves. Coral-reef areas have been recorded as large as 1,000 ha fringing around the islands. Coral fish densities range from 71 to 5,143 individuals/500m² (an average of 2,017 individuals/500m²). This is the highest coral fish density compared with other shallow coral areas studied in Vietnam. In addition, other precious marine species, such as dugong, dolphins, marine turtles (Green turtles and Hawksbill turtles), have been identified in this National Park (Ministry of Fisheries, 2006). The approximately 15 ha of mangroves along different islands are important nursery grounds for marine organisms¹⁸. Possessing important ecosystems, coupled with seasonal oceanographic currents, makes Con Dao National Park a dispersion centre of marine fry to adjacent areas (Ministry of Fisheries, 2006).

There are approximately 5,610 inhabitants - 1,348 households, residing on the largest island – Con Son island. Of these, 4,162 people are registered as permanent residents, the remainders

¹⁷ Socio-economic Assessment Report 2007 – Con Dao National Park.

¹⁸ Biodiversity Assessment Report 2007 – Con Dao National Park

are temporary residents. A high yearly population growth rate of 6.36% has been recorded for this area compared with the average rate of 1.2% for Vietnam¹⁹. However, the major contribution to this population increase is a migration in from other areas (5.27%), with only 1.09% as natural population increase²⁰. The rapid population increase has been perceived as an underlying cause leading to other socio-economic problems for local communities on this island²¹.



Figure 1.4: Map of Con Dao National Park (Source: Con Dao National Park Management Authority).

This brief overview has served to introduce the three study sites for this research. The next sections present the structure of this thesis and the linkage between chapters to answer research questions and realize the research aim.

¹⁹ A population growth rate of Vietnam for a period 1999-2009 is about 1.2%/year. Source: A comprehensive housing and population census report - General Statistic Office of Vietnam, 2009.

²⁰ Con Dao District Annual Report 2006 cited by Socio-economic Report 2007 – Con Dao National Park

²¹ Socio-economic Report 2007 – Con Dao National Park

1.4 Thesis overview:

This thesis is structured into three parts as presented in **figure 1.5**. The first part (**chapters 1 to 3**) introduces the research, and key concepts utilised, and the framework developed, for this research. The second part (**chapters 4 to 6**) examines, analyzes, interprets and compares empirical results of the research based on theoretical and applied bodies of knowledge and the structure of the formed analytical framework. The third part (**chapters 7 & 8**) discusses and synthesises research findings and then presents conclusions of this study and recommendations for future research. An overview of each chapter is summarized as follows:

Chapter 1 introduces research context and problems related to institutions, governance and management of natural resources, and specifically MPAs in Vietnam and other areas. It presents the scope and objectives of this research. A brief introduction to study sites is also included in this chapter.

Chapter 2 presents the research process through steps of forming, examining, interpreting and answering research questions. It discusses the research paradigm and data collection methods and analytical techniques utilised for this study. Triangulation strategies are also presented in this chapter to reinforce the rigour of the research.

Chapter 3 presents reviews of theoretical and applied studies of other researchers and the development of a multilevel analytical framework. The framework consists of formal and informal settings that will be used to investigate and identify barriers to effective governance and management of MPAs. Some themes that can be used for applying this framework in the specific study context are also presented in this chapter.

Chapter 4 examines the complexity of formal institutions relating to MPA governance and management. Specifically, it identifies gaps, overlaps, conflicts and drawbacks of existing rules, policies and strategies that can be barriers to effective governance and management of MPAs in Vietnam. Secondary data are presented in this chapter to analyze and demonstrate the current vacuum of formal institutions. Some primary data are also used to illustrate various dysfunctions in vertical and horizontal interplays within the operations of formal institutions.

Chapter 5 uses primary data to identify perceived barriers of social processes and interactions to interagency collaborative governance of MPAs. This chapter develops a framework that illustrates influential variables driven by human behaviour and the organizational structure of

governance which affect inter-individual and inter-organizational collaboration and social interactions. These then affect the outputs of decision-making processes and outcomes of MPA governance and management. The results of **chapters 4 and 5** demonstrate that when formal institutions are inadequately developed within a specific social-political context, a range of problems occur with social interactions and interagency collaborative governance processes, and then affect the outcomes of these processes.

Chapter 6 presents factors derived from the socio-economic context and identifies the informal rules that can be barriers to the effective governance of MPAs, through affecting the participation of local communities. This chapter also demonstrates the importance of ownership and benefits of local communities, and the conservation demand of informal institutions, to achieve effective governance of MPAs. Some pre-conditions necessary for a community self-governance model of MPAs are also presented and argued in this chapter.

Chapters 4 and 5 provide evidence of how the formal setting, including formal institutions (**chapter 4**) and interagency governance processes (**chapter 5**), affect the effectiveness of governance and management of MPAs in Vietnam. **Chapter 6** illuminates the influences of an informal setting, including informal rules and social interactions of local communities, on MPA governance and management. While these three result chapters (**4 to 6**) have elucidated separate components developed in the multilevel analytical framework (**Chapter 3**), **Chapter 7** integrates these research findings from the result chapters and then discusses the interactions that occur within and between groups of state and non-state actors. This chapter also develops an operational framework that demonstrates the overarching relationships of barriers to effective governance and management of MPAs in Vietnam. Some discussions and arguments about political-regime problems and their impacts on the outcomes of interactive governance within the MPAs are presented in-depth. This chapter discusses options recommended by participants for a more adaptive institutional and governance structure that then helps improve effective governance and management of a national MPA network.

Chapter 8 summarizes the thesis, revisits the research objectives and questions, and synthesises significant practical and theoretical contributions of this research to scholarly discourse relating to natural resource governance and management. Some recommendations to improve the effective management and governance of the MPAs are provided. Potential future research is also identified at the end this chapter.

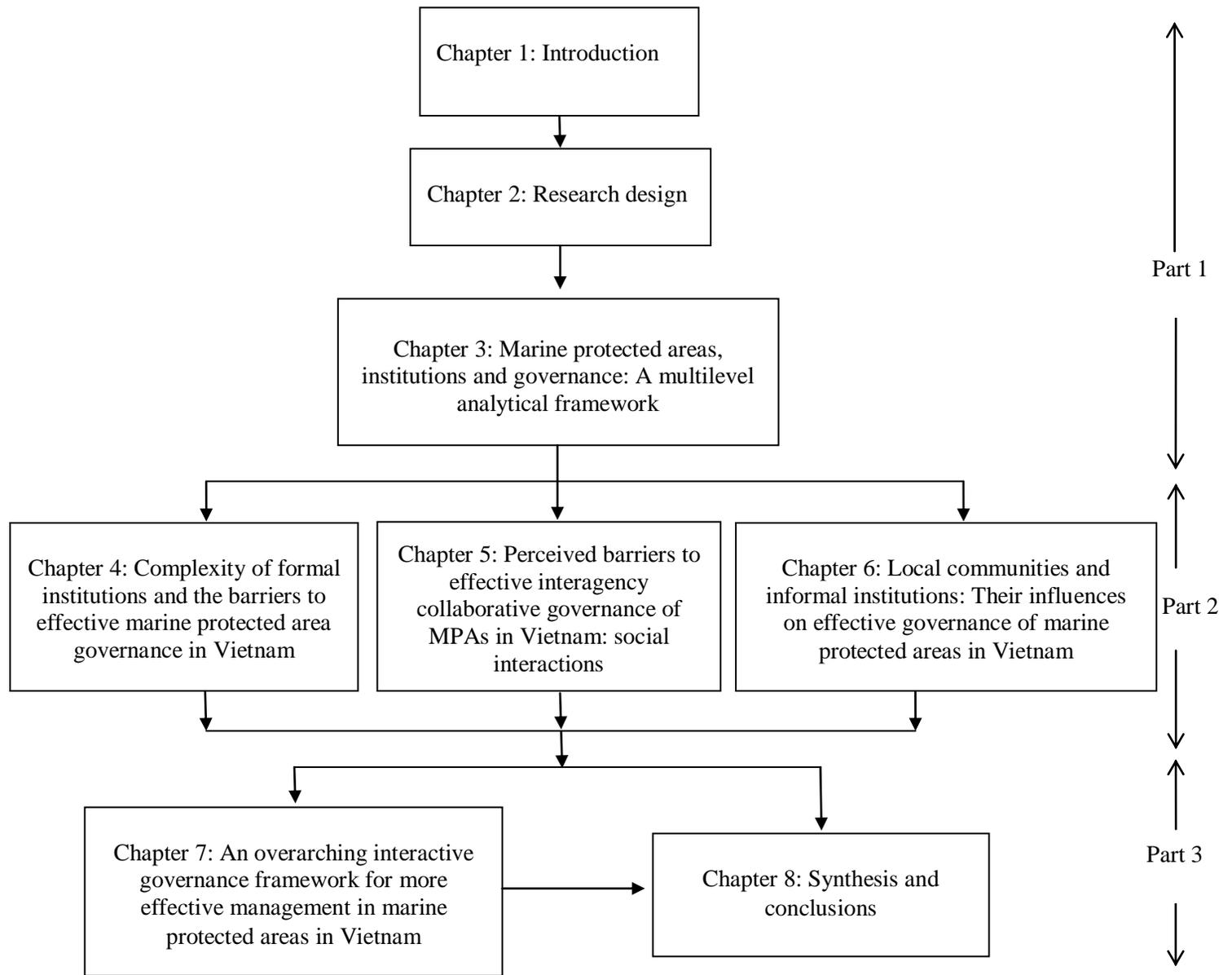


Figure 1.5: Thesis structure

CHAPTER 2: RESEARCH DESIGN.

This chapter describes and discusses the design and process used to conduct this study based on the research objectives. Three phases are presented in **Fig 2.1**. below.

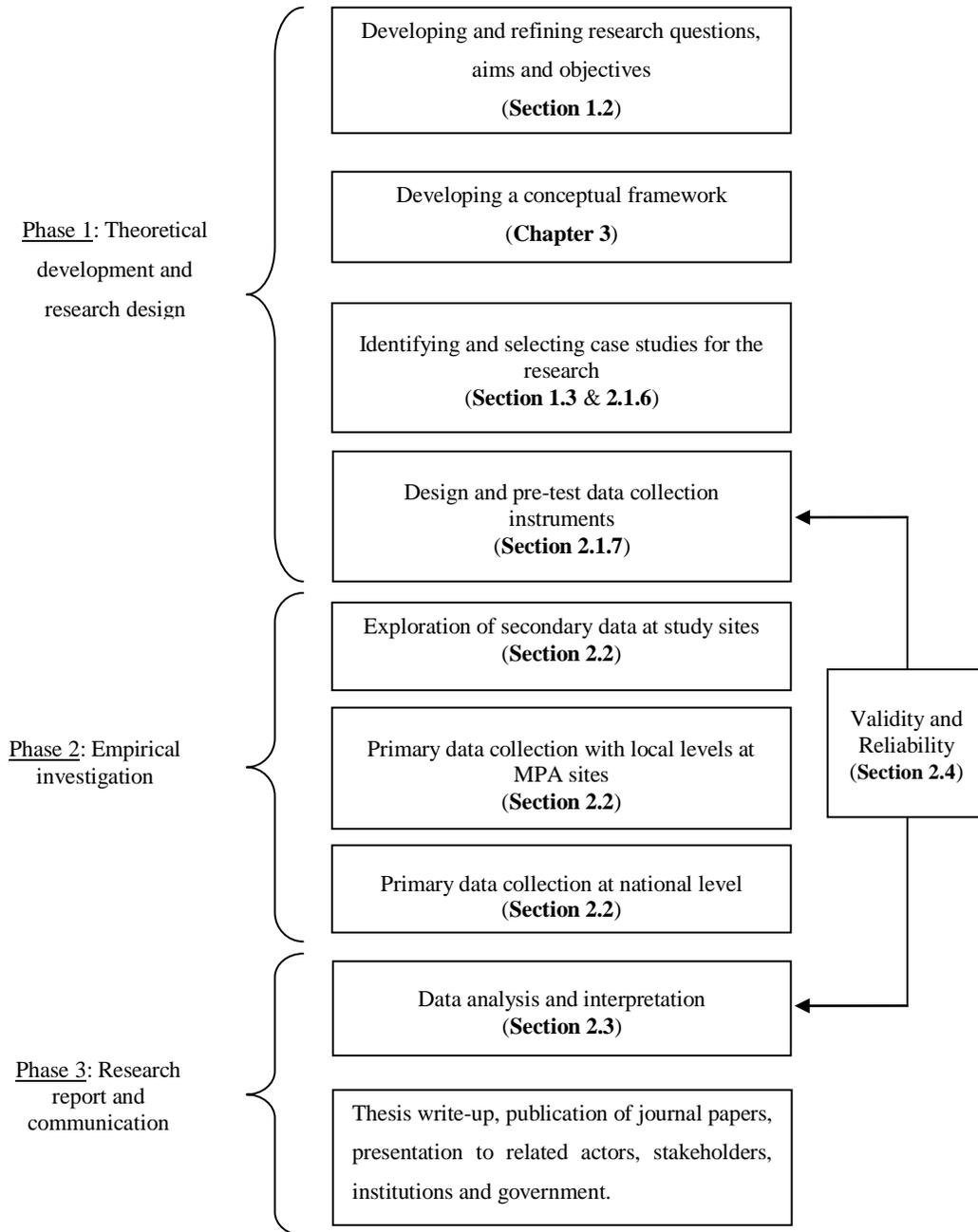


Figure 2.1: A research process (Adapted from LeCompte and Schensul, 1999).

The first phase is theory development and research design. This describes the development of the research questions, addresses preliminary research considerations and the instruments used to collect data. The second phase addresses the empirical investigations at field sites in Vietnam that consist of an exploration of secondary data and collecting primary data through situation analyses and semi-structured and open-ended interviews. The third phase presents the data analysis and interpretation. More details of each phase are elaborated in the following sections.

2.1 Research design:

2.1.1 Research paradigm:

The term “paradigm” has been widely known since a science philosopher - Thomas Kuhn (1970), described it as a basic orientation to theory and research (Neuman, 2006). A paradigm can be viewed as a set of basic beliefs (or metaphysics) based on ontological, epistemological and methodological Assumptions (Guba and Lincoln, 1994). Of these, ontology is a theory of ‘being’ or ‘existence’ (Mash and Stoker, 2002). It is a study about what exists (Hughes, 1980), about the appearance or existence of the world or about the “reality” that the researcher wants to investigate (Guba and Lincoln, 1994). Epistemology is a theory of knowledge that reflects what we can know and how we can know the world (Mash and Stoker, 2002), about what we are to count as facts (Hughes, 1980) or the relationship between the “reality” and the researcher (Guba and Lincoln, 1994). The methodology is how the researcher can conduct research to find out what he or she wants to know (Guba and Lincoln, 1994). In other words, a research paradigm presents a worldview that defines questions, such as (i) What “reality” or existence of the world do the researchers want to know? (ii) What theories or basic knowledge are the researchers able to explore or how do they understand “reality”? and (iii) What methods are used and how do researchers use these methods to undertake the research? Different research paradigms can be distinguished based on the distinctions between these considerations.

Three major paradigms, including *positivist social science*, *interpretive social science* and *critical social science* (Mash and Stoker, 2002, Schutt, 2004, Neuman, 2006a), have been evaluated and distilled through arguments for social sciences since the 1960s (Neuman, 2006). Three other paradigms, *Post-positivism*, *Constructivism* and *Participatory*, have been identified and described in details more recently by other authors (Denzin and Lincoln, 2005, Schutt, 2006). *Positivist* and *Post-positivist* paradigms aim to discover social reality governed by social laws (Sarantakos, 1998),

via deductive reasoning and *nomothetic* explanations (Neuman, 2006) or numeric measures of observation (Creswell, 2003). These should be value-free and objective ‘science’ (Neuman, 2006). Conversely, *Interpretive* and *Constructivist* paradigms aim to understand social meanings in a specific context (Sarantakos, 1998, Schutt, 2004, Neuman, 2006a) via inductive reasoning and *idiographic* explanations (Creswell, 2003). These paradigms take a relativistic stance regarding value positions (Neuman, 2006). Critical social science mixes *nomothetic* and *ideographic* explanations “to uncover the real structures in the material world in order to help people change conditions and build a better world” (Neuman, 2006). Although the categorization of these research paradigms has been described by a number of social science researchers and philosophers, most are still evolving (Denzin and Lincoln, 1994, Neuman, 2006a) with a “blurring of genres” (Denzin and Lincoln, 2005) and are often competing with each other (Neuman, 2006, Schutt, 2006). It seems there is not one overarching paradigm accepted for all social research (Schutt, 2006). Selection of paradigms to be used may require one newly devised, or integrated, or adapted, or based on existing research paradigms, depending on the research purpose, problems and contextual conditions (Guba and Lincoln, 1989, Smith, 1991). This study has been undertaken by a qualitative approach within a more critical-constructivist paradigm. Further explanations about the formation and usage of the given approach and paradigm are in the following sections.

2.1.2 Constructivism:

This study aims to understand the nature of reality (ontology) regarding the influences of institutions and contextual factors on the governance and management of MPAs. These can be the development, change and evolution of formal institutions; characteristics, environmental values, social norms and behaviour of the actors residing in the multilevel structure; and their vertical and horizontal interplays for governance and management of MPAs. In other words, this study constructs knowledge and “truth” based on the observations and emphasis of meanings of daily activities, feeling and interactions that social actors may share or not.

The constructivist paradigm was introduced as a “Naturalistic inquiry” (Lincoln and Guba, 1985). Constructivist researchers believe that reality is “socially constructed” (Heap, 1995). It may be constructed differently, depending on which actors particularly get involved, in particular places at particular times, through prolonged, complicated processes of social interactions including history, language and action (Denzin and Lincoln, 1994). Constructivist researchers investigate the ways

and meanings whereby people construct their world. They use a “dialectic” approach to analyze, critique and then lead other inquirers and participants to build up joint findings or outcomes of a case. They “do not exist outside of the person who creates and holds them; they are not part of an ‘objective’ world that exists apart from their constructors” (Guba and Lincoln, 1989). Therefore, a constructivist paradigm perceived as objectivism, empirical realism, objective truth and essentialism (Denzin and Lincoln, 1994) was used for this research.

In addition, I have chosen to conduct this research within a constructivist paradigm, but more critical, because of the reasons below:

A constructivist paradigm appeared to be the most suitable for this study. In particular, realities, within this research, have been assumed to be locally and specifically constructed. I have used qualitative methods and a multi-voice construction approach to understand research issues. I have engaged in marine resource management and conservation at study sites as a part of the communities for approximately ten years. This has enabled me to develop a rapport with most participants across the study sites and institutional levels. This may make difficult a notion of ‘objectivity’ (epistemology) that requires the knower (myself) to be detached or value-free from the ‘real’ reality of the research. Conversely, I understand points of view and interests of different stakeholders about MPAs that would not have been possible without my previous experience.

Next, I have used a participatory approach to undertake this research. In this process, I have played a role of a participant and a facilitator to logically discuss with other participants and construct the ‘reality’ about interactive governance and management of MPAs. Research findings are the agreement and knowledge created based on collectively-accepted-social processes which have occurred within the study context and communities.

2.1.3 Qualitative approach considerations:

Qualitative and quantitative approaches share some basic scientific principles, but each of them has specific strengths and limitations (Hammersley, 1992, Neuman, 2006a). Qualitative research involves the study of humans in naturally occurring settings, whereas quantitative research is associated with studying artificial settings of pre-determined purposive research (Spicer, 2004). Similarly, Punch (1998) contends that a qualitative approach is stronger in terms of “processual”

aspects, while a quantitative approach tries to understand “structural” features of social life. Furthermore, the difference between these approaches is characterized in the research process. Qualitative research mainly relies upon empirical data or social self-knowledge to construct theory or insights (normally inductive process). On the other hand, quantitative research entails forming hypotheses of research questions initially and then conducting empirical research for testing or answering (normally deductive process) (Spicer, 2004, Neuman, 2006a).

In addition, there is a linkage between the research approach taken and methodological assumptions (Creswell, 2003). A qualitative approach tends to be linked with *interpretivism*, *constructivism* and *postmodernism* while a quantitative approach is *positivistic* (Spicer, 2004). Moreover, other pragmatic factors, such as institutional contexts, political situation, researcher’s skills and experience, sponsor’s interests, may also influence the selection of a research approach (Brannen, 1992, Spicer, 2004, Neuman, 2006a). In this study, based on the research topics and methodological assumptions (*constructivism*) as well as researcher’s self-knowledge about research ideas, a qualitative approach was adopted for collecting data for this research. The following sections will describe research methods and instruments used to investigate this research.

2.1.4 Research approach

2.1.4.1 Collective case study research

A case study can be considered either an object of study (Stake, 1995) or a methodology (Creswell, 1998). In either approach the case being studied needs to be specific (Denzin and Lincoln, 2003) and bounded by time and place (Creswell, 1998). A case study is the study of the particularity and complexity of a single case to understand its activities within the specific context (Stake, 1995). Case studies are categorized into three groups depending on the interest of the researcher. If it is to learn or understand problems or events of a particular case – intrinsic interest, it may be called an *intrinsic case study*. Where a case study is to provide insights into issues or modify generalizations; it is called an *instructional case study*. Lastly, when several instructional case studies are used for an investigation, it is called a *collective case study* (Stake, 1995, Denzin and Lincoln, 2003). A collective case study may be the most appropriate for generalization due to the higher number of cases (Yin, 2003). A collective case study was thus selected for this study. The process used for selecting particular cases as the collective case study for this research is further described in **Section 2.1.5**.

In general, the case study perspective is appropriate not only for exploring and describing a situation, but also for discovering attributes forming causal relationships (Yin, 1993). Furthermore, it can be a good choice when the study phenomenon is not readily distinguishable from its context. The phenomenon is occurring due to either the context-based driving forces or the implicit boundaries between phenomenon and context (Yin, 1993). A case study approach was therefore determined to be the most suitable for uncovering cause-effect relationships between contextual characteristics of actors; governance structure and institutional change, which might be restraining forces on effective management of MPAs at the study sites.

2.1.4.2 Critical ethnography

In recent decades ethnography has become a more prominent strategy in social research (Hammersley and Atkinson, 1995) for describing and interpreting a cultural or social group or system (Creswell, 1998). Ethnographers use some methods, such as observation, group discussion or face-to-face interviews to understand the meanings of behaviour, language and interactions of culture-sharing groups (LeCompte and Schensul, 1999). The tools designed for, and used by, ethnographers are for discovering and learning how and why things are done in the real world by systematically observing, participating and recording (LeCompte and Schensul, 1999).

As a subtype of ethnography, critical ethnography shares several fundamental characteristics of conventional ethnography, such as usage of qualitative data, ethnographic methods and analyses to describe and interpret cultural or social phenomena. Nevertheless, critical ethnography employs a reflective process to select conceptual alternatives and make value-laden judgments, criticisms of meanings and methods to challenge research, policy and other forms of human activities (Thomas & O'Maolchatha 1989) and finally make a change (Thomas, 1993). In other words, critical ethnographers not only need to understand 'what is the truth quotient of the study?', but also consider 'what are the social implications of our findings?' by modifying existing consciousness or invoking a call to action (Thomas, 1993). I have used case study and critical ethnographic strategies to constructively study and answer the research questions throughout chapters in this thesis.

2.1.5 Using theory and conceptualizing a multilevel institutional analytical framework:

The next step in the first phase of this research design is to understand the social theories and apply these theories in the development of a conceptual framework for this specific study. In social research, theory can be used to help researchers predict and explain behaviour or attitudes that are likely to occur in certain conditions (Schutt, 2006). Theory can also provide a lens to guide social scientists on what is important to study in their research and how it should be investigated (Creswell, 2003). Furthermore, it helps specify the implications of the research findings and the contributions to important theory (Schutt, 2006). In this study, a multilevel institutional analytical framework (developed in **Chapter 3**) was used as a theoretical guidance to investigate the research, analyze, elaborate and explain research findings.

The multilevel institutional analytical framework was developed over the first six months (the second half of 2006) of this research period and further refined during the first empirical data collection trip (the first half of 2007). A framework was developed based on combined theoretical and practical insights. Theoretical insights were drawn from reviewing the literature on social learning, organisations, institutions, participatory, collaborative and self-governance approaches (see **Section 3.2**). Meanwhile, practical insights were developed based on practical research, including institutional analyses, governance and management of natural resources (see **Section 3.3**). Two major components identified to guide analysis are formal and informal settings. Each of these components contains three equivalent sub-components, including (i) actors and organisations, (ii) institutions (set of rules), and (iii) governance processes (see **Section 3.4**). In parallel to the analytical framework, a list of themes and attributes that were identified and collated from academic literature associated with institutional analysis, institutional performance, and effective governance, or arose from practical research, was formed and refined for data collection and analyses (see **Section 3.5**).

2.1.6 Identifying and selecting study sites

The selection of study sites for research is an important factor that can affect the success of the research. The study site selection may be straightforward due to prior knowledge of the researcher (Yin, 2003). Otherwise, it should be selected depending on (i) which sites are likely to be most

suitable for the researchers to understand the study problems to achieve the purposes of the research; and (ii) the participants (for the study) are available and willing to get involved in the research and comment on draft materials (if possible) (Stake, 1995).

In this study, Nha Trang MPA, Con Dao and Halong Bay were selected as study sites because of their distinctive geographic and cultural characteristics and diversity of socio-economic profiles and institutional arrangements. These are located at three regions of Vietnam (**Figure 1.1**). While Nha Trang Bay MPA is located in the central part (**Figure 1.3**), Con Dao and Halong are located in the South (**Figure 1.4**) and North of Vietnam (**Figure 1.2**), respectively. These sites have different establishment histories. Nha Trang Bay MPA was established as the first typical MPA in Vietnam. Con Dao was approved as a National Park that consists of a surrounding marine area, whereas Halong was listed as a World Heritage Area. These sites are also under different national, provincial and local jurisdictions, with different objectives, rules and management approaches (see more in **Chapter 4**). Additionally, some additional MPAs were also visited to gain further understanding of research issues. These are Culaocham and Phu Quoc MPAs that were newly established and officially adopted into the national MPA network in Vietnam. Additional data collection at these sites enriched the data. The collection of data at these existing MPAs in Vietnam allowed some generalized conclusions about institutions and governance issues of the whole MPA system in Vietnam. Moreover, study sites selected for this research were designated and listed as either MPA (Nha Trang, Culaocham and Phu Quoc), National Park (Con Dao) or World Heritage Area (Halong). However, the issues studied relate to marine resource management and governance at all of these sites. So they are all, hereafter, referred to as MPA sites to reduce confusions.

2.1.7 Pilot study

A pilot study was conducted for two reasons. First, it was for pre-testing and refining the interview questions, data formats and the appropriateness of data collection instruments, and further clarifying the research design. Second, the pilot study was also an important opportunity for the researcher to become more familiar with the selected data collection instruments and gain experience and skills for the utilization of these instruments.

Some representatives of each participant groups at Nha Trang MPA were invited to pre-test questionnaires. The time taken for interviews of each type of group was also recorded. The

participants were then asked to comment on the suitability and representativeness of question content, question sequence, and the duration and approach of the interviews. Some modifications of the questionnaires were undertaken prior to the implementation of the final surveys. Nha Trang MPA site was selected for this pilot study because the researcher had previous knowledge of contacts and familiarity in terms of geography and other conditions within the area.



Figure 2.2: Tourism development is an opportunity and also a threat to Nha Trang Bay MPA.
Photo by Thu V.T. Ho

2.2 Research conduction and methods:

There were two major data types collected from empirical investigations for this study. These were (i) secondary data and (ii) primary data. The secondary data were collected by reviewing existing technical reports, scientific documents and legislation. These documents were stored at MPA management offices, research institutions, government agencies and other sources. Meanwhile, primary data were collected using focus group discussions and face-to-face interviews. Participant

observation and consultation meetings were utilised to further supplement and confirm the collected information.

Two field trips were conducted to study sites for collecting data. The first trip lasted for six months at Nha Trang bay MPA. This trip was first carried out to conduct a pilot study as presented in the preceding section (**section 2.1.7**). Formal data collection tasks were continued after reviewing and adjusting the questionnaires and research instruments as suggested by participants of the pilot study. The second trip was conducted at the other study sites, including Con Dao, Halong, Culaocham, Phu Quoc and Hanoi, over almost seven months. The researcher also took a short trip of approximately two weeks (of the second field trip) to Nha Trang Bay MPA to check and update information about the governance and management of this site. The research process, approach and methods used for collecting data are elaborated in the following sections.

2.2.1 Data collection approach

This study was carried out using bottom-up, general-specific and indirect-direct approaches to collect data (**Figure 3.2**). Specifically, the empirical research was started with local participants (on behalf of non-state actors) and then actors across local authorities to national level (being representatives of state actors). This can be called a bottom-up approach. This approach can help the researcher to assemble practical issues and problems in the field, which were then taken for discussing and confirming with responsible actors at higher levels. Furthermore, a general-specific approach was applied by employing different data-collection methods from focus-group discussions to face-to-face interviews for each actor level. While group discussions between the researcher and groups of participants were conducted first to understand general issues and outcomes of MPA management and governance, face-to-face interviews were subsequent to explore, in detail, influential factors of these issues and outcomes. Potential solutions were also discussed using these methods. Meanwhile, state actors from related government agencies at each level (e.g. Department of Natural Resources and Environment, Department of Planning and Investment at provincial level) were invited for interviews prior to interviews with representatives or actors of more-direct-responsible agencies (e.g. Department of Agriculture and Rural Development; and MPA authority). This is an indirect-direct approach. While the (indirectly) related department actors were interviewed to understand the issues, and context and people or stakeholders engaged in the issues, the more-direct-responsible actors were then invited to enlarge

the rationale, and elaborate causal factors, of the issues. This approach guided the researcher to firstly have a general understanding of issues occurring at the study sites and their relevant context. Then, the researcher gradually explored more in-depth information and influential factors of the issues and outcomes of management and governance of MPAs. By using a combination of these approaches the researcher examined research problems in more detail and triangulated the achieved information throughout the field trips.

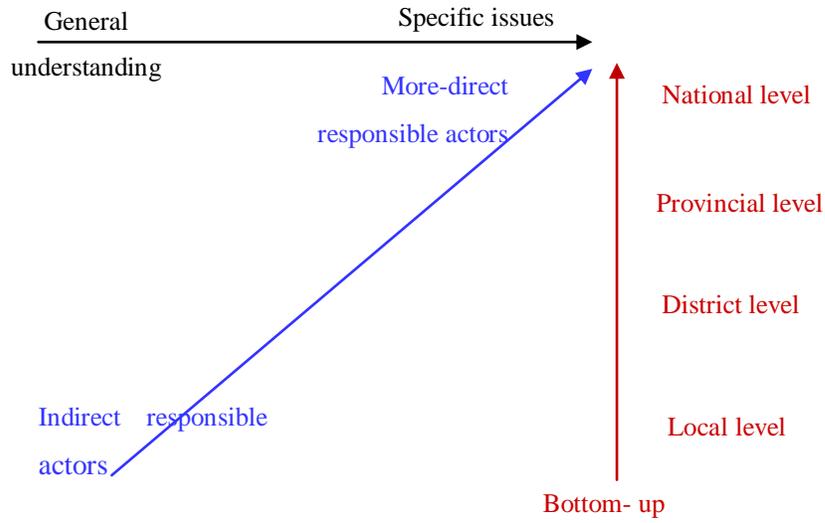


Figure 2.3: Data collection approaches used in this study

In addition, a ‘backsolving’ approach (Edwards and Steins, 1999) was applied for discussing and exploring data during each data collection activity. Questions related to research issues, consequences and outcomes of collaborative governance at each MPA, which were deliberated from secondary information and mentioned by participants, were then raised by the researcher for further discussions. Causes or reasons for the outcomes and consequences were probed and then addressed by interviewees based on their knowledge and experience. Finally, perceived barriers and influential factors were identified and summarized through a series of interviews and discussions between the researcher and participants.

2.2.2 Sampling design

Sampling is a major task of any type of research. Robust sampling design is essential to the success of the research. The sampling is considered appropriate if it achieves three objectives: (i) the data

are representative of the population; (ii) sampling accuracy satisfies the reliability requirements; and (iii) there is an efficient time use of resources (Luck and Rubin, 1987). In short, these are time, cost and accuracy, which the researchers need to pay attention to when designing a sampling strategy (Neuman, 2006). However, these are interpreted differently depending on the research methods in practice. Quantitative researchers try to use a larger number of samples and seek statistical significance to produce an accurate generalization for a larger population. By contrast, qualitative researchers usually work with small samples of people, cases, units or activities, vested in their context, and studied in-depth (Miles and Huberman, 1994, Gobo, 2004, Neuman, 2006a). For the former, once established, the same sample is used for the whole duration of the research. For the latter, the sample may change through the study for exploring information, modifying and extending the test (Lincoln and Guba, 1985). Based on specific characteristics of qualitative methods applied for this study as discussed above, the researcher selected the study sites and participants for the investigation according to the purposes of the research, position of participants and the context of the study site. For example, while Con Dao, Nha Trang and Halong were selected for collecting data about practical issues across local communities to provincial level, the issues related to MPA management and governance at the national level and national policies and strategies were mainly identified in interviews and discussions with participants from national level agencies in Hanoi.

In addition, based on the conceptual framework and intended themes drawn from the literature review, a purposive sampling approach was developed for the research. At the various field sites, the researcher firstly explained the research objectives to local communities' representatives and then discussed with them the basic conditions for selecting potential participants. A list of the local population with demographic information, such as age, household size, occupation, origin, role in the communities and wealth status was supplied by the village heads. Participants as representatives of each group were selected from the list for the study. The potential participants were contacted by telephone and invited for interviews. The second contact (by telephone or letter) was undertaken to set up the time and venue. Those potential participants who did not want to participate in the research were replaced by other people with similar characteristics. Furthermore, some new participants were incidentally recruited based on the emergent information achieved through data collection, in order to supplement information or extend the research. Meanwhile, for state-actors, the researcher contacted representatives of agencies directly by telephone or through introduction letters from the MPA authorities to make an appointment for interviews. The

distribution of participants involved in interviews and focus group discussions across levels and locations for this research is showed in the **table 2.2**.

Table 2.1: Distribution of participants involved in interviews and focus group discussions, their levels and locations

No.	Group of participants	Interviews		Focus group discussions
		Number	Percentage (%)	Groups (about 10 participants/group)
<i>Community level</i>		27	32.5	
1	Nha Trang	16	19.3	3
2	Con Dao	7	8.4	4
3	Halong	4	4.8	
<i>Local Government</i>		52	62.7	
4	Nha Trang	20	24.1	1
5	Con Dao	11	13.3	1
6	Halong	5	6.0	
7	Culaocham	7	8.5	
8	Phu Quoc	9	10.8	
<i>National government</i>		4	4.8	
9	Hanoi	4	4.8	
Total		83	100.0	9

2.2.3 Data collection methods:

A range of data collection methods was utilised for this study. These were document reviews, focus group discussions, open-ended interviews, participant observation and consultation meetings. This section describes what these methods were, and why and how they were used.

(a) Document review:

In this research, all documents including both public materials (mass-media reports, published articles, regulations, strategies etc.), published information and official documents, such as

technical reports, memoranda, internal decisions, rules, local communities' writings, were collected and used as secondary data. These were collected from MPA management offices, research institutions, government agencies, local communities and other sources when research was started at each study site. The analysis of these secondary data helped the researcher gain a primary background and better understanding of underlying issues and consequences of MPA management and governance that have occurred at the study sites. These were useful for shaping the research ideas and questions as well as interpreting social phenomena later on.

In addition, legislative documents including rules, laws and agreements were analyzed as primary data to understand the existing multilevel institutional system and its validity. Most of the documents were published in Vietnamese. Some others (e.g. National Strategy for Socio-economic Development in the period 2001 – 2010, Documents of IXth National Communist Party Congress) were available in both Vietnamese and English. The researcher translated Vietnamese documents to English and also searched available English versions of documents that were relevant and used for this research.

(b) Focus group discussion:

Social researchers utilise focus-group discussions to study or understand social issues or the socially constructed nature of knowledge through face-to-face discussions among members of the small group. On the one hand, this method provides an opportunity for participants to explore different points of view, formulate and reconsider their own ideas of the study issues and understandings (Hay, 2000). On the other hand, this method is very useful for researchers to generate research questions and theories (Goss and Lainbach, 1996, as cited by Hay, 2000), to refine the design of survey questionnaires (Jackson and Holbrook, 1995), and to interpret the findings of the surveys (Goss and Lainbach, 1996, as cited by Hay, 2000). The characteristics of participants may affect the result of the discussions. Homogeneous groups may be more convivial and willing to share feelings (Schutt, 2004), so they can have in-depth discussions on sensitive or controversial issues (Hay, 2000). In contrast, heterogeneous groups may stimulate more ideas with different perspectives about the issues (Schutt, 2004). Therefore, focus-group discussions are an excellent tool for social researchers interested in the process of knowledge production.

In this study, focus-group discussions were conducted with groups of ten participants at each community site and MPA. The participants were representatives of different local social

associations, local people interested in MPAs or officials of government agencies. The researcher first introduced the participants to the aims of the research and objectives of the focus-group discussion. He subsequently provided pieces of paper and asked the participants to write down three issues of most concern related to the MPA governance and management based on participants' perspective and experience. This process served to ensure that the views of strong personalities did not dominate. The identified issues were then discussed among participants through open-ended questions asking and facilitating by the researcher. The discussions were recorded by flip charts and an audio-tape recorder. Each focus-group discussion normally lasted for two hours. The result of focus-group discussions was a foundation for the researcher to gain a basic understanding of causal variables and generated questionnaires for the upcoming research activities. Similarly, this procedure was also applied for focus-group discussions among state actors. In total, the researcher conducted nine focus-group discussions with local communities and government actors. The distribution of these discussions against study sites is presented in **table 2.2**.



Figure 2.4: A focus group discussion was conducted at Tri Nguyen Village, Nha Trang.

Photo by Thu V.T. Ho

(c) Interviews:

Interviews are short-term, secondary social interactions between two strangers with the explicit purpose that an interviewer wants to obtain specific information from the other – interviewees or respondents (Neuman, 2006). Interviews are one of the most popular techniques through which contemporary social scientists can engage with issues that are of concern (Sarantakos, 1998, Seale *et al.*, 2004). In this study, interviews were applied using a semi-structured format with open questions. These interviews varied significantly in structure, length, intensity, order, wording in asking questions and interviewees' participation (Sarantakos, 1998) to explore experiences, knowledge, emotions, identical opinions, truth etc. (Seale *et al.*, 2004) of the participants about the 'reality' or study themes.

The composition of questionnaires depended on the category and position of participants to ensure relevant data were collected. Three questionnaires were formed equivalent to three different participants' groups classified in this study. These were (i) local communities; (ii) participants who directly get involved in MPA management, such as MPA managers, MPA staff; and (iii) participants who relate to MPA management, such as sectoral agencies and people's committees across levels. While social issues, environmental values and outcomes of institutional enforcement were the major focus of the interviews with local communities, information about horizontal and vertical interactions associated with governance and management of MPAs were the focus for the interviews with state actors. The roles and capacity of local communities were also discussed through focus group discussions and interviews with participants, especially who were from research institutions, commune level groups and MPA management authorities. Some solutions for improving the roles and capacity of the local people were identified and discussed during these processes.

The structure of the questionnaires and the sequence of questions related to research issues formed in these questionnaires may influence the result, process of the interview, and the feeling and motivation of interviewees and interviewers (Schensul *et al.*, 1999). The actual content of the questions was initially generated based on themes reviewed from relevant academic literature. These questions were then refined on the basis of the document reviews (secondary data) and focus group discussions. In general, the questionnaires were structured by groups of questions equivalent to the number of reviewed themes that varied with respect to a specific participant group (**Appendices I-III**). However, the order of questions was flexible in terms of sequence, wording

and content depending on specific characteristics of the participants. These characteristics included duty, position, background, and experiences of the participants.



Figure 2.5: An interview with local people residing within Nha Trang Bay MPA.

Photo by Thu V.T. Ho

Interview duration and timing: Interviews were anticipated to take approximately thirty minutes. However, some participants were so interested in the research topic, especially government officers and older villagers, their interviews lasted longer than the intended time. The timing for interviews was also important in the fisheries villages. For example, local fishermen normally started a fishing trip around 3.00PM and returned to the mainland by the following morning. The women were busy selling captured fish in the morning when their family boat returned as well as preparing logistics for the next fishing trip in the afternoon. Therefore, the best time for interviewing with the men was in the morning (after returning from the fishing trip) and during the evening for the women.

Interviewing process: Interviews were conducted face-to-face. These were started with self-introduction by the interviewer about the aims of the research, duration of the interview, confidentiality and anonymity of data utilisation. An audio-recorder was used for recording the interviews if allowed by the participants. Some participants felt uncomfortable with the interview

being recorded. The audio-recording was very useful for transcribing the content and verbal interactions of the interviews (Seale *et al.*, 2004). Furthermore, it also helped the researcher concentrate more on the story and feelings of the participants during the interviews.

In total, 83 interviews were conducted at study sites. Details about the interview distribution are presented against the levels in table 2.2.

(d) Participant observation:

Participant observation has been used for a range of purposes in social research. For example, for enumerating, providing complementary evidence or contextualizing social issues (Hay, 2000) and for developing or testing theories (Harvey and MacDonald, 1993). According to Hay (2000), social researchers use participant observation to understand perception, behaviour and experiences of local communities through being a part of the spontaneity of everyday interactions. This method matches this study's objectives.



Figure 2.6: Small trading at a floating village – Giang Truc Vong, Ha Long Bay

Photo by Thu V. T. Ho

In this study, I utilised participant observation including personal reflections based on the role of a local participant (Becker and Geer, 1957) when coming to the field or accompanying fishing boats. I was involved in all the activities. Notes were taken as questions or queries based on actual activities. Participant observation was undertaken at activities and meetings within the local communities, MPA office as well as workshops or meetings between different agencies and stakeholders whenever the researcher had a chance to get involved. Contextual descriptions or images were noted during the observations. All the phenomena, lessons learned, ideas or memos related to research issues from the social activities were also recorded by note-taking after field encounters, by hand writing at field sites or computer typing in the office (Hay, 2000, Schutt, 2004). This was important for me to keep fresh impressions or memories of activities or notes for explaining or expressing the social interactions. In addition, any of my feelings, premonitions, “hunches” were also recorded about the conversations and discussions with participants.

2.3 Data analysis and interpretation

2.3.1 Data analysis

The data collected for this study were qualitative using various methods, including focus group discussions, interviews, participant observations, document reviews, and stakeholder meetings. Data analyses, then, had to follow the basic principles of qualitative data. This was a simultaneous process including continual reflection about the data, asking analytical questions about the data and social phenomena, recruiting participants related to emergent issues and writing memos throughout the study (Creswell, 2003, Seale *et al.*, 2004). The research strategies of the case study and critical ethnography with descriptive data were chosen to direct this study, so research themes or issue-driven analyses were used for analyzing the data. A textual analysis (Tesch, 1990, Miles and Huberman, 1994, Titscher *et al.*, 2000) was used to classify the information obtained into categories, themes and issues and then checked using the computer software package NVivo 8.

The data analysis process started with summarizing information from focus group discussions, transcribing interviews, optically scanning document materials, summarising related mass-media materials, and typing up field notes. All the data were formed into text format, which was subsequently used for manual textual analysis or downloading into NVivo 8. The next step was a coding process that drew data materials or images from the textual transcriptions into different categories and themes based on the collected information contents. This process was conducted on

transcribed or written documents, one by one. Some similar topics were grouped together to reduce the number of topics and themes for subsequent discussions and arguments. The related themes were connected to show the interrelationships, based on theories and the conceptual and analytical framework, for further interpreting the research ideas about social interactions. In parallel, the data were also analyzed using the NVivo software to confirm the findings. More details of each step are elaborated as follows:

2.3.1.1 Data transcription and translation:

All the data collected through focus group discussions, interviews, participant observations were transcribed into full textual transcriptions (Microsoft Word 2000). These texts were also revised and refined by the researcher, research assistants and other related participants, if needed. These were then translated from Vietnamese to English by other colleagues. The English translated versions were then reviewed and amended by the researcher to ensure correct technical and contextual terminologies used. All the translated transcriptions were used for coding and sorting according to reviewed and emergent themes, categories and research questions by optical scanning and NVivo software.

2.3.1.2 Analysing data through an organizing system:

A data organizing system was constructed based on the analytical framework formed for this research (**Chapter 3**) and from the raw data. This was a hierarchical system. Three major categories related to (i) institutions; (ii) interagency governance processes; and (iii) local communities' participation and customary regulations were formed as the highest level for the data organizing system. Furthermore, this research has used organisational theories for examining and learning issues related to individual and organisational behaviour, so the data were also analysed across individual and organizational levels (Katz and Kahn, 1966, Herman and Hulin, 1972, Naughton, 1988) as sub-categories. Meanwhile, some relevant themes were summarised based on the reviews of theories and practical research about institutional analysis and effective governance performance. These were used as a guidance for collecting and analysing data to pursue the research questions of the study. These themes were classified into the formed categories to match the research objectives. However, the formed categories and themes were also constructed and modified while collecting and analyzing data to suit the practical issues explored from secondary data and reflections of participants at the field sites. Thus, some emergent themes and topics were

produced from these processes. Information segments are the lowest level in the data organizing system. They were grouped into one or several themes that they may relate to. The qualitative data, in this study, were analyzed through this data organizing system with sequential steps (Tesch, 1990) as follows:

- ***Briefly scanning***: an optical scan was undertaken by the researcher for the first several transcriptions to have a primary sense of the collected information. This step was conducted on each transcript, one by one, until the researcher had a sound understanding of interested issues, matters and the context of the study sites.
- ***Topics and themes writing***: all the topics and themes were identified and written in the margin of the documents.
- ***Refining the topics and themes***: a list of the identified topics or themes was made in this step. These topics and themes were then compared with each other. All the topics and themes must be understood clearly and correctly by the researcher. They can be checked with original transcripts or the participants, if necessary. The topics or themes were then written on pieces of paper and clustered on a pin board. The topics or themes that were similar in content or significance were clustered together to reduce the number of topics or themes. Each cluster was named by a term that was mostly used by participants or other researchers or fitted with the general content of the cluster. For some themes or topics that had no compatible themes or topics, but were important to the research questions, a single cluster was formed. A new list of clusters of themes and topics was then formed again.
- ***Try out the preliminary data organizing system***: the newly formed themes or topics were coded by abbreviations of their names. All the data documents were carefully scanned by the researcher. The codes of topics or themes were then written next to the appropriate information segments while scanning the documents. Some new topics and themes that were relevant to the research questions could emerge in this step.
- ***Refining the data organizing system***: the most descriptive wording for the topics or themes was considered again and then listed on the same paper. Some topics or themes that were related to each other were put into the same category. At this time, a table of hierarchical system of categories, themes or topics and segments was developed.
- ***Preliminary analysis***: all the relevant content segments on the entire body of textual transcripts were coded. Some segments that were too rich or diverse in content were coded and marked by related themes or categories. These could be two or three themes or categories. All the segments belonging to the same themes or categories were then gathered

into the same column. The researcher also made questions or marked considerations that emerged during this step for further discussion and confirmation with following interviews or newly recruited participants.

- ***Identify and summarize the content for each theme or category***: this step was to identify (i) commonalities in content for each theme and different themes in the same category, (ii) uniquenesses in content, (iii) confusions and contradictions in contents, and (iv) missing information with regard to the research questions. This step helped the researcher to have an overall understanding or theorise concepts based on the content of each category. This step was iteratively conducted to clarify the boundary between categories or restructure the system, if needed.

2.3.2 Data interpretation

For a qualitative approach, interpretation of data can be viewed as translation, or ‘reading text’ to make good sense of data through more abstract conceptualizations (Spiggle, 1994, Hay, 2000). These conceptualizations can borrow from intellectual traditions (Miles and Huberman, 1994) or be based on resemblance of literary or figurative devices (Spiggle, 1994, Hay, 2000). According to Thomas (1993), data interpretation is a *defamiliarization* process in which the researchers need to revise and understand what they have seen and then translate them into something new. In particular, critical ethnographers need to find new points from obtained data texts compared with former research and identify alternative ways to interpret and display cultural symbols. In this study, the conceptual analytical framework and theories (see **Chapter 3**) were used as lenses for organizing data, interpreting and presenting the research findings. Furthermore, the interpretation of social research data needs to continuously reflect on the data and search for images and metaphors that reorient research findings into a more meaningful frame for the context (Thomas, 1993, Spiggle, 1994). Such research findings can make significant contributions to theoretical knowledge and practical implications. Following this manner, this research has used critical reflection and observation of the environmental values, culture, belief and behaviour of study actors to explain their interactions and decisions for MPAs management and governance.

In addition, context has been taken into account for interpreting the research findings. In reality, the cultural context is a foundation for forming and interpreting ethnographic research findings, even though the culture can vary over time and space (LeCompte and Schensul, 1999). In other words,

ethnographic research results can be valid and realized in a specific context. Contextual factors are regarded as being important for shaping strategies of resource users and are defined as “*dynamic forces constituted in the user groups’ social, cultural, economic, political, technological and institutional environment*” (Edwards and Steins, 1999). In this study, contextual factors were considered for interpreting revealed social phenomena (**Chapters 4 to 6**) and forming an operational framework (**Chapters 7**).

2.4 Validity and reliability

Validity and reliability are terms commonly used in quantitative research. In qualitative research, they have been called by different names depending on researchers’ perspectives (Creswell and Miller, 2000, Creswell, 2003, Golafshani, 2003). These can be trustworthiness (Lincoln and Guba, 1985), rigour (Hay, 2000, Davies and Dodd, 2002), or quality (Yin, 2003, Seale, 2004) etc. There is a general consensus that qualitative researchers seek rigour, under any of these terms, to demonstrate their research is plausible, credible, trustworthy and dependable (Johnson, 1997, Creswell and Miller, 2000).

According to Silverman (1997), there is no single coherent set of research methods applicable in all types of data analyses. So ensuring rigour is one of the most important procedures once researchers design the research to establish its trustworthiness (Creswell and Miller, 2000, Hay, 2000). This matter should be considered at the commencement of the research (Hay, 2000). The researcher initially needs to define the strategies for ensuring trustworthiness and then carefully document what occur at each stage of the whole research process (Hay, 2000). Creswell and Miller (2000) state that procedures for ensuring rigour for social science research are governed by the lens of the people who get involved, and the research paradigm assumptions that the researcher used, in the study. These procedures should consider the lens of the researcher, the participants involved in the research and the reviewers and readers who are familiar with or interested in the research. In this study, I adopted a more-critical constructivist paradigm, as mentioned in **Section 2.1.2**. Triangulation procedures were employed, as suggested by Mathison (1988) and Johnson (1997), for ensuring rigour of this research. This procedure was also discussed by Thomas (1993) and Stake (1995) for ensuring rigour with case study and critical ethnography strategies which were employed in this study as well. Engaging deeply in most social interactions with the communities studied and utilizing critical reflexivity (Berg, 2004) and peer debriefing procedures (Lincoln and

Guba, 1985, Guba and Lincoln, 1989) allowed verification and corroboration of data collection and interpretation. The following sections provide details of how these procedures were applied to this research.

2.4.1 Triangulation strategies

Triangulation is a process by which the researcher can observe something from different angles or viewpoints (Neuman, 2006). Social scientists use this process not only to reduce personal and methodological biases, but also enhance a study's generalizations (Decrop, 1999), enrich the data and verify interpretations (Denzin, 1978a). Moreover, application of triangulation into the research has potential to provide such a multifaceted view of the research problems (Foss and Ellefsen, 2002b, Neuman, 2006a). There are four basic types of triangulation: triangulation of data sources, methods, investigators and theories (Denzin, 1978a, Neuman, 2006a). In this study, I employed triangulation of data sources, methods and investigators to increase the reliability of collected data and accuracy of the data interpretation and research findings. These triangulation strategies are discussed as follows:

- (i) ***Data source triangulation***: this strategy consists of the use of a variety of data sources in a study. In this study, a range of data sources of each data type was obtained for the research. Various participants from different levels of the MPA management and governance structure were invited to provide information and perspectives on the same problems. These participants were also from different sites. In addition, secondary data were collected from different related offices and agencies located across local to national levels. Various additional descriptions and viewpoints about the research ideas were obtained from the field trips.
- (ii) ***Method triangulation***: this includes the use of multiple methods to study determined issues. Since each method has its own limits and biases, using multiple methods helps reduce those limits and strengthen the credibility and plausibility of attained information (Decrop, 1999). For this research, the secondary data, such as written documents, photographs, pictures and maps, were collected to have a basic understanding of the research issues. I also used several data collection methods, such as focus-groups discussions, semi-structured interviews, and participant observations (**Section 2.2.3**), to

collect primary data from the field trips. The combination of different data collection methods and data types helped enrich the data and triangulate the research findings. All the data from these methods were transcribed and coded for constructing the theories and gaining the knowledge about the research issues.

- (iii) ***Investigator triangulation***: this strategy was applied by using a principal researcher (myself) and research assistants (each at Nha Trang and Con Dao sites, where a high number of samples were collected) to collect and interpret the same body of data. The researcher and research assistants had meetings or talks at the end of each day of the field trips to debrief and check the collected data, results and considerations, and any problems encountered in the interviews or participant observation. Any remarks or considerations from us were subsequently clarified with related participants or other responsible people. This was the way to check as well as enrich the data collection and interpretation. The collected data and research results were once more triangulated between the participants and investigators through the plenary meetings. This was to ensure a consistency of rigour in the qualitative research process applied in this study.

2.4.2 Critical reflexivity

Reflexivity is a strategy that a researcher develops and utilizes to actively engage and critically self reflect on his/her potential biases and predispositions while undertaking research. This strategy helps the researcher become more self-aware and minimize the biases (Johnson, 1997). According to Thomas (1993), ethnographic researchers are active creators rather than passive recorders of narratives or events. They should avoid accepting everything at face-value and consider the materials as raw data that may require corroboration or verification (Berg, 2004). Ethnographers are not only to describe the social dynamics that they investigate, they must strive to understand them and if possible, to explain the activities and consider their further implications (Thomas, 1993, Berg, 2004). To achieve this, ethnographic researchers should not simply be either “insiders” or “outsiders” (Hay, 2000). They need to have constant, self-conscious scrutiny of themselves and of the research process (England, 1994) and ask themselves what their social roles are and how their social interactions affect the data collection, analysis and subsequent interpretation of data (Thomas, 1993, Hay, 2000). In other words, a critical reflexivity procedure uses the lens of researchers to construct the interpretations of experiences in the field (Creswell and Miller, 2000,

Berg, 2004) and finally “provide insights into the workings of the world and insights on how that knowledge came to be” (Berg, 2004).

In addition, the critical ethnographers’ reflection may vary due to endogenous and exogenous factors. Depending on the role or participation levels of researchers in the various activities, the researchers can be either complete observers, observers as participants, participants as observers or complete participants in the research (Hay, 2000). At any of these positions, the researchers, more or less, become a part of the social situation that they are studying (Schutt, 2004), so they may be affected due to their own personal emotional levels. Indeed, researchers, in practice, need to manage personal dimensions when confronting, reflecting or interpreting any social phenomenon. Furthermore, researchers also consider their own appearance and the way they behave when participating in activities with a local community (Hay, 2000). Researchers need to build a rapport with a community at the outset of the research and acknowledge local norms in advance (Hay, 2000, Schutt, 2004).

All the above points were taken into account while conducting this research. I sometimes attempted to be an “insider” to build a rapport with participants to better understand insights of the research context (Thomas, 1993, Hay, 2000) and I was mainly an “outsider” to avoid influencing the interpretation of the topics and issues (Thomas, 1993). Moreover, I strived to clarify the same questions or considerations with different participants at various institutional levels to ensure that my personal qualities or perspective did not create biases in the data collection, analysis and interpretation of the final findings of the research.

2.4.3 Peer debriefing

Peer debriefing is a procedure inviting someone who is independent to the study, but familiar with the research and has experience with the phenomena being explored, to review and criticize the research results as well as support the researcher to overcome research constraints (Creswell and Miller, 2000). The peer is external to the research, so they may have neutral perspectives on the research ideas and interpretation, which help improve the credibility of the research. Furthermore, they may be audiences of the research and therefore can help interpret and illustrate the findings, enhance plausibility and convince the readers. In this study, I have discussed research issues and findings with my supervisors and other colleagues since the outset of the study. In addition,

research results were briefly presented and discussed at study sites to receive feedback from the participants to minimize biases that are probably made by the researcher. I have received comments on the design of data collection and arguments on the research findings through meetings, workshops and emails. These comments have been considered and adjustments made where necessary.

2.5 Ethical considerations

This study follows the human ethical guidelines of James Cook University (JCU) (permit number – H2563). The study's ethical considerations, in terms of informed consent, confidentiality and security, are discussed in following sections.

2.5.1 Informed consent

Informed consent means the knowing consent of individuals to participate in the research activities. It is a requirement that a consent form is signed by the participants at the start of the interviews. Obtaining signed informed consent indicates that the people knowingly participate in the research activities by their own choice. For local communities and government agencies, I firstly presented information to the participants and explained the study's research aims, objectives and activities. The consent for interviewing and audio-tape recording was endorsed by participants through signing the consent page provided by the researcher. I also delivered a power-point presentation about the research to all the staff of the MPA authorities. This helped the staff understand and have a chance to comment on the research as well provide consent when being invited for interviews or other research activities. Almost all participants agreed to be interviewed and audio-tape recorded. Some local participants agreed to take part in the research, but refused audio-tape recording.

2.5.2 Confidentiality and security

When presenting the research consent, I also explained about the security and further utilisation of data as well as confidentiality of participants. The participants were informed that all the data will be used only for scientific publications and all the identities of participants will be protected or

replaced with fictional names. Confidentiality and security were also applied to the agencies, associations and institutions within the case studies once referred to in publications.

In this study, alphabet symbols were used as participants' identifiers for quoting in this thesis and other publications to protect them from problems that might happen in the future. The participants' identifiers were coded over the levels from national to local community levels. In particular, "N" was for participants from national level. Similarly, "P", "C" and "L" were for provincial, communal and local community levels, respectively. In addition, GD was for focus group discussions. All the raw data, such as field notes, recorded audio-tapes, interview transcripts (both Vietnamese and English versions), will be stored in a restricted area of JCU for at least five years.

2.6 Preliminary conclusions:

This chapter has outlined the research design for forming research questions to conduct the research and then analyzing and interpreting research findings. It has identified the philosophical stance taken as the foundation for directing the research to achieve the aims and purposes of the study presented in **Chapter 1**. It has explained why the more-critical constructivist paradigm was selected, against other competing social research paradigms, for this research. A research design has been subsequently discussed and explained in detail to describe the way the research was conducted. Data collection approaches and methods have been identified. Data analysis and interpretation have been described. Issues of scientific rigour and ethical research have been addressed in the concluding part of the chapter. The following three chapters (**4 to 6**) detail the research results over formal institutions, inter-agency governance, informal institutions and the participation of local communities in MPA governance and management in Vietnam.

CHAPTER 3: MARINE PROTECTED AREAS, INSTITUTIONS AND GOVERNANCE: A MULTILEVEL ANALYTICAL FRAMEWORK.

3.1 Introduction:

Marine protected areas (MPAs) have been recognized as important tools for fisheries management (Bohnsack, 1998) and in situ conservation (Chape *et al.*, 2005). Increases in the spawning biomass and mean size of caught stocks (Roberts and Hawkins, 2000, Gell and Roberts, 2003), population abundance (Côté *et al.*, 2001), population density, biomass, fish size, and diversity (Roberts and Hawkins, 2000, Halpern, 2003, Palumbi, 2004) have been observed and recorded within their boundaries. They may also increase the exploited biomass in the adjacent areas due to ‘spill-over’ effects (Kramer and Chapman, 1999, Tupper and Juanes, 1999, Roberts *et al.*, 2001, Gell and Roberts, 2003, Russ *et al.*, 2004). MPAs are also considered to help maintain the genetic biodiversity of wild populations by protecting breeding stocks and thereby improving the genetic heterozygosity (Bergh and Getz, 1989). These benefits will be maximized when individual MPAs are connected as an effective network or system. These are not only within a certain area, country, but also as trans-boundary MPAs between nations or in a broader geographic region, if not international (IUCN-WCPA, 2008). However, effective management of MPAs has been raised as one of the major concerns for their establishment and implementation. Some MPAs exist as “paper parks” (Hockings *et al.*, 2000, Roberts and Hawkins, 2000). These are the MPAs where resource uses and other activities that may negatively affect them are not limited or effectively managed, so that the objectives of these sites are not achieved (Kelleher and Kenchington, 1992, Roberts and Hawkins, 2000). Institutional and governance problems are substantive challenges for effective management (Hanna, 2006, Christie *et al.*, 2007).

While institutions consist of established norms and behaviour, political structures, and legal arrangements (Ostrom, 1990, Berkes, 2004), governance is “*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). In other words, institutions are ‘hard structures’ containing actors, players and legal tools, and governance is a ‘process’ that describes how the actors and players utilize legal tools to govern embedded actors and their activities towards achieving common societal purposes. If any of these

components are weak, then that would influence the overall outputs and outcomes of these governing processes.

There are many generic studies about institutions (Ostrom, 1986, North, 1990, Ostrom, 1990, Knight, 1992, Crawford and Ostrom, 1995, Scott, 1995, Agrawal, 2001, Costanza *et al.*, 2001, Brunckhorst, 2002, Ostrom *et al.*, 2002, Young, 2002b, Young, 2003, Anderies *et al.*, 2004, Furubotn and Richter, 2005, Young, 2006) and institutional analysis for natural resource management (Oakerson, 1990, Ostrom, 1992, Thomson, 1992, Imperial, 1999a, Imperial, 1999b, Gibson *et al.*, 2000a, Noble, 2000, Olsson and Folke, 2001, Hagedorn *et al.*, 2002, Dolsak and Ostrom, 2003a) as well as governance processes (Swallow and Bromley, 1995, Costanza *et al.*, 1998, Borrini-Feyerabend, 2003, Graham *et al.*, 2003, Christie and White, 2007). Some of these studies have addressed principles, criteria, or indicators and formed frameworks that have been applied as guidelines for evaluating the performance or outcomes of natural resource management programmes, in general (Oakerson, 1990, Thomson, 1992, Pido *et al.*, 1997, Hagedorn *et al.*, 2002, Dolsak and Ostrom, 2003a) and in the particular field of marine resources (Pomeroy, 1995, Pido *et al.*, 1997, Juda and Hennessy, 2001, Tompkins *et al.*, 2002, Rudd *et al.*, 2003, Hidayat, 2005, Hilborn *et al.*, 2005, Hanna, 2006). Mutual influence between institutions, governance and the context on the outputs and outcomes of state development, in general, has been studied and discussed by a number of researchers (Fritz and Menocal, 2007, Grindle, 2007). However, there have been few studies that integrate or connect the principal components of institutions and governance in the same comprehensive analytical framework, or closely combine institutional and governance perspectives into the same framework, for analysing or evaluating the conservation and sustainable use of natural resources including MPAs.

A Marine protected area with its dependent human communities can be considered as a combination of human and natural systems. In these, marine or coastal ecosystems may be considered as a 'natural subset', while the human subset consists of governance structure, cultures, histories etc. that are focused on goods and services of the natural subset (Holling, 2001). Overused activities of the human subset may negatively affect the natural subset. Human and natural systems are normally dynamic, unpredictable and complex (Gunderson and Holling, 2001, Folke *et al.*, 2002a). This is especially apparent in the recent debates about climate change (Hughes *et al.*, 2003, Hughes *et al.*, 2005). Uncertainties and disasters seem more frequent, so the capacity and robustness of embedded actors and institutions to confront uncertainties and disasters are very important. Emerging perspectives for studying the human subset of human-natural systems, indeed,

not only need to analyze the change in the evolution of the institutional systems, but also take into account the capacity and interactions of all the components of the systems to persist in a new situation, to confront the uncertainties and crises and then overcome the constraints of the systems. In other words, both ‘hard structure’ (the institutional system) and ‘process’ (governance) should be simultaneously analyzed to best understand the patterns of resource and environmental uses, the functions of the overall institutional system and the endogenous/exogenous factors which affect institutional performance, outputs and outcomes of the systems. These are essential to understanding of MPAs and MPA networks as human and natural systems when studied.

The main purpose of this chapter is to introduce an analytical framework that combines institutions and governance based on institutional, governance, natural resource management theories and MPA concept. The application, significance and implications of this framework will be utilised to draw answers for interrelated questions formed in this research (**Chapter 1**). The remainder of the chapter is structured as follows. Section 2 describes the functions of governing systems that can operate through an inherent linkage between institutional structure and governance. Section 3 briefly reviews how the institutions have been analysed by others. The introduction to the multilevel analytical framework is the main content of section 4. Section 5 discusses principles and variables, and the applicability of this framework. The final section concludes with some implications of the framework and its practical applicability for the analysis of institutions and governance using MPAs in Vietnam as a case study.

3.2. Institutions and governance – the essential elements for operation of a governing system.

3.2.1 Institutions

Institutions have been variously defined by researchers (Schmid, 1972, Schotter, 1981, Bromley, 1989, North, 1990, Ostrom, 1990, Knight, 1992). These are the sets of working rules (Ostrom, 1990) or any form of constraints devised by human beings to shape human interactions (North, 1990). These include determining persons to be responsible, actions to be allowed, information to be disseminated and incentive sharing mechanisms. They can be viewed either as standards of behaviour (Schotter, 1981) or similar to a “political structure” with the range of attributes of a system (Ostrom, 1986).

Institutions consist of established norms and behaviour, political structures, and legal arrangements (Ostrom, 1992, Scott, 1992). Established norms and behaviour are called informal rules or constraints and are unwritten (North, 1990), as for example, customary regulations, social norms, customs, habits or taboos. Legal arrangements, however, include documented rules, namely formal rules or constraints (North, 1990), for example, political rules, contracts, agreements.

Institutions operate through three levels: operational, collective-choice and constitutional (Kiser, L. & Ostrom E., 1982, cited by Firmin-Seller, 1995). Operational rules, such as regulations, prescribe processes and actions. These include when, where and how to act, who should be involved in monitoring the implementation of actions, what information must be exchanged or withheld, and the rewards and sanctions or corrective actions that will be provided to those whose actions comply with or violate the rules. Collective-choice rules directly influence the operational rules by determining when and how the operational rules can be changed, and who makes decisions for change. Meanwhile, constitutional rules influence operational rules indirectly through determining who is eligible and what basic rules are to be used in shaping collective-choice rules (Ostrom, 1990, Imperial, 1999b, Hidayat, 2005).

Institutions can have dual roles depending on the context. On the one hand, they play a 'subject' role by establishing a stable structure for human interactions in order to reduce uncertainties (North, 1990). On the other, they are created, evolve or change over time through the actions of human beings (North, 1990) or are based on the interactions of humans (Crawford and Ostrom, 1995), or changes of history or culture. Thus, they are an 'object' of human interactions.

Organisations which are defined by rules, norms and shared strategies can be viewed as institutions (Ostrom *et al.*, 1993, Imperial, 1999b). Both institutions and organisations provide structure to human interactions (North, 1990). Organisations include bodies or individuals sharing some common purposes to achieve objectives by following defined constraints. Thus, the existence and evolution of organisations are fundamentally affected by institutional frameworks (North, 1990). The transformation of organisations may also require institutional changes to support achievement of strategic objectives. Indeed, organisational change should be taken into account when studying institutions. Both organisations and institutions may 'co-evolve' in certain circumstances, with bi-directional 'feed-backs' leading to the refining of shared objectives. The next section is about the concept of governance.

3.2.2 Governance

Governance is an awkward concept. It has different meanings to different people (Stoker, 1998, Kooiman and Bavinck, 2005) and diversely applied by practitioners and managers (Stoker, 1998). Governance can be viewed as a social coordination mechanism (Lee, 2003) or the generation of conditions for ordered rules and collective actions (Stoker, 1998). In other ways, it can be considered as a structure and a process for people to make decisions and share power (Pierre and Peters, 2000).

Governance is a process whereby the powers of the individuals or institutions are exercised in order to achieve desired objectives (Graham *et al.*, 2003). This process has been defined relating to roles, responsibility, power, relationships and accountability (Borrini-Feyerabend, 2003, Graham *et al.*, 2003) or combined 'steering' role of people, state and market in order to achieve strategic objectives (Jones *et al.*, 2011). In this research, governance is perceived as interactions among state and non-state actors to exercise power and responsibility and make decisions for solving societal problems and create societal opportunities (Graham *et al.*, 2003, Kooiman and Bavinck, 2005).

The governance process can be partly undertaken by civil society or non-state actors through applying informal rules, such as customary regulations, taboos, and social norms or shared strategic behaviour. Similarly, state actors and organisations embedded in the political structure employ formal rules, for example, political laws, contracts, agreements, for governance processes. In some cases, the state actors and non-state actors can share their roles and responsibilities with each other. For example, where the concept of *co-management* is applied and the resource users or appropriators can be involved and take part in decision-making processes (Pomeroy, 1995, Berkes, 2005, Christie and White, 2007). This may not occur with a state-owned property rights regime or centralised management approach in that the government agencies or bureaucracies hold legal mandates and are explicitly assigned as policy makers for resource management (Christie and White, 2007).

Governance can share some components with institutions and organisational theories. Governance also consists of actors and a structure in which these actors are embedded. While governance actors can be individuals, groups of individuals, associations, firms, international bodies etc. the structure implies a set of culture, customary regulations, laws and technical possibilities (Kooiman, 2008). It is evident that formal and informal rules may supplement each other in specific cases. For instance,

informal rules and social networks play important roles in solving social dilemmas including conflicts over resource uses in a society, especially where the formal institutions are relatively weak (Cooke *et al.*, 2000, Rudd *et al.*, 2003). It appears that individuals or organisations may govern each other based on the interactions between formal and informal institutions to make generic decisions towards desired objectives.

In summary, institutions provide formal rules, informal rules and a political structure as “hard structure” to reduce uncertainties, whereas governance is a ‘process’ illustrating how individuals or organisations deploy powers and make decisions based on legal tools (formal and informal rules) in order to achieve desired objectives. The governing system can only be functional or operational if both these components are effectively combined. Organisational theory is fundamental for analysing combined institutional and governance performance.

3.3 A brief review of institutional analysis

Institutional analysis has sought to understand and explain how institutions have been formed or designed, how the institutions have changed or evolved, and what factors have been important in such change (Hall and Taylor, 1996). These also include how institutions have persisted over time and adapted to changing external circumstances (March and Olsen, 1989, March and Olsen, 1995). In order to respond to contemporary events, phenomena or problems, institutional analyses have been conducted within different disciplines (e.g. economics, sociology, philosophy, politics, and history) (Koelble, 1995) and viewed from different perspectives using a variety of approaches (Ostrom, 1986). Furthermore, institutional analysis not only focuses on the rules that constrain people’s behaviour to understand how institutions affect the behaviour of individuals (Hall and Taylor, 1996). It also considers the formulation and history of rules to achieve order and predictability among human relations (Ostrom, 1986). Therefore, these related theories are foundations for understanding institutional design and transformation (Alexander, 2005).

Koelble (1995) and Hall and Taylor (1996) have reviewed studies of institutionalisms and classified them into three ‘schools of thought’, namely: ‘rational choice’ institutionalisms, sociological institutionalisms and historical institutionalisms. Within these, ‘rational choice’ institutionalism utilizes an instrumental approach and systematic theory-building to conceptualize the relationship between institutions and behaviour. This applies goal-oriented and efficiency

perspectives to explain the persistence of institutions that are subjected to processes to minimize transactions, influence costs and provide more benefits. Studies of this approach are often characterised as 'functionalist', 'intentionalist' or 'voluntarist' when analysing the institutional creation. Sociological institutionalism concentrates on the identity or culture of individuals or organisations to accommodate them into the socially-appropriate forms. This school of thought has been mainly used to interpret origins and changes of institutions based on socially-interactive processes between actors. The new institutional actions are only accepted if they achieve a high level of social legitimacy through a dialogue and are widely valued within a broader cultural environment. Lastly, historical institutionalism uses a behaviour-driven approach and cultural approach to assume that the unequal power allocations among social groups in the decision-making processes may create new institutions. This school of thought is strongly associated with historical development, so it is very useful for analysing institutional development and policymaking.

Similarly, three classes of theories of institutional change have been classified by Schuter and Hanisch (1999, as cited by Hidayat, 2005). In these, the first theory of institutional change, based on economic efficiency or cost-effectiveness, is used for transaction processes. This is equivalent to 'rational choice' institutionalism mentioned above. The second theory of institutional change is based on conflicts in power distribution, which is similar to the historical institutionalism school of thought. The third theory of institutional change is based on public-choice that is accepted by political parties or government to intentionally lead to a change (Hidayat, 2005). This is also considered as a socially appropriate form of culture or identity that social organisations and players afford changing institutions (Koelble, 1995, Hall and Taylor, 1996).

In general, each 'school of thought' on institutionalism or class of theories of institutional change has specific advantages and disadvantages. They can supplement or strengthen each other when being incorporated or integrated for applying to institutional analyses (Koelble, 1995, Hall and Taylor, 1996). Each approach has a specific theoretical 'lens', and should be chosen depending on the research questions and the way each researcher views the specific questions. For example, it is likely that the strategic-outcome-oriented approach applied in rational institutionalism may be suitable for the institutional system. In this, individuals or organisations are embedded in similar socio-economic conditions and also have consensus on shared-common goals. In this case, the preferences and strategic goals of the bodies can be established at the outset of the institutional formulation process. Institutional practices are persistent over time based on the means-ends efficiency approach. Conversely, the historical and cultural approaches may be applied for the

institutional systems that have been developed for a long period. Determinants of social interactions and human beings should be portrayed at the centre for these approaches.

In the natural resource management arena, the analysis of institutions has been undertaken through the use of structured frameworks. Some of which have been widely applied in various types of natural resource management, such as fisheries (Oakerson, 1990, Pido *et al.*, 1997), forestry (Thomson, 1992), common-pool resource use (Dolsak and Ostrom, 2003c), or agri-environment co-operatives (Hagedorn *et al.*, 2002). Most of these frameworks suggest an analysis of institutions through a process inter-linked between different components or variables. The components in each framework are connected with each other. However, most of these have not provided in-depth analyses of the inherent interactive processes occurring within each component, which might be essential drivers for change of the component. Nor have the interaction effects among variables or components for a whole institutional system been analysed (Agrawal, 2001). Oakerson (1990) and Thomson (1992), for example, assume their frameworks are not a causal model, just a heuristic logic. It is used for explaining possible outcomes of resource uses created by the influence of the physical world, decision-making structures, and incentives of those components on the interactions of individuals embedded in the institutional system.

Pido *et al.* (1997) consider all attributes relating to resource and resource users as causal variables that may characterize collective-action situations and influence outcomes. While these variables are mentioned as endogenous factors, the others like climate change, political and social conditions are viewed as exogenous attributes of the outcomes of institutions and fisheries management systems. In other words, this framework has enlarged a picture of institutions when contextual factors are taken into account for the analysis process.

Dolsak and Ostrom (2003a) place characteristics of resource and resource users at the focal point of their analytical framework as major drivers forming the institutions that govern resource use processes. Other external variables, such as economic environment, political environment, legal environment and technology, are described either as direct or indirect factors influencing the constitution of institutions.

In general, these aforementioned frameworks have not depicted how the resource users change the institutions governing resource use (Hidayat, 2005), nor do they show what factors may influence this changing process and how they can establish, monitor and enforce self-governance (Hidayat,

2005). Furthermore, these frameworks do not concentrate on the interactions of actors who utilize institutions to govern the exploitation processes and enforce resource uses. The self-organizing, adjustment and adaptation processes of institutions have been only superficially covered in these frameworks.

Hagedorn (2002) has used concepts of New Institutional Economics and approaches of other researchers of institutional analysis of natural resources to develop an analytical logic for studying institutional change in the arena of agri-environmental coordination. The logic identifies firstly determinants of property rights and governance structures that influence institutional performance. Secondly, it identifies two determinants of properties transactions and characteristics of actors as driving forces for institutional innovation processes. In other words, this framework identifies endogenous factors which may affect the performance and development of institutions, especially concentrating on self-organizing and self-governing factors for adaptive processes. However, the final outcomes of the institutional change process are not clearly taken into account. Contextual “exogenous” variables, such as economic, political, social and cultural conditions (as referred by Pido *et al.*, 1997, Dolsak and Ostrom, 2003b), are not obvious in this logic.

In summary, the selected analytical frameworks described above follow either rational institutionalism (Oakerson, 1990, Thomson, 1992), sociological institutionalism (Dolsak and Ostrom, 2003b), or a combination of these institutionalisms (Pido *et al.*, 1997, Hagedorn, 2002). Each of them provides certain insights based on the objectives of the researchers and the specific context of research questions. Essentially, most have been developed based on four major principles. These are attributes or characteristics related to (i) resource systems, (ii) resource users, (iii) institutional arrangement; and (iv) the relationships between acting groups (Agrawal, 2001). The contextual conditions have been mentioned by these authors, but their influences are not apparent. Additionally, the common objectives of these frameworks are to analyse how the institutions have been formed, changed and evolved over time. It seems governance has not yet been clearly taken into account for these institutional analyses. Meanwhile, mutual influences between actors and institutions are not obvious. Further implications of the institutional analyses for governance and management of common-pool resources have not yet included in these frameworks. Comprehensive institutional analysis should be conducted as a multilevel process (Ostrom, 1986) and from complex and multi-dimensional perspectives (Wilson, 2006, Wilson *et al.*, 2007) including the various levels and scales.

3.4. Combining institutions and governance: a multilevel analytical framework

3.4.1 Levels and scales:

The concepts of “scale” and “level” have been long understood and used more explicitly in natural science compared with social science. These are important for studying and analyzing problems of both these sciences (Gibson *et al.*, 2000b). “Scale” is defined as the spatial, temporal, qualitative or analytical dimensions used to measure and study any phenomenon. Meanwhile, “levels” are described as the units of an analysis that are located at different positions on a “scale” (Gibson *et al.*, 2000b, Cash *et al.*, 2006). For example, an environmental problem, such as climate change, can occur at different levels including patches, landscapes, regions and globally. These levels are located on the same spatial or geographic scale. Similarly, climate change may occur slowly or quickly varying on the temporal scale with different levels of days, weeks, seasons or years etc. Additionally, the impacts of a phenomenon may be counted, not only for a small group, a community at the certain time, but also for broader communities over the next or even several generations (in sociological and anthropological dimensions). If so, a study or analysis of natural or social problems, such as the climate change phenomenon, should account broadly for both (spatial, temporal) scales and other dimensions with various levels on each.

The levels may continuously range on a scale and sometimes are not explicitly distinguished. Young (2006) states that notion of “scale” may produce anomalous results. This author suggests adding the scope of jurisdiction to draw clear distinctions between levels on the same scale and allocates political or legal authorities among these levels. For examples, in terms of institutions, the scale of rules can be classified into increasingly different levels like operational rules, regulations, laws and constitutions. Similarly, the scale of an administrative structure in this term can be understood as consisting of commune, provincial, national, and international levels. As mentioned above, the scope or boundary of different levels is sometimes vague and most of, if not all, the problems in the linked human-natural system need to be solved across the scales. However, “scale” can also – and sometimes simultaneously – imply a level of organisation or a functional unit (Ahl and Allen, 1996) when studying organisational problems or phenomena. In other words, the boundary among scales and levels are sometimes vague, but these concepts are important for both the natural and social sciences. These should be taken into account when developing, conducting,

interpreting and communicating research questions. Therefore, the concepts of scales and levels were considered for developing a multilevel analytical framework for this research.

3.4.2 A multilevel analytical framework:

Institutions play two roles (subjective and objective) compared with human beings because on one side they shape the behaviour of humans, while also being created and changed by human beings on the other. In other words, human beings can be both drivers and restraining forces for the formulation, change, persistence, development and evolution of institutions. Crucially, the social interactions and human development should be central or focal points. Other social, economic, political and cultural context that may influence these processes should be taken into account for institutional analyses.

As stated in **chapter 1**, the purpose of this study is not only to elucidate how MPA-related institutions were formed and evolved. This study also focuses on how existing institutions and governance mutually influence each other toward achieving desired objectives and the goal of MPAs. In particular, this study concentrates on how social interactions, political relationships and economic conditions negatively or positively affect the exercise of power and decision making by actors. If these are identified, potential solutions can be determined for improving the governance and management effectiveness of individual MPAs and the national MPA network as well.

To meet these objectives, the framework requires inter-linked components. First, actors involved in governance processes are classified into groups: state and non-state actors. Secondly, the institutional arrangements are separated into two major components: a formal institutional component (includes formal rules, laws, regulations etc.) and an informal institutional component (consists of informal rules, customary regulations, environmental values etc.). Thirdly, the governance process is divided into two sub-processes. One reflects how state-actors or formal institutional organisations enforce formal rules. Another is the operation of informal rules implemented by non-state actors and informal institutional organisations. All of the state actors/formal institutional organisations, formal institutions and governance sub-processes undertaken by these actors/organisations are grouped into one set, namely a formal setting. Other remaining components, including non-state actors/ informal organisations, informal institutions and the other governance sub-processes are gathered into an informal setting. All these components are

connected to form a multilevel analytical framework as **figure 3.1** below. Further descriptions of these sub-components and sub-processes of each setting will be described later on with illustrative examples of marine protected areas as follows:

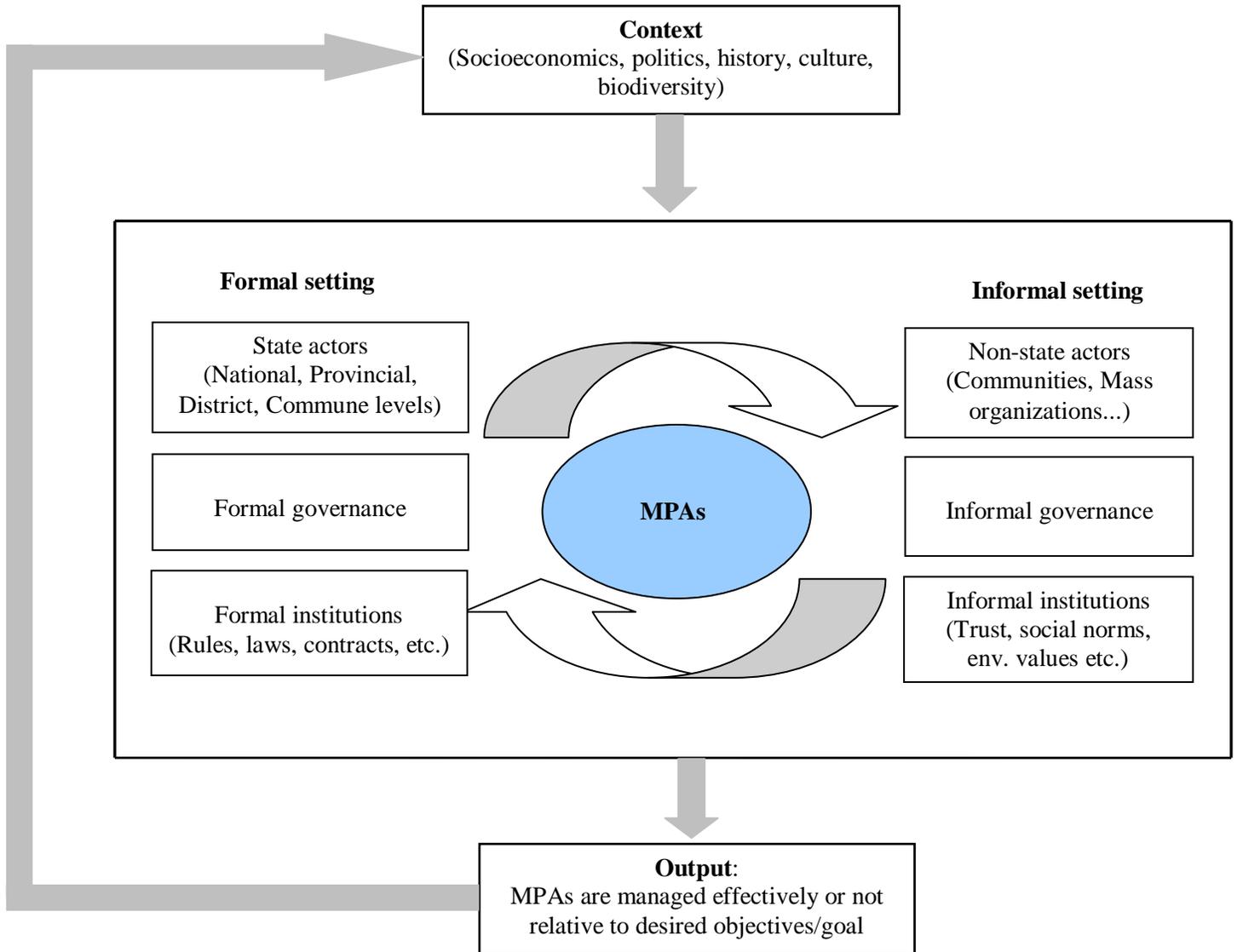


Figure 3.1: a multilevel analytical framework

A formal setting: includes sub-components and sub-processes as follows:

(i) *State actors and organisations:* who can be individuals; associations; or agencies responsible for administrative management of the political structure. At the study sites (in

Vietnam), the administrative system is multilevel from local authorities or committees to commune (hamlet), city (district), provincial (capital city) to central government agencies or even higher, if possible, at regional or international levels for trans-boundary or international institutional systems. State actors or organisations are employed or established based on formal legal decisions or documents signed by responsible person(s) or organisation(s) on behalf of the government. These actors or agencies in a political structure normally exercise their powers described in formal legal documents.

(ii) *Formal institutions*: are a set of rules, laws, regulations or contracts composed and approved by the state actors or agencies of the political structure (and may have some contributions of non-state actors and organisations). For examples, in a marine protected area, formal institutions can be a management plan, operational regulations etc. These are developed by a MPA authority and other related stakeholders, if possible, and approved by responsible state individual(s) or agency(ies).

(iii) *Formal governance processes enforced by state actors or organisations*: a governance process can be conducted by state or non-state actors or a combined group of these actors. When this process is undertaken by formal political actors using formal rules for enforcement within their responsible arena, it can be called formal governance. Another is an informal governance process that is presented in more detail below. These processes may occur together to constrain people within given procedures of a governmental structure or civil society to achieve common societal purposes. They may positively or negatively interact with each other. Objectives or approaches to these processes may or may not be aligned.

An informal setting: is elaborated into three entities as follows:

(i) *Non-state actors and organisations*: these include individuals and mass organisations of civil society or resource users or appropriators. The leaders or chairmen of mass organisations are normally elected by their members based upon accepted criteria, for example, prestige, origin, religion or gender of the candidates. The mass organisations represent the local communities to bring ideas or recommendations from local people to work with higher or responsible agencies. In some local communities, traditional culture remains viable and strongly influences local decision-making processes. Traditional individuals or organisations enforce traditional rules in order to

structure social interactions. These individuals can be a “village father” (*de facto* village leader), popular religious leader or head of traditional trade in the community.

In addition to civil society, resource users or appropriators described as non-state actors as above, market actors (Juda and Hennessy, 2001, Barrett *et al.*, 2005) or other stakeholders should be mentioned in this analytical framework. They can be NGOs, media or private bodies who may get involved in the governance processes. They can help with financial support, technical knowledge, information dissemination, workload support and contributing to think-tanks. They can be stakeholders with independent points of view to help connect different stakeholders especially for coping with complex social and cultural issues. They may help mediate social conflicts occurring within the civil society or between the state and civil society. Furthermore, they may sometimes strongly influence the rectification, declaration and dialogue of institutions. However, they cannot get very involved in development and approval of formal institutions, at least with the current political regime in Vietnam. They also cannot play roles as decision or policy makers. In this study, they are therefore classified into non-state actors.

(ii) *Informal institutional component*: consists of informal rules, customary regulations, belief, or norms. Informal rules are normally created through regular traditional practices of culture or history of the civil society. These are handed down from generation to generation. Informal rules may be changed or developed in response to changes or development of the society (culture, history, politics, and economics) and through perceptions of local people about these informal rules.

(iii) *Informal governance processes*: are undertaken by non-state actors or mass organisation(s) to deploy informal rules. For example, in some fisheries villages in Vietnam, a *de facto* village leader has responsibility to organize traditional festivals of the village and has power to enforce local social norms that have existed at the village for a long period of time.

What else should be taken into account for analysing institutions and governance of MPA? Marine protected areas have been formed mainly for either biodiversity conservation or fisheries management or both (Bohnsack, 1998, Roberts and Hawkins, 2000, Roberts *et al.*, 2001, Chape *et al.*, 2005). However, their goals or primary objectives may differ from each other depending on the specific situation, including social, economic, cultural, political context, of the area or nation in which MPA establishment is attempted. MPAs are sometimes established to maintain marine

systems for aesthetic appreciation, particularly of tourists, in developed countries (Woodley, 1985, Alcalá and Russ, 1990). In developing countries with a high fishing pressure and lack of technical resources for fisheries management, MPAs are becoming a potential fisheries management tool by reducing conflicts in resource use between different fisheries sectors, and improving yields and biomass generated by recruitment (Roberts and Hawkins, 2000). In other words, socio-economic and political conditions may not only influence the prioritising objectives of MPAs, but also affect the management of MPAs and its efficiency. Socio-economic and political conditions are thus key considerations in analyses of MPAs.

In this analytical framework, social, economic, political, and cultural factors should be viewed as both consequences and forces of the process of institutional change. On the one hand, creation and maintenance of prosperous social, economic and environmental systems are goals of sustainable development (Folke *et al.*, 2002a). They also seem to be overall outcomes that the individuals and organisations embedded in the institutional systems want to move towards and achieve. In this case, they are consequences. On the other hand, they are also forces that can positively and negatively influence the governance processes towards better or worse consequences. In other words, they can be driving or restraining forces for governance processes.

In addition, social, economic, political, and cultural factors can play as both endogenous and exogenous factors when investigated subjects are individuals, parties or a whole society. For example, when a MPA authority has insufficient finance for enforcement activities, rangers cannot patrol with an appropriate frequency and duration to effectively reduce violations. Similarly, when rangers have not enough income for themselves and their family, they may be susceptible to corruption from violators of the fishing area and receive financial incentives from the sharing of illegal benefits. In this case, socioeconomic and political conditions are endogenous to the MPA authority, but exogenous to MPA rangers. It is likely that socioeconomic and political conditions are driving forces for the social connectedness and good management of natural resources when they are prosperous. Conversely, they are also restraining forces affecting the governance processes and management of natural resources when their conditions are dysfunctional or sub-optimal. Therefore, a use of social, economic, political, and cultural factors as the only criteria or benchmarks for evaluation of governance processes or management programmes is insufficient. These should be considered, whether target people are individuals, parties or a whole society, and at all stages of the governance and management processes or programmes to better understand the whole institutional system and its operational process.

3.4.3 An iterative, cyclical process

This multilevel analytical framework can be adopted for further use if some fundamental points, like the concept of effective management and specific considerations for applying this concept to MPAs, can be clarified. Effective management is a process that compares designed objectives of natural resource management programmes with the outcomes (Bellamy *et al.*, 1999) after a certain implementation period. This concept was developed originally based on a set of principles for terrestrial protected areas (Hockings *et al.*, 2000, Day *et al.*, 2002). It has been promoted in MPA management as a tool to help MPA-related stakeholders (*e.g.* managers, practitioners, communities, policy makers) achieve adaptive management, improved planning and better accountability. It also helps encourage appropriate resource allocations through a process of monitoring and evaluation against designed objectives (Hockings *et al.*, 2000, Day *et al.*, 2002, Hockings *et al.*, 2002, Gubbay, 2005). Furthermore, this tool may help facilitate responses or solutions to threats and deficiencies in management, from site-based actions to broad political and policy reviews (Hockings *et al.*, 2000), of a national or regional MPA network. However, some difficulties have emerged when applying this concept to marine systems because of different natural characteristics and a relative lack of knowledge of marine ecosystems and their species (Day *et al.*, 2002).

As stated above, the major objective of this analytical framework is to understand the social interactions of actors embedded within institutional systems and how the institutional systems function or are influenced by specific social, political, cultural and economic contexts. Another related objective is to develop the capacity for institutional systems to adapt to complex and ever-changing context to help better achieve desired objectives and goal of MPAs. Ideally, a participatory approach involving all stakeholders (*e.g.* government, civil society, media, non-government, private sectors) should be used. All the components of this framework should be analyzed as a whole. Changes to any of these components may influence others with consequences for the functions of the whole institutional system. This logical framework is a continuous and cyclical process and should be applied in an iterative way similar to adaptive management. However, principles or criteria are required to assist in its application.

3.5 Principles or criteria for an application of this analytical framework:

While a framework portrays linkages and processes for analysing the functions of the governing system, principles or criteria are practical points or foundations that practitioners need to rely upon to put the framework into operation. Various sets of criteria for institutional and governance analysis have been suggested (Oakerson, 1990, Thomson, 1992, Pido *et al.*, 1997, Costanza *et al.*, 1998, Imperial, 1999a, Imperial, 1999b, Hagedorn *et al.*, 2002, Dolsak and Ostrom, 2003b, Graham *et al.*, 2003), but it is very difficult to accept any set of criteria as a universal standard for analysis and evaluation, and some are controversial (Graham *et al.*, 2003). This section reviews the published literature about institutional analysis in a natural resource management arena (Pido *et al.*, 1997, Bellamy *et al.*, 1999, Imperial, 1999a, Imperial, 1999b, Pretty and Ward, 2001, Rudd *et al.*, 2003) equivalent to the formulation of the analytical framework developed above.

Firstly, in relation to effective operation of a formal institutional structure, Bellamy and others (1999) suggest some essential characteristics which should be considered as follows:

- **Clear and consistent goals and objectives** are needed to guide agency staff about the means and ends, understand the relevance of their tasks in this process, and the potential challenges.
- **Adequate financing** is one of the decisive factors that helps achieve goals and objectives. It needs to be transparent and efficient for program implementation.
- **Good coordination** of the activities of agency programs and activities within and between levels of government and with the community in general is a core requirement of successful resource management programs. Thus, one of the most important attributes of any program is the extent to which there is effective coordination between implementing agencies and their activities.
- **Adequate guidance to implementing agencies** is the extent to which the program defines the processes and the formal rules for the implementing agencies to make decisions. This will characterise the progress of implementation. The implementers must know clearly what they are required to do, and how and whom they can collaborate with to do it. Staff commitment in the core implementing agency and allied agencies can substantially influence outcomes in the long term and is essential to the success of programs.

- **Provisions for access by others** to collaborate with agencies and other stakeholders can help foster contributions of outsiders. Funding and staffing for specific activities of the resource management programs can influence the participation of external agencies, program target groups and the community. The key consideration is whether provision has been made for adequate contribution by community groups.

A second key consideration relates to the informal component that encompasses civil society, social organisations and a whole array of social and moral norms. Of these, social and moral norms constrain individuals' behaviour and thereby allow the coordination of expectations in social and institutional exchange (Raiser, 1997). The features of social organisations that facilitate collaboration and cooperation for mutual benefits can be networks, norms, and social trust (Putnam, 1995). To understand how informal institutions including norms of behaviour, conventions, and self-imposed codes of conduct (Ostrom, 1990) and social capital (Rudd *et al.*, 2003) influence the operation and performance of an institutional system, it is necessary to analyse the central features of the informal organisations or civil bodies and interactions that occur within the civil society and social organisations. Some factors (Pretty and Ward, 2001, Rudd *et al.*, 2003, Pretty and Smith, 2004) that should be considered for this component are as follows:

- **Trusting relations:** include trust among individuals and social organisations within civil society and between civil society and government agencies. Mutual trust is important for collaboration among actors in the governance processes. It may reduce transaction costs and time.

- **Reciprocity and exchanges:** can be an exchange of tangible items of roughly equal values at a certain time, or an intangible relationship or help over a period of time. These not only demonstrate mutual trust, but also help build social connectedness among people and communities.

- **Common rules, norms and sanctions:** can be generated through general discussions, negotiations or agreements among bodies in a community or handed-down norms of behaviour, identity or culture generously accepted by most local people. These provide the people with the basis for daily behaviour during involvement in collective actions at community level.

- **Connectedness of networks and groups:** can be affected by differences in social economic background or other aspects, such as, religion, origin, or level of education among groups of local people. A degree of connectedness may affect information dissemination processes and enforcement.

- **Local ownership and benefit sharing mechanisms:** can enhance responsibility and give voice to local communities over natural resources. When local people view the resources as their

own assets, they are more likely to spend the necessary tremendous effort to protect them than when they feel disenfranchised. This is a cost-benefit tool to connect people with resources, thereby empowering them with a stronger and long-term commitment to resources.

Lastly, governance processes can be manifest through performance evaluation of an institutional system. Elinor Ostrom and her colleagues (e.g., Koontz 1997, Crawford and Ostrom 1995, Ostrom and others 1993, 1994, Ostrom 1986, 1990, Blomquist 1992, Sproule-Jones 1993, Kiser and Ostrom 1982) have developed a set of attributes in an Institutional Analysis and Development Framework . Four interrelated criteria are suggested in this framework for evaluating institutional performance:

- **Efficiency (market and administrative):** ‘efficiency’ (Imperial, 1999a) or transaction costs (Rudd *et al.*, 2003) consists of coordination costs, information costs and strategic costs. In the case of marine reserves, the transaction costs can be the cost of environmental monitoring of reef conditions and fish stocks, the cost for discussing, developing and reaching agreements on rules (e.g. about reserve designs, zoning plans and access rights) to control resource uses. These also include the legal costs for implementing management solutions and ongoing enforcement costs to ensure compliance with the final policy package. Efficiency is one of the major objectives for which institutions strive.

- **Equity:** can be understood in two ways: fiscal equivalence and redistributive equity. The principle of fiscal equivalence holds that those who benefit from the service should shoulder the burden of financing that service (Imperial, 1999a). Redistributive equity is concerned with structuring program activities based on differential ability to pay. There is thus an equity in both process and result (Imperial, 1999a). Ultimately, this needs to be a transparent and fair mechanism for cost and benefit sharing between actors or beneficiaries in the long term.

- **Accountability:** is important for institutional arrangements by providing the opportunity for all the actors or stakeholders to monitor each other’s behaviour and practices and to play active roles in monitoring decisions related to the implementation of a management plan (Imperial, 1999a) or an enforcement process.

- **Adaptability:** the institutional performance in term of its ‘adaptability’ is viewed as the ability of the actors, including local communities and government structure, to respond to the ever-changing, complex and unpredictable world (Holling *et al.*, 1998). These include changes in political, economic, cultural and environmental conditions, which may bring unforeseen impacts or suffering during the implementation process.

In addition, Graham *et al.* (2003) discuss and suggest five key principles for good governance of protected areas. Three of these have similar meanings to those suggested by Ostrom and others (as described above). Two other principles recommend firstly consideration of participation of stakeholders and secondly a strategic vision for more stable, participatory and integrated approaches to conservation and sustainable use. These have recently been increasingly used for the governance processes of protected areas (Graham *et al.*, 2003, Folke *et al.*, 2005). More details are below:

- **Performance:** can be measured by the capacity of all the actors embedded within the institutional system to undertake activities with responsiveness, effectiveness and efficiency.
- **Fairness:** considers the participation by all stakeholders without discrimination, especially those from civil society, in the design and development processes of law, rules and enforcement. This applies for both establishment of new protected areas and management of existing PAs.
- **Accountability:** is a transparency in sharing information, assigning responsibilities and authorities among actors within the same structure (government, civil society, media, non-government) and among these structures.
- **Legitimacy and Voice:** count that stakeholders, especially civil society, should be involved in all levels of a decision-making process. There should be a high level of trust among actors of formal and informal institutional structures.
- **Direction:** should include a strategic vision for all the levels, from individual protected areas to national and international networks, to ensure that the levels are consistently integrated to support each other. Human development and historical, cultural and social complexities should be taken into account in developing these strategic visions.

In brief, there are various sets of principles or criteria for analysing institutions or evaluating governance of natural resources as reviewed above. In this research, a synthesis of secondary data and situation analysis were initially undertaken to select appropriate themes and principles, based on the realistic context and problems, and the reviews above, for the study. The application process of this multilevel analytical framework is presented as follows:

a) Situation analysis: this step was undertaken at the outset of the empirical program including document reviews and focus group discussions using audio-visual materials held at community and governance actors' level (more details about these data collection instruments in the **section 2.2.3**).

This helped obtain an understanding of the institutional system, its problems, and other factors that may affect the governance and management of MPAs. Based on the secondary and primary data collected, primary or main issues were grouped into different research themes or principles for further investigations later.

b) Refining research themes and principles: the research themes and principles obtained from the situation analysis were revised and then referred to principles or criteria suggested by other sources (as outlined above) to refine and compose particular criteria that suit the situation of study sites. This set was compatible with the specific situation of the particular MPA on the one hand, and not seriously in conflict with current best-practice reviewed, on the other. This contextual set of criteria, together with the developed multilevel analytical framework, will be utilised as a guide for later investigations through open-ended interviews of government and civil society's actors and other stakeholders.

3.6 Preliminary conclusions:

This chapter has reviewed theories and concepts related to institutional analysis, governance evaluation and natural resource management to develop theoretical grounding as described in research objective one (**Section 1.2**). For the purposes of this research, the framework developed was a useful tool for understanding the social interactive processes occurring inside the institutional structure, and the way that institutions function and governance processes in the specific context of MPAs in Vietnam. It has also helped evaluate the outcomes of the governing system towards achieving common purposes. In other words, the research objective of development of a multilevel analytical framework (**Section 1.2**) has been accomplished through this chapter.

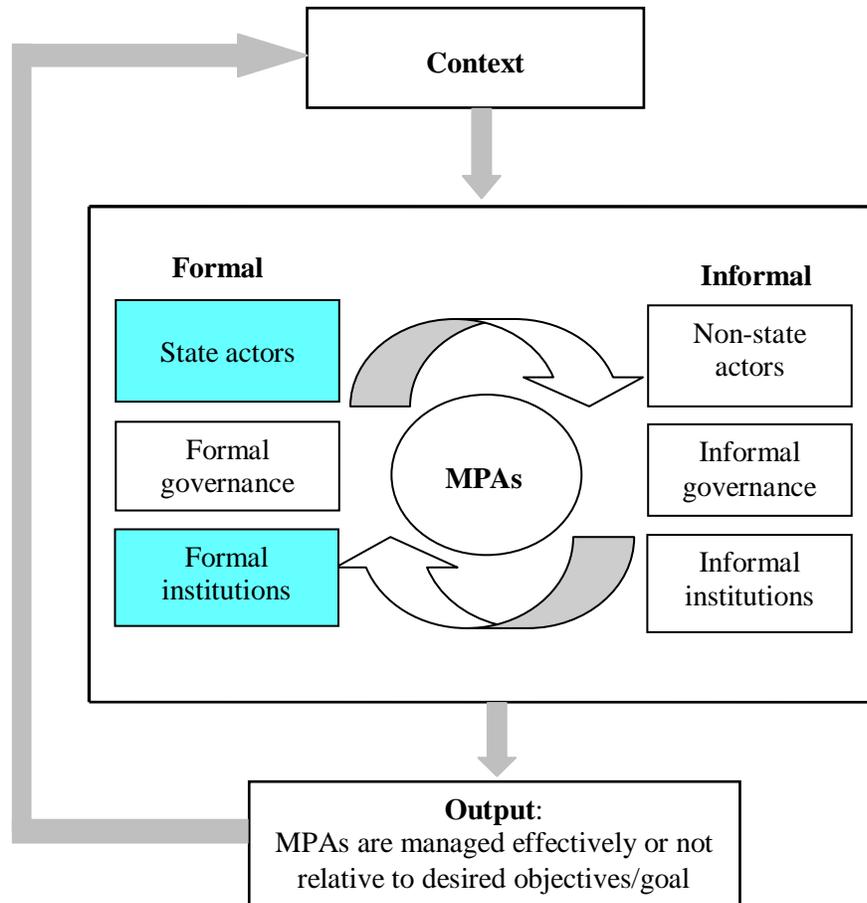
This framework will be used for empirical research to achieve the remaining objectives and aims of this thesis through studying institutional and governance analysis of MPAs in Vietnam. Findings and insights from the research will help consolidate theory and applicability of the framework in understanding institutions, governance and their causal factors and thereby could aid identification of potential solutions for improving management effectiveness of the MPAs.

As discussed in **chapter 2** this study was investigated through an inductive research approach within a constructivist paradigm. The research results were 'socially constructed' and interpreted

depending on data collected within the specific context of study sites. Three thematic categories, equivalent to three major components of the analytical framework developed above, were classified based on collected data while analysing textual materials. These related to (i) the complexity of formal institutions, (ii) social interactions and their perceived barriers to formal governance and (iii) civil society, informal institutions and their influences on informal governance. These themes will be scrutinized and elaborated in the next **chapters (4 to 6)**. **Chapters 4 and 5** will present how the formal institutions and interagency governance processes affect the governance and management of MPAs in Vietnam. These chapters will respond to the major components of a formal setting developed in the analytical framework. **Chapter 6** will concentrate on the informal setting including the influences of informal institutions, the socio-economic context, social interactions of local communities and their participation in these processes on MPA governance and management. **Chapter 7** will elaborate on the discussion and synthesis of the research findings addressed in **chapters 4 to 6**.

CHAPTER 4: THE COMPLEXITY OF FORMAL INSTITUTIONS AND THE BARRIERS TO EFFECTIVE MARINE PROTECTED AREA GOVERNANCE IN VIETNAM.

4.1 Introduction:



This chapter presents results of an analysis of formal institutions and organisations relating to marine protected areas (MPAs) in Vietnam (the highlighted parts in the developed framework above). Its purpose is to understand how the regulatory system and organisational structure related to MPA governance have been formed, persisted and changed and how these systems have impeded, or advanced, the effective governance of the marine protected area (MPA) network. Specifically, the chapter tries to answer the questions: How are the multilevel formal institutions related to MPAs formed? Who gets involved in MPA governance? What are the roles of each agency in these processes? How are the actors, players or organisations formed into this

institutional structure? What are the gaps and overlaps, in functions and responsibilities, between the agencies over levels and sectors? In what way are the rules-in-use and rules-on-paper congruent or incongruent? What is the capacity of state actors to enforce these formal institutions for MPA governance? What factors or variables may help form and develop this institutional structure within the specific socio-political context of the MPA network and if so, in what way?

Data analysed and cited in this chapter were from available legal documents (listed in **Appendix 4**) and collected from interviews with marine-protected-area-related policy makers, managers, practitioners, staff of government agencies, and local communities at study sites. Formal regulations at both national and provincial levels were used to analyse the complexity of formal institutions, including syntheses of overall goals, strategies of the country in relation to marine conservation and environmental protection, and the allocation of responsibilities between government agencies. In addition, the contents of open-ended interviews were employed to understand the status of human resources and their capacity for achieving desired goals. The findings from the interviews were also used to confirm and reinforce the issues detected from the formal institutional examination and to explore the consequences and outcomes of governance and management of MPAs caused by these issues.

The findings are presented in this chapter with a consideration of level-related problems. According to Berkes (2007), in a multilevel system for biodiversity conservation and natural resource management with organizational levels ranging from local to international, each level has specific perspectives, knowledge and scale of the commons. Some problems may be solely dealt with in relation to their particular level or scale. Other problems, however, may not, and the approach applied may vary over the different levels (Murphree, 2000). In this chapter, some themes, including syntheses of policies, strategies and allocation of responsibilities and mandates, and human capacity, are presented from national to provincial level. Meanwhile, approaches to the decentralization of MPA establishment and governance are recognized as themes that interlink between these levels.

This chapter is structured into three main sections. The first section is a brief introduction to the government organizational structure related to MPA governance in Vietnam. The second section presents research findings of this study to demonstrate the complexity of formal institutions. That consists of six issues identified as barriers to effective governance of MPAs in Vietnam. The final section presents the conclusions of this chapter.

4.2 Understanding organizational structure related to marine protected area governance in Vietnam

In Vietnam, there are three constitutional components of government - legislative, executive and judicial bodies. The National Assembly is a legislative body that has the highest power to approve the Constitution, Resolutions and all laws. The Judiciary consists of agencies or bodies responsible for enforcing the laws of Vietnam to solve conflicts or disputes. The executive component consists of administrative agencies designed as a hierarchical system (see below). These agencies issue legal documents that guide implementation of the constitution, resolutions and laws approved by the National Assembly. At national level, while the government has power to promulgate decrees and decisions coming into effect over the country, sectoral ministries have power to issue circulars and decisions that are applied for its particular sector. At local level, agencies, such as, provincial, district or commune people's committees, approve and sign legal documents, which are used for day-to-day management and governance activities.

The organizational structure of the Vietnam Government can be divided into two nested sub-structures based on geopolitical allocation: (i) National administrative sub-structure: includes government offices, ministries and other national-level offices responsible for administratively steering implementation of all aspects of socio-economic development, and for the execution of legal documents, over the whole country. (ii) The local administrative sub-structure: consists of people's committees of province, district and commune levels. Sectoral agencies at these levels are responsible for administrative processes to ensure that socio-economic activities are developed as planned at the equivalent geopolitical scale. In addition, governmental agencies at each level can be designed either as an administrative management agency, government enterprise or government business enterprise (**Figure 4.1**). They have different mandates and legal rights and are constrained by specific regulations. While administrative management agencies consult people's committees in the execution of formal regulations, other functional departments and enterprises assist the people's committees in implementing and delivering socio-economic activities and services.

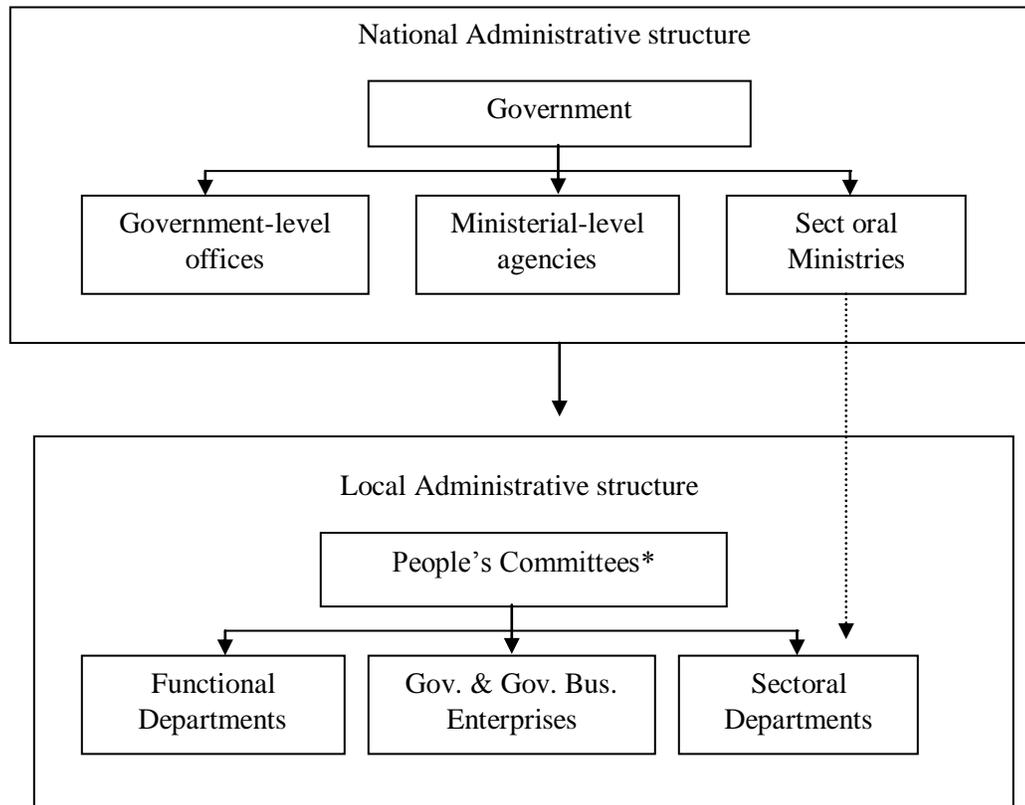


Figure 4.1: The organizational structure of the Vietnam Government designed based on geopolitical allocation (adapted from National Administrative Institute, 2008).

By another view, the **Figure 4.2** below illustrates the vertical hierarchical system among responsible jurisdictions. The Government and People's Committees, from provincial down to commune level, are administrative agencies and responsible for general jurisdictions of certain locations. Other agencies, such as, Ministry of Agriculture and Rural Development, Ministry of Natural Resources and Environment, and similar departments at provincial, district and commune levels, are sectoral agencies and responsible for specific technical jurisdictions of that particular sector over the assigned scale.

In **Figure 4.2**, a sectoral provincial agency that integrates administrative management mandates and technical functions, is responsible to two entities: (i) Provincial People's Committee for general administrative management and (ii) sectoral Ministry for technical supervision. For example, a sectoral agency, as the Provincial Department of Agriculture and Rural Development, is administratively managed by a responsible Provincial People's Committee (e.g. staffing, salary) and steered by a ministerial level (e.g. Ministry of Agriculture and Rural Development) to oversee

* These are People's Committees at three different levels – province, district and commune

strategic development and implement sectoral legal documents at provincial level with technical instructions from this sectoral agency. The same structure is also repeated at district level. However, at commune level, the Commune People’s Committees are mainly responsible for administrative management. Sectoral tasks, such as, fisheries and agriculture, are included into mass organisations like the Farmer Association, because of the limited number of staff provided, and a significant number of demands at this level (**Figure 4.2**).

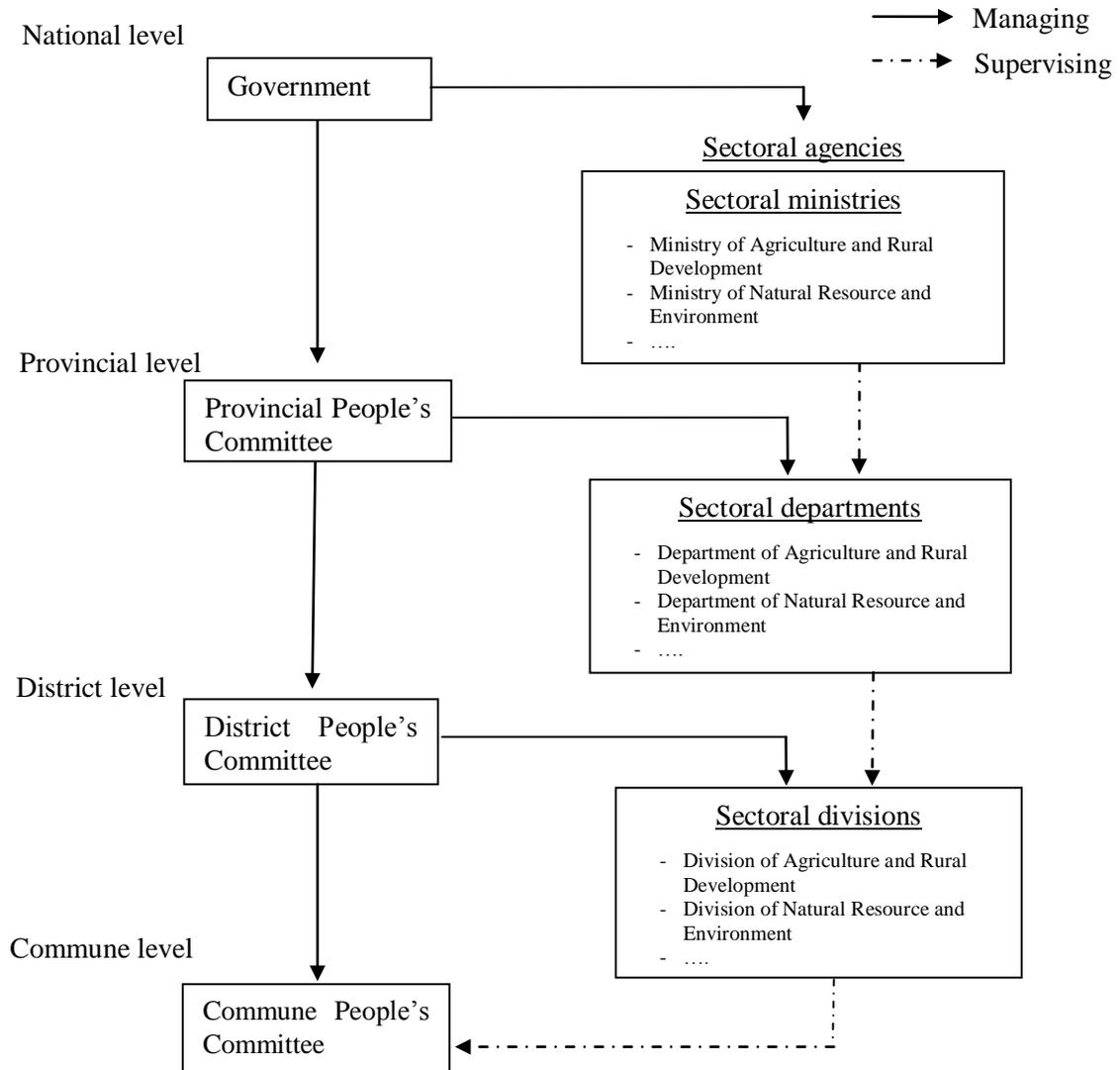


Figure 4.2: The Vietnam government organizational structure designed based on the mandates of agencies (adapted from National Administrative Institute, 2008).

In brief, when a marine protected area is established, its management authority can be located at national, provincial or lower levels and designed as an administrative management agency,

government enterprise or government business enterprise (more information about differences in functions, responsibilities of these three agency's organizational types in **Appendix 5**). Typically, the MPA authority can be set up under one agency, such as, a People's Committee for general administrative management, and another sectoral agency for technical guidance and regulations.

4.3 Research findings:

This chapter demonstrates the complexity of formal institutions related to MPA governance in Vietnam by answering the group of questions made above (**section 4.1**). This complexity is illustrated through six identified issues: (i) implicit and inconsistent MPA-related policies and strategies over the jurisdictional levels, (ii) overlaps in allocation of responsibilities among sectoral agencies, (iii) unstable organizational structure responsible for MPA governance, (iv) MPAs established based on insufficient information and by external interests, (v) incongruence between rules-in-use and rules-on-paper and a temporal-scale mismatch problem of formal institutions, and (vi) insufficient staffing and capacity building programs relating to MPA governance. These issues are elaborated as follows:

4.3.1 Implicit and inconsistent MPA-related policies and strategies over the jurisdictional levels:

This chapter, through analysing formal institutions, has detected that (i) MPA-related policies and strategies are implicit and inconsistent over the jurisdictional levels. There are confusions in terminologies of protected areas prescribed in national policies and strategies. (ii) Socio-economic development has been given a higher priority over environmental protection and conservation in written policies and strategies at provincial level. These issues have created problems in the application of the terminologies to institutional development for allocating responsibilities among related agencies and for the institutional operation at practical sites to achieve effective governance of the protected areas. These issues are elaborated below:

4.3.1.1 Commitment to environmental protection, confusion about protected-area terminologies and their application in national policies and strategies:

A number of critical international conventions have been signed by the Government of Vietnam to show its strong commitment to biodiversity conservation and environmental protection with

international communities.²² At the national level, there is a strategy “(T)o bring the country out of the less developed state; visibly improve the material, cultural and spiritual life for the people; form a firm foundation so that Vietnam basically becomes an industrialised country by the year 2020;...”²³ To achieve this strategy, the Political Bureau (the executive committee of the Communist Party of Vietnam) views environmental protection in the period of industrialisation and modernisation of the country as a fundamental principle. This party strongly states that “(E)nvironmental protection is inseparable from the lines, directions, and socio-economic plans of authorities at all levels and in all sectors, and is a significant basis for ensuring sustainable development and successful implementation of the course of industrialising and modernising the country”.²⁴ Furthermore, socio-economic development must be closely tied to environmental protection and improvement to ensure harmony between the artificial and natural environment and biodiversity conservation.²⁵ Similarly, environmental protection is also mentioned as a duty of the whole society across all the levels, sectors, organisations, communities and citizens. All efforts including internal forces and international cooperation are called for to promote environmental protection and sustainable development.²⁶

Environmental protection, including marine and coastal areas, is one of three pillars of sustainable development. It is viewed as a way for “... protecting national parks, natural reserves, conserving biodiversity; overcoming environmental deterioration and improving environmental quality”.²⁷ Establishment of a network of marine and coastal protected areas is mentioned as a major action to help conserve biodiversity and protect the marine and coastal environment. It should also support

²² These important International Conventions include the World Heritage Convention (signed on 19/10/1987), Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention), 1971 (signed on 20/9/1989), Convention on International Trade in Endangered Species of Wild Fauna and Flora (signed on 20/1/1994), Vienna Convention for the Protection of the Ozone Layer (signed on 26/4/1994), United Nations Convention on Sea Laws, 1982 (signed on 25/7/1994), United Nations Framework Convention on Climate Change, 1992 (signed on 16/11/1994), Convention on Biological Diversity (signed on 16/11/1994).

²³ National Strategy for Socio-economic Development in the period 2001 – 2010

²⁴ Directive No. 36-CT/TW dated on 25th June 1998

²⁵ Stated in documents of IXth National Communist Party Congress

²⁶ Article 1, Decision 256/2003/QĐ-TTg Approving the National Strategy on Environmental Protection till 2010 and Orientations towards 2020

²⁷ The strategic orientation for sustainable development in Vietnam (Vietnam Agenda 21)

the development and improvement of livelihoods for coastal communities and mitigate impacts of natural disasters.²⁸ Eventually, a strategy for the establishment of a national protected area system was approved by the Government.²⁹

The goals of this strategy are to:

- Establish, organize and effectively manage protected areas located in different ecosystems (including terrestrial, wetland and marine) in order to protect, within an ecologically sustainable development framework, the rich and unique biodiversity and landscape resources of Vietnam;
- Closely link conservation and development activities; and
- Fully mobilise roles and functions of the protected area system to actively support the implementation of the Comprehensive Development and Hunger Eradication and Poverty Reduction Strategy in the course of national industrialisation and modernisation.³⁰

The commitment to environmental protection at the national level was emphasised when Vietnam became a member of the World Trade Organisation (2007), the Government again describes the need to “*(E)stablish and implement projects for, river valley environmental protection, natural protected areas and biodiversity conservation, marine and coastal environmental protection, strengthening environmental monitoring capacity, and developing environmental technologies and industries*”.³¹ In other words, marine protected areas have been indicated, through national policies and strategies, as one of important tools toward sustainable development of the country.

However, establishment, governance and management of MPAs has been awkward because of immature institutions and limited comprehension of the MPA concept. Although the MPA concept has been explicitly defined by IUCN for almost three decades (IUCN, 1988), it remains a relatively

²⁸ Decision 256/2003/QĐ-TTg Approving the national strategy on environmental protection till 2010 and orientations towards 2020

²⁹ Decision No. 192/2003/QĐ-TTg dated on September 17th, 2003 approving the Management Strategy for a Protected Area System in Vietnam to 2010

³⁰ The Comprehensive Poverty Reduction and Growth Strategy, 2002

³¹ Section 10b of Resolution No. 16/2007/NQ-CP dated on February 27th, 2007 promulgating the Action programme of the Government to implement Resolution of the fourth plenum of the Xth National Communist Party Congress on some major guidelines and policies of for rapid and sustainable economic development when Vietnam becomes a member of the World Trade Organization.

new concept in Vietnam with different definitions depending on the function of the responsible organisations. Consequently, there are overlapping roles and confusion about definitions of MPAs and other types of protected areas.

In Vietnam, a marine protected area is defined as “*an identified sea area (including any islands inside) which possesses fauna and flora systems of national and international significance regarding the science, education, tourism, recreation and that is protected and managed pursuant to the regulations of the protected areas*”.³² Meanwhile, other areas, which are “*permanently or temporarily submerged in water... with a depth of no more than six meters at ebb tide*”³³ are defined as a wetland. In effect this means that some coastal wetland areas can be classified as marine protected areas.

Similarly, forests, which “*encompass islands and marine ecosystems*” are defined as a special-use forest. Some “*inland wetlands*” can also be declared as natural reserves. Both of them must be regulated by institutions for special-use forest protection.³⁴ Indeed, there are some overlaps in the definitions of marine protected areas, wetlands and special-use forests, even though they are managed by different sectoral agencies.³⁵ While a national system of protected areas (including terrestrial, wetland and marine) was approved by the Government,³⁶ the definitions of different types of protected areas have not yet been made explicit. Each type is under specific sectoral jurisdictions. Therefore, some areas are concurrently managed by several agencies, whereas others are not effectively governed and classed as ‘governance vacuums’. These cause confusion and overlaps between sectors in developing sectoral strategies and policies and assignment of responsible agencies (more in **section 4.3.2**).

³² Decree No. 27/2005/N^D-CP dated on March 8th, 2005 regulating details and guiding implementation of some articles of Fisheries Law.

³³ Circular No. 18/2004/TT-BTNMT dated on August 23rd, 2004 Guiding the implementation of the Government’s Decree No. 109/2003/ND-CP dated on September 23rd, 2003 on Conservation and Sustainable development of Wetlands.

³⁴ Decision No. 08/2001/QĐ-TTg dated on January 11th, 2001 approving the protection regulation for Special-use Forests, Protection Forests and Production Forests.

³⁵ Decision No. 192/2003/QĐ-TTg dated on September 17th, 2003 approving the Management Strategy for a Protected Area System in Vietnam to 2010

³⁶ Decision No. 192/2003/QĐ-TTg dated on September 17th, 2003 approving the Management Strategy for a Protected Area System in Vietnam to 2010

4.3.1.2 Trade-off between development and conservation manifest in provincial policies and strategies:

Environmental protection has been explicitly mentioned in policies and strategies at national level (as presented above), but remained vague in those at provincial level. Specifically, economic development has received more attention and been mentioned more frequently in provincial strategies and policies than environmental protection. For example, major socio-economic development objectives of Khanh Hoa province in the period 2006-2010 are “(T)o achieve an average economic growth rate of more than 11% per year; prepare a solid foundation for rapid transforming existing economic structure towards a development tendency based on service, tourism, industry and agriculture after 2010; and restructure the labour force towards a proportional increase in industry and service...”.³⁷ Similarly, the coastal and marine economic potential of Khanh Hoa province are described in “(O)rientations for development of Khanh Hoa province”¹⁷ as the main means for economic development of the province for an upcoming period. In the meantime, environmental protection including the marine domain has received little, if any, mention in these documents. The outcome is that any tradeoffs between development and environment inevitably favour development. Some participants expressed this phenomenon as follows:

“The provincial governors pay more attention to economic development and poverty reduction in the province than environmental protection” [P21], some of senior governors “don’t pay attention to this (marine conservation) sector instead of infrastructure construction” [P34] and sometimes “they recognize that economic activities may influence the environment and marine protected areas, but they ignore these impacts” [P35].

In addition, another issue at provincial level is a lack of strategic planning for the area covering the MPA with integration of all interests. For example, it is necessary to have comprehensive planning for Nha Trang (NT) Bay. Currently, there is just sectoral-planning for each sector operating within the Bay [P21]. Bodies responsible for developing and implementing the planning have insufficient experience and weak commitment. Strategic planning has not yet been developed by professional people and operated with a consistent commitment to designed objectives and timing when approved. For instance, provincial aquaculture planning was developed, but then an area of two

³⁷ These reports have been downloaded from website of Khanh Hoa province at <http://ws1.khanhhoa.gov.vn/> (on April 9th, 2009).

hectares within a planned area was cut off by the province for one company before it was going to be approved and gazetted [P28]. In other words, the governors or responsible people must be consistent and strongly commit to the approved planning. There also needs to be comprehensive and detailed planning for all the activities and sectors operating within the Bay [P21]. Problems, including approvals of economic investments ignoring environmental standards, limited experience in developing long-term planning and inconsistent commitment of governors to approved planning, have occurred to various degrees at provincial level [P28, P29]. These have significantly affected the overall effort for environmental protection, in general, and marine conservation, in particular, at provincial level. In short, one participant confirmed that:

“Conservation and development are two sides of a problem. It is not easy to solve them simultaneously. For developed countries, this problem may be easier to be solved. For the developing countries as Vietnam, in relation to national security or economic development, that is not easy because all provincial governors want to have good development results to report to the higher level – a national level, for instance, high Gross Domestic Product and other results. Conservation is important, but is not as important as economic development for the province”
[N1].

In summary, it is evident, through analysing the formal institutions over jurisdictional levels, that the Government of Vietnam has made a high-level commitment to environmental protection and biodiversity conservation through signing a series of important international conventions. The government has issued a range of formal institutional documents, in relation to establishment and management of a national network of marine protected areas, as a crucial solution toward sustainable development of the nation. Development of national strategies, policies and other related institutional documents is a substantial direction and foundation for government agencies, communities and other stakeholders at lower levels. They can rely on them to develop their own policies, strategies and employ staff to implement them. However, some confusion and overlaps in definitions of different types of protected areas have caused issues for development and practical implementation of sectoral institutions for managing and governing marine protected areas. Furthermore, the attention to development rather than conservation at provincial level – a major legal executive level, has generated a non-alignment problem in strategies and policies across levels in a multilevel institutional system. Thus, a number of difficulties in vertical coordination and the ineffectiveness in horizontal collaboration between provincial agencies have emerged during MPA governance processes. These will be further discussed in the next **section (4.3.2)** and **chapter 5**.

4.3.2 Overlaps in allocation of responsibilities among sectoral agencies:

The second issue explored from the formal institutional examination is the overlaps in allocation of responsibilities among agencies within organizational structure responsible for MPA governance. These are presented over the national and provincial level as follows:

4.3.2.1 At national level:

The responsibilities for MPA governance and management have been shared among four agencies at national level - Ministry of Fisheries, Ministry of Natural Resources and Environment, Ministry of Agriculture and Rural Development, and National Administration of Tourism. The overlaps in responsibility allocation were detected by analysing sectoral formal institutions as follows:

a. Ministry of Fisheries:

This Ministry has been defined as “*an agency of government responsible for state management of fisheries sector that includes... protection and development of marine and inland resources over the country...*”.³⁸ The responsibility of Ministry of Fisheries (MoFI) for marine protected areas is also clearly described in another Decision of the Prime Minister.³⁹ This Ministry was assigned as the principal agency to implement national regulations related to management of aquatic resources (e.g. Fisheries Law). It has also been responsible for organizing surveys, assessments to make planning and governance of inland and marine protected areas; managing statistics; communicating about fisheries activities; and other fisheries management activities.⁴⁰ In summary, “*the Ministry of Fisheries shall be responsible to the government for implementation of administrative management functions about fisheries activities throughout the country*”.⁴¹ In regard to marine protected areas, this ministry has also been responsible for planning a national network of MPAs. It not only submits strategies and proposals for the establishment of national MPAs to the Prime Minister for

³⁸ Article 1 of Resolution 43/2003/NĐ-CP dated on May 2nd, 2003 Prescribing the Functions, Responsibilities, Mandates and Organizational structure of Ministry of Fisheries.

³⁹ Article 2 of Decision No. 192/2003/QĐ-TTg Approving the Management Strategy for a Protected Area System to 2010.

⁴⁰ Act 3, Article 51, Chapter VIII of Fisheries Law

⁴¹ Act 2, Article 52, Chapter VIII of Fisheries Law

approval, but it also evaluates proposals for MPA establishment at a lower level submitted by provinces.⁴²

The Department of Capture Fisheries and Fisheries Resources Protection (DECAFIREP), within the Ministry of Fisheries, was approved by the Minister to be “... *an agency assisting the Minister in administrative management of aquatic resource exploitation and protection, ensures sustainability of aquatic resources and development of aquatic resource exploitation...*”.⁴³ This agency has responsibilities relating to marine conservation and management. These include development and submission of programmes and projects, and making recommendations and submissions of legal-document proposals that relate to exploitation, protection and development of aquatic resources, to the ministry. It has been responsible for checking and monitoring the conservation of seedlings, genetic pools, aquatic biodiversity and protection of inland and marine protected areas as mentioned in approved legislative documents. It has collaborated with other sectoral agencies to inspect, check and monitor aquatic-resource exploitation to prevent and ban violations in this field as prescribed in legal documents.⁴⁴

In brief, the Ministry of Fisheries has been the main agency responsible for research, planning and development of nationally or internationally important marine protected areas. This agency has also been responsible for evaluation of other types of MPAs submitted by provinces and enforcement of these areas based on duties assigned in approved legal documents. While the Ministry of Fisheries is responsible to the government, DECAFIREP is a key agency to assist the ministry to undertake duties of MPA management, in practice.

b. Ministry of Natural Resources and Environment:

The Ministry of Natural Resources and Environment (MoNRE) has been the agency of the government performing functions of state management over land, water and mineral resources, and

⁴² Article 4 of Decree No. 27/2005/NĐ-CP dated on March 8th, 2005 about in-details explanation and guidance for implementation of some articles of Fisheries Law

⁴³ Article 1 of Decision No. 08/2003/QĐ-BTS Approving the Functions, Responsibilities, Mandates and Organizational structure of the Department of Capture Fisheries and Fisheries Resources Protection (DECAFIREP).

⁴⁴ Article 2 of Decision No. 08/2003/QĐ-BTS Approving the Functions, Responsibilities, Mandates and Organizational structure of the Department of Capture Fisheries and Fisheries Resources Protection (DECAFIREP).

environment. This agency submits law-related projects, ordinances and other legal documents, and development planning and strategies to the government for approval.⁴⁵ The National Administration of Environment, under the Ministry of Natural Resources and Environment, performs functions to assist its minister in state management of the environmental domain.⁴⁶ This agency has been responsible for general management activities relating to biological-resource conservation, restoration and development based on approved legal documents.⁴⁷ This agency has also been responsible for “*developing profiles for adopting internationally important wetland areas based on the RAMSAR convention...*”.²⁵ Consequently, it means the National Administration of Environment is an in-line acting organisation assisting the ministry to provide overall protection of biodiversity and management of natural reserves including marine and coastal areas.

In short, based on the definition of coastal wetlands that “*are coastal or island-edge areas submerged in saline or brackish water, with the depth of no more than six meters at ebb tide*”⁴⁸ and other legal documents examined above, the Ministry of Natural Resources and Environment has coordination responsibilities and mandates to submit environmental protection proposals to the Prime Minister for approval. It also develops proposals for establishment of coastal protected areas shallower than six meters at ebb tide. The National Administration of Environment is a key agency to assist the MoNRE to develop profiles for establishment of internationally significant, nationally important natural reserves and biodiversity conservation sites, including marine and coastal areas, and to manage these sites. These agencies have developed a range of strategies for completing the assigned responsibility. However, the responsibility for the coastal and inland wetland areas has also been assigned to Ministry of Fisheries and Ministry of Agriculture and Rural Development (more details in the previous (a) and next (c) sub-sections).

⁴⁵ Decree No. 91/2002/NĐ-CP dated on November 11th, 2002 Prescribing the Functions, Responsibilities, Mandates and Organizational structure of the Ministry of Natural Resources and Environment.

⁴⁶ Decision No. 132/2008/QĐ-TTg dated on September 30th, 2008 Prescribing the Functions, Responsibilities, Mandates and Organizational structure of the Environment Protection Agency directly under Ministry of Natural Resources and Environment.

⁴⁷ Act 6, Article 2 of Decision No. 132/2008/QĐ-TTg dated on September 30th, 2008 Prescribing the Functions, Responsibilities, Mandates and Organizational structure of the Environment Protection Agency directly under Ministry of Natural Resources and Environment.

⁴⁸ Circular No. 18/2004/TT-BTNMT

c. Ministry of Agriculture and Rural Development:

Ministry of Agriculture and Rural Development (MARD) is an agency of government, performing functions of state management in agriculture, forestry, salt industry, irrigation/water services and rural development nationwide.⁴⁹ This agency has been responsible for state management of forests, forestry-resource development, exploitation and forestry-product preservation and protection.⁵⁰ The ministry has worked with provincial people's committees and other ministries to select sites and submit proposals to the Prime Minister for the establishment of National Parks. This ministry also develops a national system of special-use forests and is responsible to the Prime Minister for overall managing this system. It has collaborated with Ministry of Fisheries and Ministry of Natural Resources and Environment to organize technical guidelines, inspections, and regulate the management and protection of aquatic resources within national parks and natural reserves, where aquatic ecosystems are included.⁵¹ Indeed, Ministry of Agriculture and Rural Development has shared responsibility for management of national parks and natural reserves encompassing aquatic areas, with Ministry of Fisheries and Ministry of Natural Resources and Environment.

The Forest Protection Department is an agency that is directly under Ministry of Agriculture and Rural Development and performs functions assisting the minister in sectoral state management and undertaking state management of forest protection. This department also steers management of a system of coastal-mangrove forests and inland wetlands that are established as protected areas.⁵² Thus, responsibility for management and governance of coastal mangrove and inland wetland areas has been shared amongst three sectoral agencies belonging to Ministry of Fisheries (through DECAFIREP), Ministry of Agriculture and Rural Development (through Forest Protection Department) and Ministry of Natural Resource and Environment (through National Administration of Environment).

⁴⁹ Article 1, Decree No. 86/2003/NĐ – CP on Functions, Responsibility, Mandates and Organizational structure of Ministry of Agriculture and Rural Development

⁵⁰ Act 6, Article 2, Decree No. 86/2003/NĐ – CP Functions, Responsibility, Mandates and Organizational structure of Ministry of Agriculture and Rural Development

⁵¹ Decision No. 08/2001/QĐ-TTg dated on January 11th, 2001 approving the protection regulation for Special-use Forests, Protection Forests and Production Forests.

⁵² Article 1, Decision No. 22/2008/QĐ-BNN Prescribing Functions, Responsibility, Mandates and Organizational structure of Forest Protection Department

In brief, the Ministry of Agriculture and Rural Development is responsible for management and governance of a national system of forestry protected areas and other aquatic or wetland ecosystems that are geographically covered by these forestry protected areas. The Forest Protection Department is an in-line agency providing assistance to the Ministry to manage and protect national parks or natural reserves. Hence, the responsibility for management and governance of the areas that includes marine areas and wetlands, has been shared among this ministry with the other two ministries (MoFI and MoNRE).

d. National Administration of Tourism:

National Administration of Tourism is an agency under the Ministry of Culture, Sport and Tourism. It has functions assisting this ministry for state management about tourism over the country.⁵³ It has responsibility to implement scientific research, assessment of tourism resources, and steer and guide solutions for protecting tourism resources and environment. It means that the National Administration of Tourism and its sectoral agencies at lower levels have also been responsible for managing tourism-related activities, such as permits for tourism business operators and tourism services over the nation. Tourism activities within marine protected areas have been managed by this sectoral agency as well, if there are no special regulations or legal documents specifically in effect for these areas.

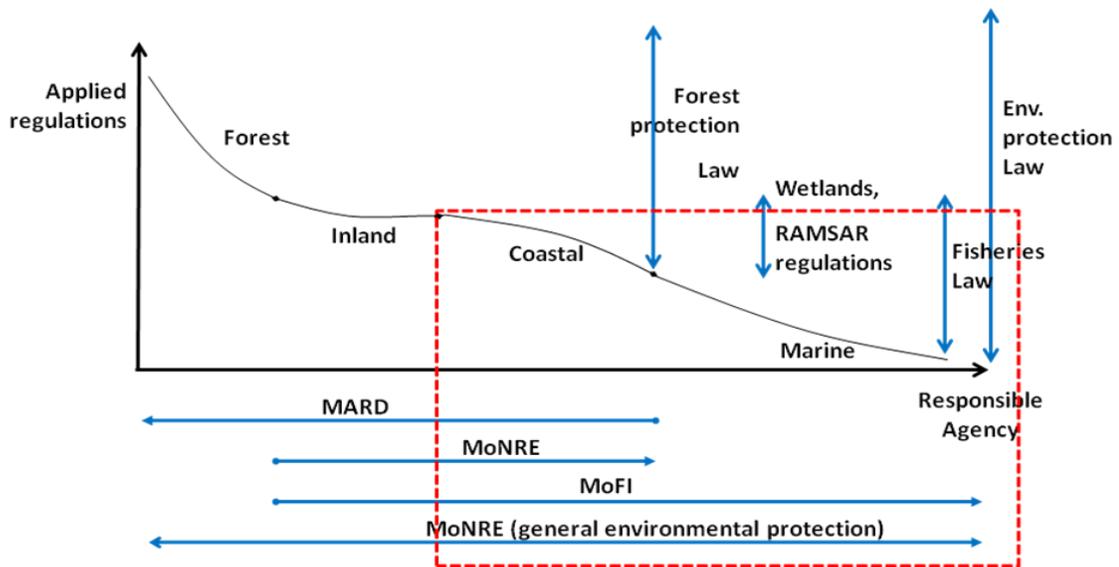


Figure 4.3: Extent of responsible national agency and applied regulations for governance of protected areas in Vietnam.

⁵³ Decision No 63/2008/QĐ-TTg dated on May 19th, 2008 Prescribing Functions, Responsibility, Mandates and Organizational structure of National Administrative Agency of Tourism.

In summary, protected areas have been mostly described in generic terms. Their management and governance responsibilities have been shared by Ministry of Natural Resource and Environment, Ministry of Fisheries, Ministry of Agriculture and Rural Development and National Administration of Tourism, as mentioned in formal institutions. No explicit procedure and responsibility division has been provided. Based on the analysis of formal institutions above, **Figure 4.3** was developed to illustrate the overlaps in responsibility allocation between agencies at national level for governance of MPAs. At the geographic location from coastal to marine areas (a red dotted area) where the MPAs can be established, different agencies including MARD, MONRE, MoFI and National Administration of Tourism have used their own sectoral institutions to enforce activities operated within these areas.

In addition to the analysis of formal legal documents presented above, the status of overlaps in responsibility allocation between government agencies at national level and ambiguity in definitions of different categories of protected areas were also mentioned by participants through interviews. One participant described the impact of these problems on effective MPA governance as below:

“There has been a problem in governance of protected areas that Wetland - Ramsar sites belong to the MoNRE. MPAs and other terrestrial areas are currently under jurisdiction of MARD. These Ministries are at the same level. This one can not coordinate the other, so that is very difficult (for collaborative governance of protected areas). Meanwhile, as we know that wetlands are defined by international organisations as marine waters less than 6m deep at low tide, so nearly all the existing MPAs belong to a wetland type” [N1].

Since there have been overlaps in responsibilities and mandates between different agencies at national level, as summarised in **Figure 4.3**, some issues have arisen while establishing and managing MPAs in practice. For example, one project, funded by Asian Development Bank, conducted biodiversity surveys and suggested establishing MPAs at different sites. Based on the main objectives of sustainable development and agenda 21 of the nation, some protected areas relating to coastal and marine areas have been highly prioritized for establishment. However, marine protected areas were established prior to the coastal sites due to the overlaps in the duties of different ministries for managing wetland, mangrove and coastal protected areas [N2]. Moreover, at national level, there have been some difficulties in governance of protected areas which contain both marine and forestry components because they belong to two separate ministries (MoFI &

MARD) [N2]. In reality, there have been some challenges in collaboration between the Forest Protection Unit and Aquatic Resource Exploitation and Protection Branch for enforcement of the MPA sites [N2, N3, C3].

4.3.2.2 At provincial level:

Nha Trang Bay (NTB) was selected as a major case study for this research (see **chapter 2**) partly because of the availability of research participants at this site. Data collected from Nha Trang (NT) Bay MPA were a major source for demonstrating the impacts which occurred for MPA governance and management as a consequence of the overlaps in responsibility among agencies at provincial level. Some data from other sites strengthen the generalization of the data. Research participants highlighted responsibility overlaps as a substantive factor influencing the governance and operation of MPAs in practice. A summary of the main overlaps or gaps in responsibility and mandates between agencies relating to MPA governance at provincial level is presented in **table 4.1**.

Further elaborations about these impacts are presented through statements of participants as follows:

“Responsibility and mandates of the MPA authority is ambiguous” [P21] and “when mentioning about responsibilities and mandates of agencies, we can say that is vague and overlapping each other” [P29].

The responsibility allocation in relation to MPA governance, at provincial level, has not been explicitly defined in legal documents, especially for a marine protected area authority - a newly formed agency. This issue has reduced initiatives and self-decision-making rights of the authority for MPA governance. This agency has insufficient mandates and resources for governing an area assigned by the Provincial People’s Committee. They need to collaborate with, or may depend on, other agencies to manage and enforce the MPA [P29]. As shown in **Table 4.1**, the MPA authority has overlaps in responsibility and mandates for general governance of the NT Bay with the NT City People’s Committee [P34, P28]. Furthermore, they lack legal mandates for fining illegal resource exploitation cases [P29, N2, P23].⁵⁴ Therefore, they are dependent on other agencies, which have legal mandates for enforcement and fining illegal fishing activities, such as the sub-

⁵⁴ This problem also happens in other MPAs – Personal communication with participants P9 and P16

Department of Capture Fisheries and Fisheries Resources Protection (sub-DECAFIREP) and Border Military (**Table 4.1**).

Table 4.1: Overlaps and gaps in responsibility and mandates between MPA Authority and provincial agencies.

	Provincial agencies Res./Mandates	DoNRE/Sub-VEA	DARD/Sub-DECAFIREP	Border Military	Tou. Ope.	DoCST	CiPC	CoPC	Env. Police
MPA Authority	Environmental protection	(+)/(+)							
	Aquatic resources protection		(+)/(+)	(+)/(+)					
	Tourism operation				(+)/(+)				
	Tourism services management					(+)/(+)			
	General management						(+)/(+)		
	Social-economic development of communities						(-)/(+)	(-)/(+)	
	Environmental punishment								(-)/(+)
	Aquatic resources punishment			(-)/(+)	(-)/(+)				

(+)/(+) MPA authority overlaps this mandate/responsibility with the agency

(-)/(+) MPA authority lacks this required mandate/responsibility (gap) that needs to be collaborated with another agency

DoNRE: Department of Natural resources and Environment

Sub-VEA: Sub-Environmental Protection Administration Agency

CiPC: City People Committee

CoPC: Commune People Committee

Env. Police: Environmental Police

DARD: Department of Agriculture and Rural Development

Sub-DECAFIREP: Sub-Department of Capture Fisheries and Fisheries Resources Protection at provincial level

DoCST: Department of Culture, Sport and Tourism

Tou. Ope.: Tourism Operators

Similarly, they also have overlapping responsibility for environmental protection with the Department of Natural Resources and Environment (DoNRE) and environmental enforcement with Environmental Police [P28, P29].⁵⁵ Meanwhile, the sub-Department of Capture Fisheries and Fisheries Resources Protection has to be responsible for aquatic resources management over the province, and cannot provide specific staff for patrolling the MPA due to the lack of staff [P24, P9]. Some participants further stated that:

“The Marine protected area Authority does not have enough mandates to effectively govern the bay. This Authority is under administrative management by the province and at a similar level with the City People’s Committee, but it is weak, in terms of legal mandates, compared with this Committee. Currently, the NTB MPA Authority is assigned to govern the area, but they do not have mandates or authority, so they cannot do anything. There are overlaps in responsibilities and mandates between NT Bay MPA Authority and City People’s Committee” [P29], especially, “a lack of punishment mandates to fine illegal cases” [P34, P23]. Sometimes, “the MPA Authority cannot solve problems because they do not have these mandates and resources, so they must inform the City People’s Committee for collaboration. But this agency is also busy for other activities, so they ignore them (the MPA Authority) too” [P29].

This issue has also occurred in governance of marine protected areas at other study sites. Halong Bay (HLB), for example, has also had problems relating to enforcement of illegal activities, when needed. The Authority generally needs to have staff, equipment and legal mandates to undertake this task. They may have the first two requirements, but lack the third one [P16].

In relation to community development, the issue of responsibility overlaps has also caused difficulties for the MPA authority to work with local communities because of misunderstanding about the MPA authority’s role and powers by local people. To help local communities who have been affected by the establishment of a MPA, the NTB MPA Authority has agreed to deduct 10-

⁵⁵ Environmental Police has been formed and operated at national level, but not yet operational at provincial level, at least at the time of this study – as stated by participant P29

15% from the MPA entrance fees for social welfare and environmental protection activities in villages.⁵⁶ This agreement is mentioned in the management plan, but it has not been implemented. The responsibility of fee collection has been allocated to another agency (NT City People's Committee) and the management plan has not yet been approved by the Provincial People's Committee. There have been subsequent confusion and arguments about which agency is responsible for coordination of this fund. Some participants [P21 and some local people at a tri-monthly meeting of NTB MPA on 29th May 2007] suggested that the MPA Authority has been an agency that works more closely with local communities than other agencies and can understand clearly the needs of the communities, so they should coordinate this fund. If this fund is managed by the NT City People's Committee, it will be transferred to the Commune and then to Villages. A long process will be needed and much of this money will be lost at different points in the process [P21]. Moreover, communes are very poor and do not have enough finance to support all villages that belonged to them. It is better if the entrance fees can be directed to NTB MPA who can solely support the local communities within the MPA [P29]. Ultimately, it results in misunderstanding about sharing benefits obtained from conservation activities between the MPA Authority and local communities. Some local participants mentioned that:

"I think the MPA Authority has got a lot of money from entrance fees as reported, but they do not fund it back to local communities with the proportion as discussed and agreed in the management plan".⁵⁷ Some others said "we have not yet received any financial benefit obtained from the conservation. Only the MPA Authority (through entrance fees) and tourism operators got it" [L12, L14, L15].

An overlap in responsibility of tourism management and operation is the next problem. The MPA authority has *"rights to organize or incorporate with other organisations or individuals to operate tourism and other related services"*.⁵⁸ This agency must also regulate activities operated within the

⁵⁶ This point was suggested by Hon Mun MPA pilot project and got a verbal approval from the Khanh Hoa Provincial People's Committee and then mentioned in a draft of Hon Mun MPA management plan

⁵⁷ as complained by local representatives in tri-monthly meeting organized by MPA Authority in June 2008 and local participants

⁵⁸ Article 5, Degree No. 57/2008/NĐ-CP approving a management regulation for nationally and internationally significant MPAs in Vietnam

MPA, including tourism services.⁵⁹ This creates an overlap in responsibility between the MPA authority and a tourism-sectoral management agency for tourism management and conflicts with tourism operators in competing for customers for tourism services within the MPA.

In summary, overlaps and gaps in responsibilities and mandates between MPA authorities and other agencies and stakeholders have caused difficulties and problems for the MPA authorities to effectively manage and govern the MPAs in practice. A consequence of this problem is that several agencies have the same responsibility, but all of them have not yet fully undertaken their responsibilities. In relation to environment, several agencies have similar responsibilities and mandates and no one cares [P29]. When responsibilities and mandates are overlapping, operational effectiveness is low [P29]. It requires higher-level agencies (e.g. a provincial people's committee) to make decisions for the newly-established agencies as MPA authorities to have clear responsibilities and mandates in MPA management [P34]. Otherwise, many agencies want to hold responsibilities and mandates, but no one is responsible when the problems occur [P34]. Above all, the implicit responsibility allocation among the MPA authority and other stakeholders results in misunderstanding from local communities about the MPA authority who get many benefits from entrance fee collection. Some conflicts in commercial competition between the MPA authority and tourism operators have also emerged. Conflicts between the MPA authority and other provincial sectoral agencies for MPA governance and management have been encountered. In other words, the division of responsibility among agencies has negatively affected the effectiveness of MPA governance and management processes. Some responsibilities may be either concurrently done by more than one agency or a responsibility is overlooked because each agency assumes another is responsible.

4.3.3 Unstable organizational structure responsible for MPA governance:

The next issue that affects the governance of MPAs in Vietnam identified in this study is an unstable organizational structure responsible for MPA governance. The marine protected area (MPA) concept was imported to Vietnam in the 1990's and promoted for establishment by the Government of Vietnam through a range of formal documents, including international and national

⁵⁹ The temporary management regulation of Hon Mun MPA was composed through consultations of functional departments and other stakeholders with facilitation of Hon Mun MPA pilot project. This regulation was approved by Khanh Hoa Provincial People Committee to help the MPA authority manage and protect marine resources, which are confront various threats, of the MPA before it is too late.

conventions and agreements (**section 4.3.1.1.**). Responsibility for MPA governance has been transferred between agencies following organizational transformation of the government. First, the Ministry of Sciences, Technology and Environment (MOSTE) has been “*an agency of the Government, performing functions of state management for... environmental protection over the country*”.⁶⁰ Establishment and governance of protected areas, including wetlands, coastal and inland protected areas, has been one of the main elements of a national action plan on biological diversity.⁶¹ In that, the Ministry of Science, Technology and Environment (MOSTE) has been a key organisation to implement the Biodiversity Action Plan (BAP). MOSTE has responsibilities to contact and discuss with other related ministries, sectors and local agencies to carry out the BAP. MOSTE submits annual reports to the Prime Minister on outputs of BAP implementation.⁶² Based on these legal documents, the Environmental Protection Agency (belonged to MOSTE at that time) has coordinated scientific surveys and research programs, in relation to marine and coastal environmental management, such as project - TA 5712-REG⁶³ and project - “Study and development of scientific baselines for the establishment of marine protected areas in Vietnam”. As a result, a proposal for establishing a national network of fifteen marine protected areas was developed (Hoi *et al.*, 1998).

In 2002, the Ministry of Natural Resources and Environment (MoNRE) was formed based on a combination of different departments of Ministry of Science, Technology and Environment (Environment Protection Administration, Land Administration and Hydrometeorology Administration), Ministry of Industry and Ministry of Agriculture and Rural Development.⁶⁴ Since then, responsibility for environmental protection, including biodiversity conservation, was

⁶⁰ Article 1, Decree No. 22-CP dated on May 22nd, 1993 Prescribing Functions, Responsibility, Mandates and Organizational structure of Ministry of Science, Technology and Environment.

⁶¹ Decision No. 845/TTg dated on December 22nd, 1995 on Approving Biodiversity Action Plan for Vietnam.

⁶² Decision No. 845/TTg dated on December 22nd, 1995 on Approving Biodiversity Action Plan for Vietnam.

⁶³ Project Coastal and Marine Environmental Management in the South China Sea (TA 5712-REG) funded by SIDA through ADB. This project was designed to assist three Governments, such as, Cambodia, China and Vietnam to prepare coastal and marine management plans, including considerations of protected areas at the national level for Cambodia and Vietnam, and provincial level in the case of Hainan and Guangxi (China).

⁶⁴ Resolution No. 02/2002/QH11 of the XIth National Assembly of the Socialist Republic of Vietnam at its first session, dated on August 5th, 2002, prescribing the list of the Governments ministries and ministerial-level agencies

transferred from Ministry of Science, Technology and Environment to the newly formed agency – Ministry of Natural Resources and Environment.

In addition, another Resolution approved a merger of Ministry of Fisheries (MoFI) with Ministry of Agriculture and Rural Development (MARD) in 2007.⁶⁵ Since then, MARD has taken on the responsibilities and mandates for marine protected area governance that were previously held by Ministry of Fisheries.⁶⁶ The Department of Capture Fisheries and Fisheries Resources Protection (DECAFIREP) has been assigned to be the key agency assisting MARD in planning and governance of marine protected areas.⁶⁷ As well, another agency, namely Vietnam Administration on Sea and Islands (VASI), was formed (on August 27th, 2008) under Ministry of Natural Resources and Environment, with overlapping responsibilities. These include development of legal documents, mechanism, policies, strategies, national programs, planning and projects relating to marine and islands. These also cover zoning, comprehensive planning for exploitation, utilisation and protection of marine, coastal and island resources and environment. This agency has been responsible for submitting documents to the Minister for approval, which guide other related ministries or local authorities to implement comprehensive planning. This agency is responsible for checking, assessing utilisation of marine, coastal and island resources in planning marine protected areas, coastal wetland conservation areas. It has responsibility to take part in approving projects about establishment of marine protected areas, coastal, wetland conservation areas and to

⁶⁵ Resolution No. 01/2007/QH12 of the XIIth National Assembly of the Socialist Republic of Vietnam at its first session, dated on July 30th, 2007, approving the Organizational structure of the Government and number of Vice-Prime Ministers. The merger of Ministry of Fisheries into Ministry of Agriculture and Rural Development was made, based on suggestion of the Prime Minister, due to arising of similarities and overlaps between Fisheries and Agriculture and Rural development sectors.

⁶⁶ Decree No. 01/2008/NĐ-CP of the Government Prescribing Functions, Responsibility, Mandates and Organizational structure of Ministry of Agriculture and Rural Development after a merger of Ministry of Fisheries into this Ministry.

⁶⁷ Decision No. 23/08/QĐ-BNN decided by Ministry of Agriculture and Rural Development on January 28th, 2008 Prescribing Functions, Responsibility, Mandates and Organizational structure of Department of Capture Fisheries and Fisheries Resources Protection.

collaborate with other related agencies to implement programmes, plans, and projects for marine biodiversity conservation.⁶⁸

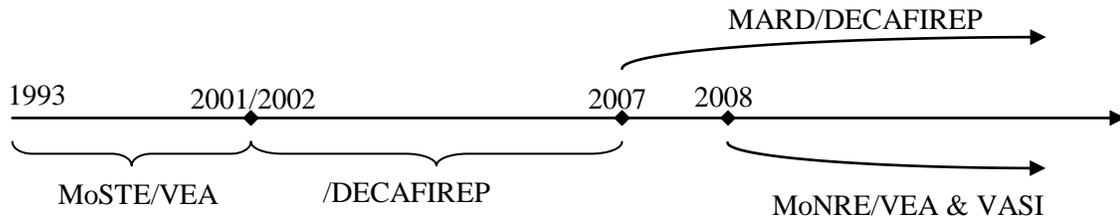


Figure 4.4: Changes in responsible agencies for MPAs over time in Vietnam

Figure 4.4 shows the mandates and responsibilities for governance of marine protected areas that have been reformed by shifting from one to another agency since the early 1990’s. Interestingly, Ministry of Fisheries and Ministry of Agriculture and Rural Development was merged together partly for “*more integrated governance of overlapping domains*”.⁶⁹ These are marine protected areas and special-use forest national parks that encompass forest and marine or island and mangrove ecosystems. Meanwhile, another new agency - the Vietnam Administration on Sea and Islands, was formed under another Ministry (MoNRE) with similar responsibilities for a marine conservation domain. This may again create similar issues in overlapping of responsibilities and mandates among agencies at the national level, with subsequent competition for resources and new confusions arising.

The organizational transformation of agencies, at national level, in charge of marine protected areas has generated some problems relating to lack of long-term commitment of staff and coordination processes in marine protected areas at lower levels. Some participants at MPAs and provincial level stated that:

⁶⁸ Decision No. 116/2008/QĐ-TTg of Prime Minister dated on August 27th 2008 prescribing the Functions, Responsibility, Mandates and Organizational structure of National Administration Agency under Ministry of Natural Resources and Environment.

⁶⁹ Resolution No. 01/2007/QH12 of the XIIth National Assembly of the Socialist Republic of Vietnam at its first session, dated on July 30th, 2007, approving the Organizational structure of the Government and number of Vice-Prime Ministers. The merger of Ministry of Fisheries into Ministry of Agriculture and Rural Development was made, based on suggestion of the Prime Minister, due to arising of similarities and overlaps between Fisheries and Agriculture and Rural development sectors

“I just have heard information that the MPA Authority will shortly have a remarkable change regarding an organizational reform. Following the change at national level, the MPA Authority, at provincial level, may be merged either into sub-DECAFIREP, Department of Natural Resources and Environment (DoNRE), or Department of Agriculture and Rural Development (DARD)” [P25]. Another followed up that “it may be merged into the City People’s Committee” [P28]. These arguments about the future of the MPA Authority may affect commitment of the staff. “They (staff of the MPA Authority) are unstable and worried how the MPA Authority will be reformed and how about their (staff’s) future positions in the new form of the MPA Authority” [P23, P25].

Arguments about future positions of a MPA authority have also been mentioned by other provincial governmental participants [P28, P30, P31] in their interviews, especially when significant changes have occurred with agencies responsible for MPAs at national level. One special case at Culaocham MPA occurred when a MPA manager decided to move to another agency when there were rumours that the MPA authority might be merged into DARD.⁷⁰ This is an example illustrating how government structure reform at the national level has affected the commitment of staff and may cause human-resource instability within marine protected areas at lower levels.

In summary, responsibility for MPA management has been transferred from one to another agency at national level over time because of organizational reform of the government. This organizational transformation has not only made difficulties in the implementation of policies and strategies at national level, but also generated some problems relating to the unstable staffing and enforcement of formal legal documents at lower levels, especially at field sites. These have engendered difficulties for effective governance and management of the marine protected areas.

4.3.4 MPAs established based on insufficient information and by external interests:

Some research participants stated that marine protected areas in Vietnam have been established based on insufficient information. If so, this may affect the effective governance of individual MPAs or even the whole MPA network. Some conservation programmes were initiated with

⁷⁰ The Author got this information from a MPA manager when taking part in an “Institutional Review Mission” to CLC MPA in 2008.

terrestrial protected areas in the 1960's. For example, the first protected area – Cuc Phuong National Park was established in 1962.

“Special-use forests have been initially established in Vietnam without any planning or explicit selection criteria. At that time, areas which were explored and recognized to be in near-pristine conditions were gazetted as protected areas. Subsequently, definitions or criteria were developed for national parks and other types of protected areas” [N3].

Until the 1980's, some protected areas relating to coastal and marine ecosystems, such as Ca Mau Cape and Bac Lieu Natural Reserves, were established to conserve mangroves. However, at that time, the knowledge about marine protected areas was still limited in Vietnam. An initiative of marine protected area establishment was organized by the Ministry of Science, Technology and Environment (at that time), international specialists and scientists of Nha Trang Institute of Oceanography. Based on a limitation of finance and human resources as well as limited research information from Nha Trang Institute of Oceanography, Haiphong Research Institute of Marine Products and Hai Phong Institute of Oceanography, some areas along coastlines of Vietnam were indicated as potential MPAs. After comprehensive biodiversity assessments were undertaken at these areas, they were ranked by WWF and IUCN, to select fifteen MPAs with higher priority than others [N1].

A marine protected area can be established using a ‘top-down’, ‘bottom-up’ or combined approach. The ‘top-down’ case is based on initiative from government departments or governors. Local communities, in this case, may have no or very little involvement in selection and establishment processes of the MPAs. Conversely, when the local community is active in establishment and development of MPAs, government bodies play a role of legal consultation and technical support. This is a ‘bottom-up’ approach. Lastly, a combination of these both approaches can occur when local communities and government parties share all responsibilities and benefits from MPAs. In Vietnam, a ‘top-down’ approach has mainly been used for selecting sites to establish protected areas. First sites were selected based on scientific assessments/inventories of habitats and ecosystems, and then put into national protected area network planning. These were then discussed with local authorities to identify areas that need to be protected [N3, N1]. However, socio-economic characteristics, especially conditions in local communities, are not as well understood as biological values [N3, N1]. Natural resources and marine environmental issues, especially coral and fish biodiversity, have been the consideration rather than social-economic ones [N1].

Therefore, a series of social-economic issues emerged during the establishment period of MPAs [N3, N1].

In addition, financial support for MPA establishment has also affected the approach and goals / objectives of the MPAs. Most marine protected areas in Vietnam, to date, have been established based on financial support from different international organisations [P9]. Objectives of these MPAs have been established with little reference to national plans.⁷¹ Consequently, goals and approaches have been varied from one MPA to another. A linkage between objectives of individual MPAs and overall goals of the national MPA network is, at best, only loosely defined. Therefore, it has been hard to recognize a consensus on a strategic approach at individual MPAs to support achieving overall goals of the whole national MPA network.⁷²

4.3.5 Incongruence between rules-on-paper and rules-in-use and a temporal-scale mismatch problem of formal institutions:

This study shows that rules-in-use and rules-on-paper, in Vietnam, are incongruent. This incongruence has negatively affected the governance effectiveness of MPAs. In relation to marine conservation, national parks, such as Cat Ba and Con Dao where a marine component was included, were the first established. Since an initial proposal for establishing a network of fifteen MPAs in the 1990's (Hoi *et al.*, 1998, Hoi *et al.*, 2000), some MPAs (e.g. Nha Trang Bay and Culaocham MPA) were then established. Recently, Phu Quoc MPA was formed, based on a commitment of the provincial authority and financial, technical support of DANIDA project. Ran Trao, Phu Long and other locally-managed MPAs have now been established, thanks to an initiative derived from district level and support of local NGOs. However, there are not comprehensive formal institutions for all of these MPAs that have been established by different approaches at various levels. Participants claimed that:

⁷¹ For example, Hon Mun MPA pilot project and Culaocham MPA were developed and funded by international organisations (developed by IUCN Vietnam and DANIDA, respectively). Their objectives and implementation approaches had been influenced differently by the donors – personal communication with senior staff of these projects

⁷² This point has been raised by the author for discussion and got agreement of MPA managers, practitioners and Scientists in a Pre-conference about MPA management in Vietnam of 4th Global Forum on Oceans, Coasts and Island organized from April 7-11, 2008, Hanoi, Vietnam.

In fact, “most of the existing MPAs are designed at provincial level and no one is at national level. In a proposed plan (assumedly as a formal legal document), some MPAs have been discussed and suggested as having regional or national significance. However, the plan has not yet been approved (at the study time)” [N2, N1]. Moreover, “all existing MPAs in Vietnam have been gazetted by provinces and other international organisations, not by State Government officially” [N1]. “MPAs established at local community level have not yet been mentioned in formal regulations or laws (rules-on-paper) and there is no guideline or regulation (rules-on-paper) about decentralization in governance of MPAs at local community level” [N2]. “We (policy makers) are now concentrating more on MPAs at provincial level or other significant sites, and have not yet paid attention to local level sites as Ran Trao. The local authority should develop regulations (rules-in-use) by themselves based on the national regulations of MPAs” [N2].

In addition, article 12 of a Decree No. 57/2008/NĐ-CP⁷³ describes that “*Ministry of Agriculture and Rural Development develops and submits to the Prime Minister proposals for MPA establishment projects for approval and directly organizes the management of nationally and internationally important MPAs or those relate to multi-sectors, located through provinces*”. “*Provincial People’s Committee organizes management of decentralized marine protected areas and guides marine protected area authorities to develop detailed regulations for governance of the MPAs*”. It means that a few existing formal institutions regarding establishment and governance of MPAs at national and provincial levels, not for lower levels (district or community-managed) are in force.

When describing formal institutions, Ostrom (1990) states that rules are nested in another set of rules. They are classified into three levels across operational rules, collective-choice rules and constitutional rules (Kiser, L. & Ostrom E., 1982, cited by Firmin-Seller, 1995). In the natural resource management arena, for example, operational rules are applied by resource users to make decisions for appropriations, provision, monitoring and enforcement of resource uses. These rules define when, how and who undertake day-to-day actions regarding resource management over others, or conversely who hold access rights to resource uses. Collective-choice rules are used by officials or external authorities to develop operational rules. Constitutional rules determine who are

⁷³ Decree No 57/2008/NĐ-CP approving a management regulation for nationally and internationally significant MPAs in Vietnam. This is perceived as the latest and most comprehensive legal document (up to this research time), signed by national level, relating to MPA management and regulation.

eligible parties, agencies and specific rules that will be used for composing collective-choice rules. Consequently, constitutional rules are the most important and can affect both operational and collective-choice rules and the whole institutional system.

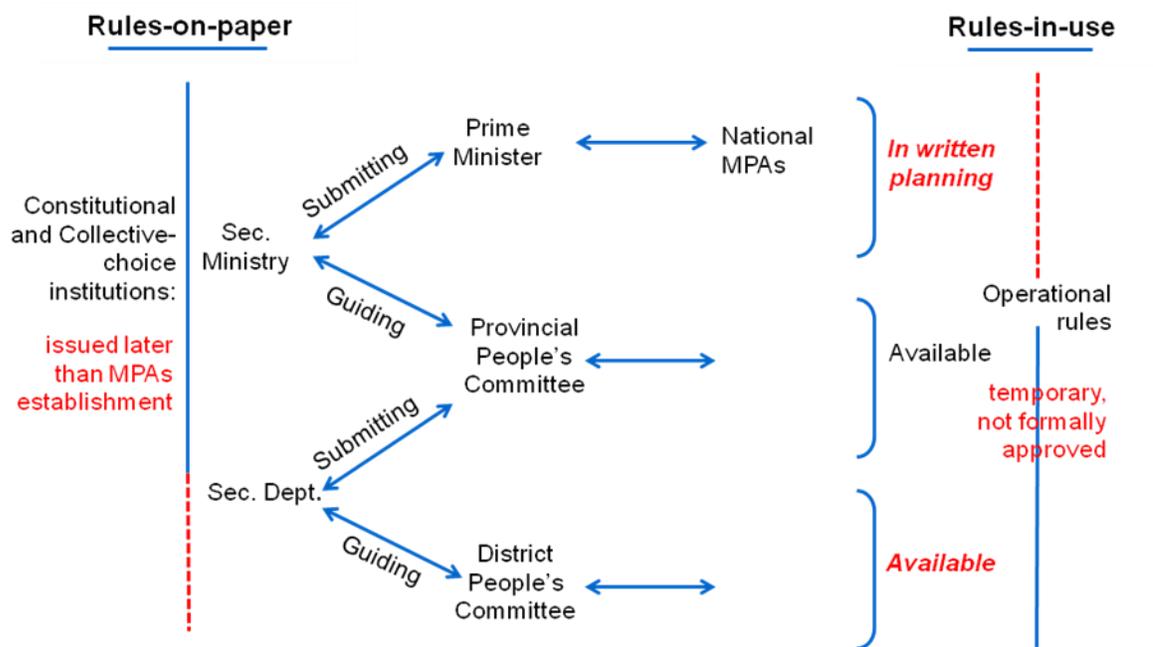


Figure 4.5: Summary of rules-on-paper and rules-in-use relating to governance of MPAs in Vietnam

Figure 4.5 shows formal institutional problems in the case of MPAs in Vietnam, including an incongruence between rules-on-paper and rules-in-use and temporal-scale mismatch, in terms of availability, among constitutional, collective-choice rules and operational rules. For example, constitutional rules (e.g. the Fisheries Law formed in 2003) and collective-choice rules (e.g. Decree No. 27/2005/NĐ-CP and Decree No. 57/2008/NĐ-CP) have been substantive foundations for determining bodies at different levels responsible for developing and approving operational rules. However, both these constitutional and collective-choice rules were issued subsequently to the establishment of existing MPAs. So these MPAs have been operated without any institutional guideline. There have been some major gaps in operational rules that influence effective governance of MPAs. For instance, the exiting MPAs have had no formally-adopted management plan, policy, strategy or other regulative documents for regulating and governing the MPAs because of lacking these constitutional and collective-choice rules (at the MPA establishment time). At individual MPAs, operational regulations have been formed in response to activities

occurring within the MPAs, not based on legal guidance. All MPA regulations have thus only been approved as temporary legal documents. For example, Nha Trang Bay MPA has had temporary regulations for constraining activities within the MPA for a long time. It does not yet have a formally-adopted management plan, policy, or strategy, although these were developed and submitted to responsible agencies. This has engendered difficulties for the governance of the MPA. Culaocham and Phu Quoc MPAs have been in the same situation. Some participants stated this situation as follows:

“I think that the government should study the organizational structure of all the agencies more properly. For example, the merger between MoFI and MARD is a significant step for more convenience in inter-agency collaboration. This is a significant reform at macroscopic scale of the government structure. However, in relation to legal documents, they need to be more explicit and non-overlap between different laws or legal documents. For instance, although a core zone of Babe National Park includes a water area, it must be protected based on special-use forest protection laws, not typically like other core zones prescribed in fisheries laws. It needs to clarify clearly in laws about who must follow the rules and should not have ambiguous definitions about rule’s players” [N3].

Moreover, “it is necessary to have a transparent and systematic legal system across levels and within each level. It needs to have legal documents in force as guidelines from the national level (constitutional and collective-choice rules) for players at lower levels. That helps provincial people’s committee in making decisions (e.g. approving operational rules)... relating to MPA governance” [P34]. “The management organizational structure relating to MPA authorities has not yet been completely designed. Currently, we are at provincial level and have no guideline or steering from Ministries at national level (constitutional and collective-choice rules). Legal bases (constitutional and collective-choice rules) for MPAs are not strong, so there are some difficulties in governance of MPAs (because of no formal operational rules)” [P35, P9]. For example, “a management plan and collaboration mechanism between provincial agencies (operational rules) have not yet been approved by the Provincial People’s Committee after submitting to this agency for a long time due to a lack of guidelines from higher level (constitutional and collective-choice rules)” [P34, P9].

In summary, MPA-related formal regulations have been composed subsequent to the establishment of MPAs. The legal rights to govern MPAs have recently been decentralized, in formal institutions, at the national and provincial levels, but not at lower levels such as the district, commune or community. Conversely, MPAs established have only been at the provincial and lower levels, not

national level (just planned at the study time). This has created an incongruence between approved formal institutions and the reality of MPAs' governance in Vietnam. Consequently, inadequacies and gaps have been encountered while operating formal institutions. Some relevant operational regulations have been composed at provincial and community levels, but still not officially, or are just temporarily, adopted by responsible agencies. Thus, validity of these documents has been limited and may be altered by other later legal documents. These have reduced legitimacy and enforcement effectiveness of governance of existing MPAs.

4.3.6 Inappropriate staffing and capacity building programs relating to MPA governance:

In the institutional arena, people create institutions and operate them as well (North, 1990). The better the capacity of the actors, the more effectively the institutions can be developed and operated. In relation to resilient concepts of human-natural systems, the capacity of humans embedded in the systems can be improved through a learning process. This is a factor that can help the systems cope with difficulties and overcome uncertainties and surprises (Armitage, 2005). Therefore, a study on human capacity of MPA authorities and other related agencies in the institutional system is very important for sustainability of the systems as MPAs. Inappropriate staffing and capacity building programs relating to MPA governance was identified by participants as a barrier to effective governance of existing MPAs. These human-capacity-related issues are represented across national and provincial levels.

4.3.6.1 At national level

In comparison to terrestrial conservation, the marine protected area domain is recent in Vietnam. There has been no formal education program specifically designed for MPA management [P5, P9, P34]. Staff working in this field mostly graduated from other backgrounds⁷⁴. Since the mid-1990's, some short-training courses have been developed and conducted based on technical and financial support from international donors and organisations (including Australian and Canadian Governments, NOAA, IUCN, WWF, DANIDA...). These courses have been specifically designed

⁷⁴ As concluded in report of "Training need assessment" and "Capacity building review" of project "Sustainable livelihoods in and around marine protected areas" funded by DANIDA.

according to types of trainees. For example, curricula for MPA practitioners and managers focus on technical issues and practical skills for MPA management, rather than those for government staff of related agencies at provincial and national levels. To date, most training courses have received positive feedback from the trainees. Some efforts to connect marine-sciences-related research and educational institutions for establishing regular training programs have been under way,⁷⁹ but are still slow.

4.3.6.2 At provincial level

Human resources are very important for the success of an agency/organisation [P21]. More than 50% of participants involved in this study mentioned staffing issues, in terms of quality and quantity, for undertaking tasks of MPA governance. Three sub-themes regarding staffing at provincial level were identified. These are (i) lack of technical knowledge or background on marine sciences, (ii) lack of long-term vision and strategy, poor operational planning, and (iii) underpaid staff leading to high turnover and continued lack of experience and awareness about conservation management.

(i) Lack of technical knowledge or background on marine sciences

The marine protected area concept has been new to MPA practitioners, some managers and government agencies at study sites. The approach applied in MPA management is still new to staff of MPA authorities [P34, P9]. MPA authority staff have little knowledge about technical aspects, such as, techniques for biodiversity monitoring and assessment [P22, P25], so that has been difficult for them to interpret the results to guide further management practices [P22]. Another point identified is that the employment of local people to support local communities and reduce fishing pressure conducted by local people, has generated other problems due to the poor quality of local staff. Most local people employed are not formally educated, and have low education level and poor technical knowledge. Even though they have an advantage in on-sea-working experience, their communication skills are very poor [P23]. So it has been hard for them to complete their tasks.

The lack of a marine background and knowledge has been a drawback for staff at protected areas where a marine component was included into a national park for conservation and governance. Participants stated that:

“I still consider about knowledge and skills for doing research about marine ecosystems. We are better in doing research of forestry fields and lack staff educated in marine fields” [P6]. “Most of staff here are trained or educated from a forestry sector. For a marine component, staff have been trained through short courses, like reef-checks for biodiversity surveys, not formal programs. Furthermore, There have been a limited number of staff involved in these training courses that are not as popular and formal as forestry programmes” [P5]. Currently, “there is no formal education or training programmes for MPA conservationists” [P9].

(ii) Lack of long-term vision and strategy, poor operational planning

Participants indicated that marine protected area authorities, especially newly-established MPAs like Nha Trang, Culaocham, need to improve human capacity in making conservation plans such as coral recovery and mangrove rehabilitation [P21]. Most of the technical staff are young [P23, P35, P22, P25] and have recently graduated from universities [P34]. They do not possess sufficient knowledge and experience for developing strategic planning [P35, P22] or visions for long-term development of MPAs [P28, P22]. Sometimes, the staff do not know what they should do and just mostly follow what a manager likes or requests. That makes the staff even more inactive [P22]. In general, they have not been capable enough to identify strategic trends and select appropriate working approaches for MPA governance [P22].

(iii) Underpaid staff leading to high turnover and continued lack of experience and awareness about conservation management

Low salaries paid to staff were determined as a major factor that affected the commitment of staff [P23, P22, P25, P34, P35]. While staff of long-established protected areas, like Con Dao National Park and Halong Bay Authority, have received better income than other agencies in the same location [P5, P6, P17], staff in newly-established sites, like Nha Trang bay, have rather low incomes compared to other agencies in the same location [P23, P25, P34, P35, P22]. They have no additional income other than a basic salary [P34, P35, P22]. Furthermore, working and travelling from the mainland to islands has been another concern for staff, especially for old staff or female employees after they got married [P22, P17]. One participant presented that:

“As I have communicated with staff here that is hard for staff to have long-term commitment with the Authority due to low income... Some staff are still not happy and looking for other opportunities from other offices and they are ready to leave (the MPA authority) when they get any better opportunity from other offices” [P35].

In summary, there have been some problems, in terms of quality, with staff who are working at MPA sites for MPA management and governance because of the lack of proper capacity building programs. These include formal education programs and short-training courses. Furthermore, these staff have the problem of low income due to inappropriate formal institutions for MPA staffing.

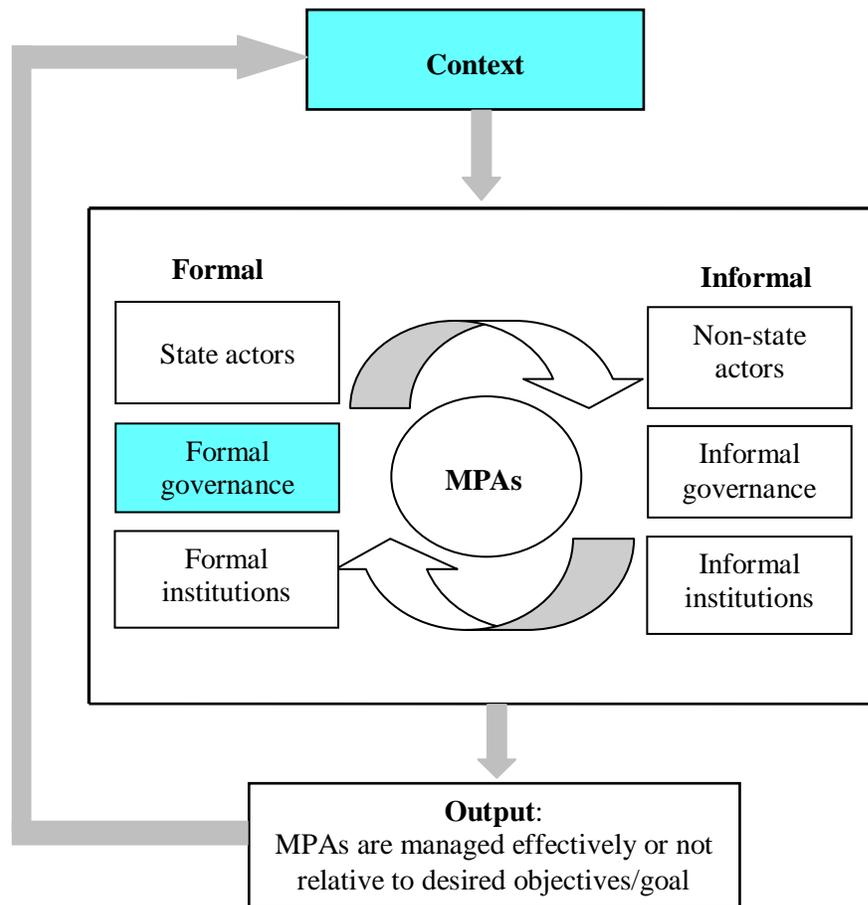
4.4. Preliminary conclusions:

This chapter has demonstrated the complexity of MPA-related formal institutions with identified issues that have engendered the MPA authorities sitting outside of the exiting administrative organizational structure of Vietnam. Specifically, these issues are (i) implicit and inconsistent MPA-related policies and strategies over jurisdictional levels, (ii) overlap in responsibility allocation among sectoral agencies, (iii) unstable organisational structure responsible for MPA governance and management, (iv) MPAs established based on insufficient information and by external interests, (v) incongruence between rules-in-use and rules-on-paper and a temporal-scale mismatch problem among formal institutions, and (vi) inappropriate staffing and capacity building programs relating to MPA management. These issues have contributed to the ineffective governance of MPAs through various dysfunctions in vertical and horizontal interplays and institutional operation.

This chapter has elucidated the first component – formal institutions, of the multilevel analytical framework developed in **chapter 3**. This has also answered research questions identified in **section 4.1**. In the next chapter, interagency governance of MPAs – assumed as a formal governance component in this study, will be presented. Specifically, perceived barriers to social processes and interactions for the effective interagency-collaborative governance of MPAs in Vietnam will be elaborated. Additionally, the consequences and outcomes of ineffective MPA governance partly affected by human behaviour and contextual conditions will also be presented and discussed in the next chapter.

CHAPTER 5: PERCEIVED BARRIERS TO EFFECTIVE INTERAGENCY COLLABORATIVE GOVERNANCE OF MARINE PROTECTED AREAS IN VIETNAM: SOCIAL INTERACTIONS.

5.1 Introduction:



This chapter presents results of surveys conducted at marine protected area (MPA) sites in Vietnam. It investigates the nature of social interactions between key government agencies/organisations and actors, and critical barriers to these interactions that negatively affect the decision-making processes within and between formal agencies for MPA governance (the highlighted parts of the developed framework presented above). Specifically, this chapter synthesizes and discusses the manner in which identified barriers have impeded the collaboration among government agencies and actors in formulating policies, exercising powers and governing

MPAs. These syntheses and discussions will help understand, in more depth, how and why a unique governance process occurs at these MPAs and the outcomes that have emerged in the context of Vietnam.

Organisation theory and social learning concepts have been applied to study organizational structures and management (Herman and Hulin, 1972, Argyris, 1973, James and Jones, 1976). These studies have mainly focussed on the relationships or interactions among individuals in the same group or organisation, or between individuals and the organisations in which they are embedded, to achieve objectives and goals or the satisfaction level of employees about their positions in their organisation (Forehand and Gilmer, 1964, Argyris, 1973, Terborg, 1981, O'reilly *et al.*, 1991). Others focussed on characteristics and types of inter-organizational relationships (Van-de-Ven, 1976, Trist, 1983). Recently, these theories have been used to explore influential factors on collaborative management and governance of natural resources. However, these factors were classified into different disciplines in general, such as, an institutional discipline (including incentives and policies) and a social discipline (e.g. attitudes, culture) (Gray and Wood, 1991, Huxham *et al.*, 2000, Kalegaonkar and Brown, 2000, Wondolleck and Yaffee, 2000). The study of effects of these influential factors on levels, for example, between individuals or organisations interacting within collaborative management and governance of natural resources, are not common.

This study integrates research approaches and perspectives from both organisation theory and social learning to analyse barriers to social processes within MPA governance in Vietnam. Interactions of actors and organisations for the governance processes occurring at provincial and district levels are the focus of this investigation. Participants, including representatives, managers or staff responsible for agencies involved in MPA governance, were invited to discuss and assess their perceptions about contemporary governance of MPAs. Thereafter, they identified dominant barriers to these processes based on their knowledge and experience, especially barriers to collaboration between individuals within or between organisations. Data collected from the survey were analyzed with a focus on the perspective from different levels, including macro and micro perspectives (Kozlowski and Klein, 2000), based on organisation theory and social learning concepts.

This chapter is organized into five sections. Section 1 is the introduction. Section 2 reviews collaborative governance and forces influencing these processes. Thereafter, research findings about barriers to social interactions that influence collaborative governance of MPAs are covered in

Section 3. This consists of two subsections presenting barriers identified based on psychological and sociological perspectives. Section 4 provides a framework that is based on research findings of this study and other research. This framework illustrates the relationships between the identified barriers to overall collaborative governance processes of MPAs. This section then further discusses and argues the identified barriers compared with other research about natural resource management and governance. Section 5 summarizes research findings and conclusions.

5.2 Understanding collaborative governance of social-ecological systems and influential factors:

As argued in **chapter 3**, governance is an awkward concept. It has been attributed different meanings by researchers and applied in various ways by practitioners and managers (Stoker, 1998). Governance implies a social coordination mechanism (Lee, 2003) or generation of conditions for ordered rules and collective actions (Stoker, 1998). It can be considered as a structure and a process for people to make decisions and share power (Pierre and Peters, 2000). In this research, governance is perceived as interactions among public and private actors to exercise power and responsibility and make decisions for solving societal problems and create societal opportunities (Graham *et al.*, 2003, Kooiman and Bavinck, 2005). In a diverse, dynamic and complex world characterised by various interacting factors, cooperation and collaboration among actors across organisational levels and scales are required to solve social problems (Kooiman, 2003, Berkes, 2006, Armitage, 2008) with appropriate responses to uncertainties and changes (Hardy and Phillips, 1998, Ostrom, 2005). No single actor can be legitimate (see more about legitimacy in **section 6.4.2**) and effectively govern by themselves (Kooiman, 2003, Berkes, 2006, Armitage, 2008). Furthermore, stakeholders possess different perspectives and abilities to view different aspects of a problem, so they can constructively explore their differences and search for more comprehensive solutions to solve public problems (Gray, 1989, Imperial, 2005). Hence, effective collaboration among individuals, groups and organisations helps actors to jointly improve governance and management.

Since the 1990's, local communities and other social organisations have emerged world-wide as practical alternatives to government for solving social issues that require more inter-sectoral cooperation (Esman, 1991, Lee, 2003, Kooiman and Bavinck, 2005). More recently, other less formal settings at transnational and international levels, such as ASEAN (Association of South East

Asian Nations) and EU (European Union), have been formed to promote collective interests and to resolve contemporary policy problems (Pierre and Peters, 2000). Cooperation and collaboration terms have been more frequently used in the field of natural resource management and governance. Nonetheless, distinctions between these terms are unclear (Jamal and Getz, 1995) and are sometimes confusing when used by practitioners and researchers (Huxham *et al.*, 2000). While cooperation means “working together to some ends” (Fowler and Fowler, 1964 cited by Jamal and Getz, 1995), collaboration focuses more on conditions and processes for key stakeholders to make joint decisions about problems of mutual interests (Gray, 1989). In reality, they may be utilised to generally describe a working together among individuals or organisations (Huxham *et al.*, 2000) that relies on neither market nor hierarchical mechanisms of control (Lawrence *et al.*, 1999, Phillips *et al.*, 2000, Hardy *et al.*, 2003, Rodrigues *et al.*, 2007).

Collaboration appears not only promising for solving organizational and social problems, but also a fascinating field for the study of conceptual contributions (Gray and Wood, 1991). It is a means for linking agencies, organisations and individuals in environmental governance and management through communication, sharing information and taking actions together to achieve shared interests (Wondolleck and Yaffee, 2000) and avoid costly overlap, inefficiencies and redundancies (Bouwen and Taillieu, 2004). Collaboration can help gain an understanding among actors and organisations. It increases their collective capacity and shares available resources. These lead towards wise decisions for solving collective problems and resolving social disputes (Nathan and Mitroff, 1991, Selsky, 1991, Wondolleck and Yaffee, 2000). Furthermore, when organisations collaborate closely, they can mobilize technical support from research and education institutions to improve capital, marketing and production skills. This, in turn, helps create more employment for the region and strengthen the involved organisations (Sharfman *et al.*, 1991). Collaboration also helps improve knowledge about societal-level policy issues and the macro-political situation (Pasquero, 1991). Indeed, collaboration benefits all participating actors and organisations and beyond to society at large and, can be viewed as a form of governance (Huxham *et al.*, 2000). When collaboration is used wisely to simultaneously reduce social problems and transaction costs and to improve the value of public services, it becomes an effective governance strategy (Imperial, 2005). In other words, studies about collaboration amongst actors and organisations are essential to understanding and improving the effectiveness of governance.

In addition to the aforementioned direct benefits, other aspects associated with collaboration among actors and organisations have been identified by other researchers (Gray and Wood, 1991, Huxham

et al., 2000, Kalegaonkar and Brown, 2000, Wondolleck and Yaffee, 2000). These aspects include the characteristics and processes of how actors and organisations collaborate with each other; driving and restraining forces for the collaboration; the conditions or context in which collaborative behaviour amongst actors and organisations can be shaped; and the outcomes of the collaboration. According to Emery and Trist (1965), the context in which actors and organisations are embedded plays an important role in collaborative processes. The context can influence the formulation of mandates for the collaboration. Furthermore, no two contextual settings are ever completely the same. They are usually diverse and complex. Therefore, these need to be creative, adaptive and sophisticated solutions for environmental governance in specific situations (Huxham *et al.*, 2000). While efficiency, equity, effectiveness and legitimacy are suggested as key criteria for achieving success and sustainability of environmental governance, contextual factors must be considered when making environmental decisions in these processes (Adger *et al.*, 2003).

Individual behaviour has also been thought to strongly affect social interactions in collaborative governance. Behaviour of individuals can affect other individuals' behaviour and then influence the collective actions of organisations to which they belong (Stern, 2000). The behaviour of an individual or organisation is a function of the interaction between the organism and environment (Forehand and Gilmer, 1964). It can manifest through decisions, practices and actions made by these individuals or organisations (Byers, 1996). However, behaviour can be influenced by intrinsic and extrinsic factors (Stern, 2000). Intrinsic factors can include personal attitudes, habits and routines, and personal capacity, while extrinsic factors are derived from the external context. Individuals act or behave to achieve their own interests in ways that are shaped by a combination of their values, background, perceptions and external conditions (Byers, 1996). In other words, contextual and intrinsic forces can influence the effectiveness of collaboration through shaping participants' behaviour.

Contextual factors and intrinsic forces influencing collaborative management and governance of natural resources have been previously studied based on different theoretical concepts or platforms with diverse results. These can be summarised as (i) distinctions in available resources and aims, strategies or agendas of the involved individuals or organisations, (ii) differences in professional languages, values and cultures that the individuals or organisations use or are embedded in, (iii) imbalance in power in collaborative decision making processes (Gray, 1985, Hardy and Phillips, 1998, Peters, 1998, Huxham *et al.*, 2000, Kalegaonkar and Brown, 2000, Wondolleck and Yaffee, 2000) or (iv) weak mutual trust (Wondolleck and Yaffee, 2000, Pretty and Ward, 2001).

Furthermore, these causes vary depending on whether participating individuals are from the same organisation or sector, or not. Organisational settings that facilitate the collaboration of individuals/organisations vary depending on whether the individuals/organisations are from the same or different organisations/sectors, because these organisations or sectors normally have different bodies of knowledge, characteristics and information about their production and uses (Ostrom and Ostrom, 1965, Kalegaonkar and Brown, 2000).

In summary, collaboration between actors within an organisation and between organisations is essential for collaborative governance processes to solve common socio-political issues that are of interest to a range of interdependent people and stakeholders. However, there are a number of barriers to the effectiveness of these collaborative processes. These can be formed by the interactions between behaviour, intrinsic values that the individuals possess, and the context in which the individuals are embedded. The impacts of these barriers can vary considerably when any of them changes.

5.3 Research findings:

As concluded in **chapter 4**, the impediments, relating to the complexity, dynamics and inconsistency of formal institutional structure and arrangements, have located the MPA authorities out of the existing administrative system of Vietnam. This has influenced the effective governance and management of MPAs in this country. In this chapter, six additional barriers to interagency collaborative governance of MPAs were identified through psychological and sociological perspectives. These barriers mostly relate to human psychology, attitudes, organisational context and design in practice. Three of them influence inter-individual collaboration. The remaining ones obstruct the collaboration between organisations. These barriers are elaborated as follows.

5.3.1 Barriers to interpersonal collaboration in interagency governance examined under a psychological perspective

5.3.1.1 Barrier 1: Differences in personal strategies and perceptions of staff from different agencies

Participants identified that perceptions and awareness of government staff about marine conservation has significantly influenced collaborative governance of MPAs in Vietnam. First,

most government officials have sector-oriented strategies (see more about the definition of sectoral agencies in **section 4.2**). They view marine conservation as particular missions or duties of MPA authorities. Furthermore, an integrated approach to marine conservation has been perceived as ‘on paper’, rather than in practice. Therefore, there is a recognition of the fact that government agencies have adopted a working mechanism towards sector-oriented strategy for a long time. Some participants accepted this is an obstacle through the following statements:

“They (other government agencies) thought that conservation is our own (MPA authority) agency’s duty, not their agency’s” [P1] and “conservation is very little (important) compared to other issues or activities in the society” [P22]. “So we (MPA staff) have to try to make them understand and recognize that it is the duty for all and all the people must share this responsibility” [P1].

Furthermore, “the most important thing is an organizational structure of the government. We need to have a good inter-sectoral organizational mechanism. We (government officials) have been affected by an old organizational model in that sectors were separately formed and operated unilaterally. This perception has been persisted with managers or leaders (high-position holders) for a long time. It needs time to change this perennial perception (mental model). In general, most people (government staff), if not all, still have not yet recognized values and benefits of the collaboration” [N3].

The differences in perceptions of government staff about management approaches to the marine environment has also influenced governance processes. In reality, provincial agencies are responsible for administrative management of general environmental issues based on legal documents, whereas the MPA authority manages practical activities. Indeed, the related agencies perceive that MPA authority’s activities do not correlate with their duties/roles, so they do not care much about these activities [P35].

Government staff are seen to have limited knowledge of the marine environment and conservation, which has also negatively affected the governance processes.

“Managers from different departments have different awareness about biodiversity conservation and MPA establishment. Some cannot understand the significance of MPAs and reasons why MPAs should be established. So they just get involved in MPA management due to the requirements of their duties or through sudden inspirations, not from their hearts” [P29]. Furthermore, “they have not yet recognized the importance or necessity of environmental protection and the effects or impacts of environmental degradation. There is no collaboration (between agencies and the MPA authority)

because the government officials here have low awareness about marine conservation, so they unilaterally implement activities based on their (organisation's) objectives" [P21] and "do not support MPA authority to accomplish related tasks" [P22].

In addition, "National Park and other biodiversity conservation tasks are defined and constrained by specific institutions that almost other administrative management agencies at provincial level have not yet understood" [P1].

5.3.1.2 Barrier 2: Personal relationships

Participants across levels mentioned and frequently confirmed that personal relationships among staff, especially leaders or managers of different agencies, have considerably affected the collaboration between government agencies in MPA governance processes. When this relationship is good, a lot of advantages can be obtained. If not, it will become a barrier that impedes the collaborative governance processes. Some participants stated:

"I think the personal relationship is very important" [P35]. "It plays an important role in collaboration between the agencies. When law, responsibility and mandates of different agencies are still insufficient or 'immature', we must collaborate with related agencies to protect and manage the natural resources" [P21]. "An illustrative example about the role of personal relationships is that it needs about four weeks, as mentioned in legal documents, to get an approval from the PPC. This seems too late for solving some urgent environmental issues. If we have very good personal relationships with them (related agencies), we can push them up, even by telephone, to do the activities much faster and better" [P35]. "If you have good personal relationships with the people in other agencies, you can collaborate with them more easily" [P21].

"There are a lot of benefits from personal relationships between managers of MPAs and other related agencies. For example, I contacted one department and felt that they are not willing to work with us due to poor relationships among the two agencies' leaders [P22]. We know there is a very complex formality to get an approval from the department. However, this process has been slowed down partly due to a weak relationship between the sectoral department and the MPA authority" [P21].

"I recognized that the MPA authority has made some good points for the environment of the bay. However, the relationships between the director of this authority and other agencies' are not good, so the authority has some difficulties in collaborating with other agencies" [P28].

In some cases, personal relationships become a very strong force, if not the strongest, for making decisions. Provincial agencies consult the Provincial People's Committee (PPC) to make final decisions for activities within the province. The departments, however, cannot affect the final decisions if the incumbent bodies have very good relationships with a higher level [P29]. Personal relationships can also be perceived as a social priority as one participant deduced:

“First: Personal relationships; Two: Position; Three: Power; and Four: Regime/Mechanism (Nhất: Thân, Nhì: Thế, Tam: Quyền, Tứ: Ché). That is very different to compare with other countries, where the socio-political regime is always the first force and then others. Personal relationships are, thus, very important in social interactions in Vietnam” [N1].

5.3.1.3 Barrier 3: Distinction in personal characteristics and a leadership approach

Some participants referred to the force of personal characteristics and a leadership approach of leaders or managers of agencies in collaborative governance processes. While personal characteristics are able to influence the collaborative governance processes through building interpersonal relationships, a collaborative leadership can strengthen or even accelerate these processes and vice versa. For example, *“I have contacted with Financial Department and felt that they are not willing to work with us because of not so good relationship among the two agencies’ leaders”* [P22]. Personal characteristics and leadership styles can either drive or restrain collaborative governance processes depending on how flexible and adaptive the leaders or managers apply them. One participant recognized and shared that:

“In general, the role of the MPA authority director is very important to establish the relationship with other agencies and we (the MPA authority directors) must be active to collaborate and build this relationship. Normally, in Vietnam, the sectoral laws and regulations are comprehended by the people, who are working in that sector only, so we need to have time sitting together. Therefore, the director of a MPA authority needs to actively contact and establish the relationships to build a mutual understanding between each other (the MPA authority and other agencies)... Furthermore, personal relationships depend on the personal skills, approach and characteristics. Sometimes, working mechanisms or regulations are not transparent or not strong enough, so it needs the leaders of agencies to be active in building relationships, which are especially important for the inter-sectoral collaboration or mechanism. We must be flexible and active in working and collaborating with them (other related agencies)” [P1].

Some participants from government agencies complained about the inactive leadership style of another MPA manager. They claimed that personal characteristics and leadership styles have caused difficulties for gathering partners into the collaborative governance processes. In this case, inactive leadership style and personal characteristics are perceived as a restraining force and stated as follows:

“The MPA authority has a duty to actively collaborate with other related agencies...” [P29]. “The authority director must encourage people (from other related agencies) to accelerate the process. Each agency has its own duties. I think the MPA authority manager has not yet been active in collaborating with other related agencies and not yet made good personal relationships to speed up the activities. He personally has not yet made much effort in building good relationships with other departments. Furthermore, the authority needs to acquire support from PPC to mobilize or gather all the agencies together for protecting the environment. Currently, the authority passively depends on whatever the PPC decides for implementation” [P21].

5.3.2 Barriers to inter-agency collaborative governance examined under a sociological perspective

5.3.2.1 Barrier 4: Differences in organizational types among agencies

According to administrative management regulations of Vietnam, one government agency can be designed as one of three types - an administrative management agency, government enterprise or government business enterprise. Each of them has specific mandates, legal rights and is constrained by different legal documents (more details summarized in **Appendix 5**). Sectoral departments, such as, Department of Agriculture and Rural Development, Department of Planning and Investment, are defined as administrative management agencies. They are managed by an equivalent level of People’s Committee (e.g. provincial level, district level) and an agency of the same sector at higher levels (e.g. a sectoral Ministry for a provincial department and a sectoral provincial department for a district division). Meanwhile, government enterprise and government business enterprise generally have similar mandates and legal rights. While the latter has mandates to operate economic activities to generate incomes for the enterprise, the former doesn’t. Both come under the jurisdiction of an in-line People’s Committee (**Section 4.2**). While MPA authorities studied are

designed as government business enterprises, other sectoral agencies at provincial and district levels are designed as administrative management agencies. Some difficulties have emerged due to the differences in the organizational type of the MPA authorities from other sectoral agencies.

Participants involved in this study were deeply concerned that the difference in organizational types of agencies is an underlying barrier to inter-organizational collaborative governance processes. Several reasons are identified. The first is a lack of a coordinator or host of the processes of collaboration by MPA authorities and other agencies. For example, in a marine patrolling trip, there must be a person or an agency to coordinate the trip [P5]. Second is the lack of legal instruments for constraining the collaborative governance processes. The MPA authority needs to have a collaborative regulation approved by a higher level to gather other partners participating in the collaborative processes [P35]. Some other participants further explained these:

“In Vietnam, some MPA authorities (Nha Trang Bay and Culaocham MPA) have developed an inter-agency collaborative regulation submitted to Provincial People’s Committee (PPC) - an in-line management agency at provincial level, for approval. However, the regulation is stuck at an Interior Department, who consults the PPC to approve legal documents relating to the administrative management of the province” [P34, P35, P22]. While “the MPA authority is a government business enterprise, other partners (provincial departments) are administrative management agencies. This department (Interior Department) doesn’t like the MPA authority to be a coordination body for this collaborative regulation/mechanism” [P21, P9]. Moreover, “there is no legal guideline relating to MPAs (from higher levels), so it is hard for responsible agencies to consult the PPC to approve the regulation” [P9].

“The sectoral agencies have not agreed the MPA authority to be a coordination agency for a collaborative procedure as mentioned in the interagency collaborative regulation. So we need to have comprehensive/integrated legal documents at national level to instruct lower levels” [P9, P35]. Currently, “the MPA authority just collaborates with other agencies by inviting them depending on activities/issues” [P9, P34, P35, P22, P5].

Consequentially, when there are no formal collaborative regulation and legal constraints related to MPA governance and management, the related agencies merely participate in the collaborative governance of MPAs by their aspiration. There is no coercive condition constraining other provincial agencies whether they collaborate with the MPA authority or not, when being contacted for collaborative activities [P34, P35]. The MPA authority is a government business enterprise, so

it does not have strong mandates, as prescribed in formal legislative documents, to complete tasks related to administrative management of the MPA [P34]. The MPA authority does not have enough information sharing about situations or activities operated within and nearby the MPA by the PPC and other related agencies [P34] due to being excluded from inter-agency meetings.

Next, at provincial level, other provincial departments ignore the activities of MPA authority because they do not want to support a government business enterprise [P30]. They are reluctant to get involved in the activities conducted by the MPA authority [P35] and just assign low-level staff or officers, who do not have much influence on the decision making process for collaborative activities. So they cannot support collaborative activities much after the workshops or meetings [P34, P35].

Lastly, the difference in agencies' organizational types has affected the involvement of the MPA authority in decision-making processes for activities, such as investment and development, which relate to the MPA. Provincial People's Committee and sectoral agencies think that only administrative management agencies may relate to this decision making, even for activities conducted within the MPAs, so they just invite these agencies involved in the meetings for making decisions of the province. The MPA authority has not been invited for this process [P21].

“According to a temporary management regulation of the MPA approved by PPC (in 2002), the MPA authority has mandates to get involved in appraisal meetings for the development of the Bay. Recently, since July 2006, Department of Planning and Investment invited us (MPA authority) to participate in this process for appraising economic projects invested within the MPA” [P35]. However, “influence of the MPA authority in this process is weak” [P22] and “our recommendations are just for reference” [P35].

Nevertheless, at protected sites that are established according to an approval by the Prime Minister, the influence of the authorities on the decision making processes is stronger thanks to specific legal documents signed by national-level agencies or international conventions that apply to these sites. One participant gave an example that:

“I suggested Provincial People's Committee to cancel one decision that was approved to supply a forest area to an investment project because the National Park is protected under legal documents signed at the ministerial or national level (higher than provincial level)” [P1].

Similarly, another participant further confirmed that:

“We (a local government authority) know that the National Park has to follow international conventions and specific regulations of the National Park. So if we need to modify the area, we need official letters from a responsible ministry with an approval of the Prime Minister... The Commune always asks consultations from the National Park about the land for economic investment projects whether it belongs to the National Park or not.... before submitting the letter to a higher level for approval” [C1].

5.3.2.2 Barrier 5: Power conflict among agencies

As described above, the responsibility and mandates of one agency vary significantly depending on the agency’s organizational type. The power of a government agency to make decisions in governance processes is prescribed as legal mandates and responsibility signed by responsible agencies. There are a number of, stakeholders interested in resource uses, and agencies governing activities, within the MPAs. Some difficulties have been encountered in MPA governance when the stakeholders or actors conceived that their benefits or powers are encroached on by others.

“There are many stakeholders interested in using MPAs’ resources, so there are a lot of conflicts, over power and benefits, between the MPA authority and other stakeholders [P30]. “There are about five types of activities operated within the MPA, such as Port, Tourism, Fisheries, Border Military, and Environmental protection. These agencies want to hold their own benefits and powers, so there are big conflicts between beneficiaries and agencies” [P27]. Furthermore, some serious difficulties have emerged in planning, zoning and managing the Bay due to conflicts over powers and benefits. Sometimes, the processes are not transparent [P31].

These power conflicts led some participants to seriously argue about the position and organizational type of the MPA authority in the organizational structure of the province. While some participants claimed that the MPA authority cannot be an administrative management agency [P28, P30], another participant complained other provincial agencies don’t want the MPA authority to hold many administrative management powers [P34]. It means the agency’s organizational type and the power conflict are related each other.

5.3.2.3 Barrier 6: Lack of an incentive sharing mechanism among participating agencies

Several participants mentioned directly or indirectly the necessity for incentive sharing for collaborative activities. The incentive here can be tangible (e.g. economic allowance), or intangible (e.g. knowledge gained from training or education courses) benefits. Most participants expressed that incentive sharing is a necessity for participating bodies to get involved in collaborative activities. The lack of an incentive sharing mechanism has been a substantial obstacle for working in collaborative processes. One participant stated:

“I think each agency has its own duty. If we (MPA authority) need them (related agencies) for enforcement or other activities, we should have some incentives for them. That is fair” [P1].

Another participant mentioned the unfairness in the sharing of incentives when participating in different activities, such as training, environmental education and enforcement:

“That is very hard for an international project to collaborate with other agencies (for enforcement activities) if having no incentives while there are various incentives for participants who get involved in other activities, such as training or others” [P9].

Although incentives are perceived as essential, incentive sharing has not been undertaken in most MPAs due to strict financial-policy constraints. In fact, there is a formal legal document guiding incentive sharing for participating bodies involved in marine resource patrolling, but not for similar activities conducted by MPA authorities.

“There is a legal document signed by the Ministry of Fisheries (at the signing time), Ministry of Finance, and Interior Ministry for inspectors working at field for more than four hours. I suggested the Financial Department to apply this legal document to patrolling within the MPA. However, they allegedly asserted that the legal document is applicable only to inspectors of a Marine Resource Protection and Exploitation Branch, not for enforcement of MPA activities (even though these activities are similar)” [P34].

“The government has not yet approved a legal document to pay allowances or share incentives or the likes (to collaborators from other agencies). That is very difficult (for the collaborative processes)” [P5, P34, P35]. “Therefore, we try to collaborate with them (other agencies) just in

substantial cases that need them to get involved, otherwise, we should do by ourselves for the simple cases” [P5, P34].

The lack of economic incentives has been one of the most important impediments for promoting collaboration among responsible agencies. The MPA authorities can't collaborate with other agencies for collaborative processes without incentives [P5, P34, P35, P22]. The agencies don't get motivated in MPAs' activities when the MPA authority sends letters to them for collaboration. They may participate reluctantly for the first few times and then ignore subsequent invitations [P35]. Furthermore, economic incentives also affect the commitment of staff within the MPA authority, especially enforcement staff because they have to work for a long (day and night) time [P34]. Meanwhile, another participant assumed that a consideration about incentives may derive from behaviour, culture and values of the people who get involved in the collaborative processes. Some agencies involved in the collaborative processes just consider their own incentives or missions and don't share the general difficult situation of other partners [N3].

5.4 Discussion and analysis:

The six barriers, as presented above, reflect some fundamental problems of state-centred governance processes of MPAs in Vietnam. As stated in the introduction and collaborative governance review sections (**Section 5.1** and **5.2**), there is a close relationship between behaviour and the actions of individuals, and the interactions between the groups' and organisations'. Individual's attitudes, cognition and behaviour are thought not only to be affected by characteristics of that person and external situations (Mariotto and Paul, 1975, Terborg, 1981, Chatman, 1989), but can also be strongly influenced by group norms (Hackman, 1976) and an organizational structure (Forehand and Gilmer, 1964). Moreover, the insufficient consideration of the role of individuals and historical, socio-political conditions in inter-individual analyses may cause failures of organizational relationships (Lister, 2000). Hence, it is likely that actions or decisions made by individuals may influence other individuals or groups and organisations that they are embedded in and vice versa.

Based on findings of former research and this study, a framework of inter-influences between barriers, over the levels, to collaborative governance processes (**Figure 5.1**) is developed. This framework illustrates interactive processes from individuals to the collaboration among individuals, and organisations. The framework also demonstrates forces that can influence the behaviour,

actions and decision making of individuals or organisations within and across levels for collaborative governance of MPAs in Vietnam. Barriers to inter-individual collaboration and social interactions relate more to human behaviour, including a difference in personal interests, weak personal relationships and inadequacy in personal skills and leadership approach. Barriers to inter-organisational collaboration include differences in agency’s organizational types, agency’s power conflicts and a lack of an incentive sharing mechanism. The influences of indicated barriers to inter-individual and inter-organizational collaboration are presented in **Figure 5.1** and then further elaborated and discussed in the subsequent sections.

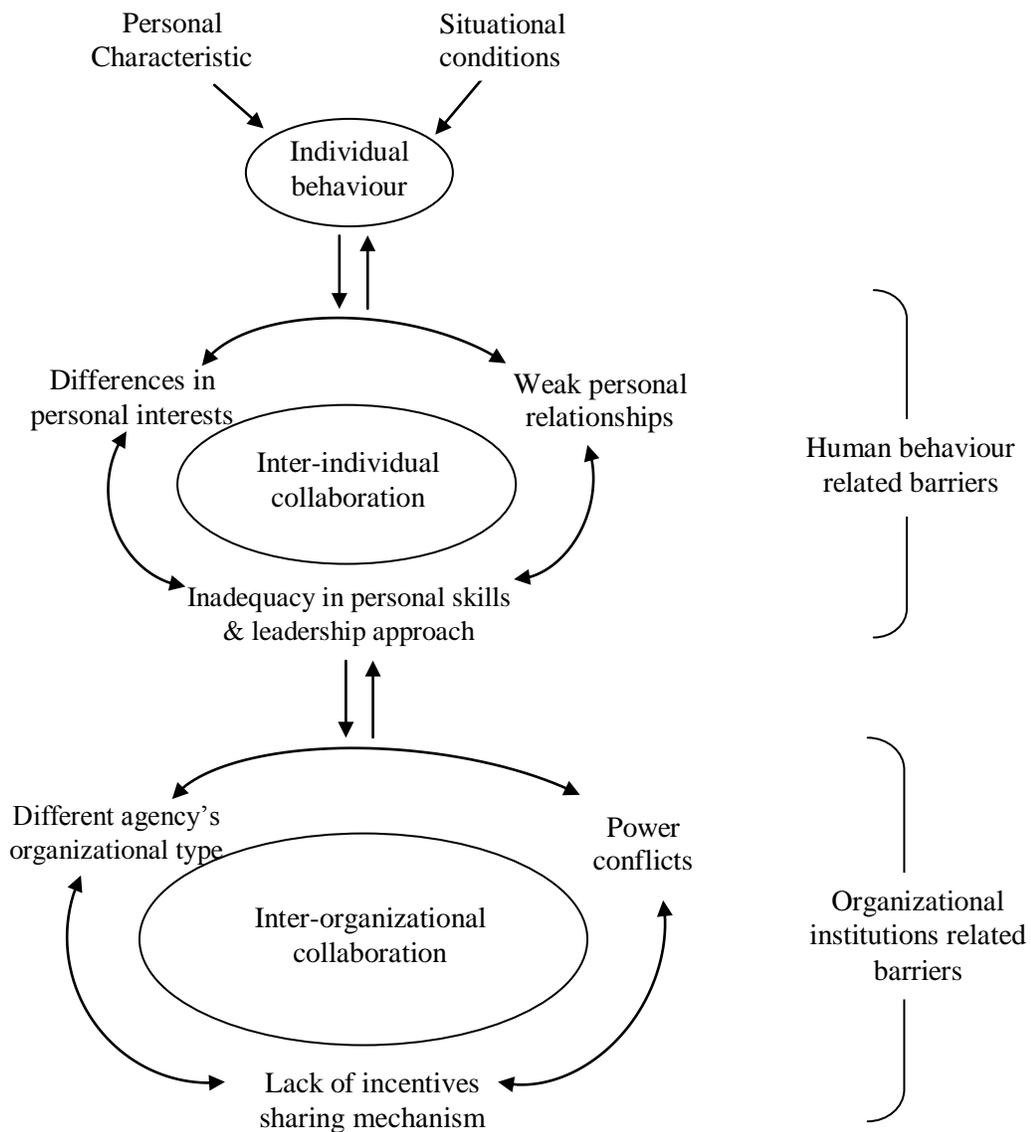


Figure 5.1: A framework of inter-influences between barriers to collaborative governance over the levels.

5.4.1 How do the identified barriers impede inter-individual collaboration in collaborative governance processes of MPAs?

The research has identified several significant barriers to collaboration between individuals from different organisations that, in turn, affect the collaboration between their organisations or agencies for the governance of MPAs in Vietnam. The main barriers to inter-individual collaboration discussed here are (i) the differences in individuals' strategies and their perception about environmental protection and natural resource conservation; (ii) inadequacy in personal skills and leadership approach; and (iii) the degree of inter-personal relationship. These barriers influence each other and are interrelated and interdependent.

Differences in individual's interests play an important role in collaboration among individuals. These differences sometimes interfere with the coordination of collective actions (Ostrom, 2000). Individual's interests can be a driving force for participants to develop their own strategies to achieve their interests. The collaboration, in this case, is a means for participants to achieve shared objectives that include their own personal interests. Individuals who have different self-interests act to obtain common objectives if they are embedded in coercive conditions or constrained by a special mechanism (Byers, 1996, Ostrom, 2000). In other words, collaboration among individuals or organisations can be formed and maintained for a long time if these individuals and participating organisations have shared values and interests that encourage them to reach desired objectives under certain contexts.

In this study, the individuals are from different agencies or organisations, so their interests are not only affected by their own individuality, but also due to the interests and objectives of their agencies or organisations. When people have different objectives driven by their agencies' or sectors' views, coupled with personal preferences formed for a long time as personal value or culture, the effort towards collaboration between these individuals becomes more difficult. For example, most government actors find it difficult to collaborate with each other because firstly their interests or objectives are driven differently by their organisations. Their behaviour has also been formed and fostered by a unilateral-sectoral approach of a previous organizational model for a long time [N3]. This influence may be even stronger when these individuals are leaders of the organisations and their personal skills and leadership approach are inadequate.

Inadequate personal skills of leaders and their leadership approach is another barrier to collaboration found from this research. It is understood that leaders can play crucial functions in collaborative governance processes between individuals in the same or different agencies (Folke *et al.*, 2005). Especially, where there is no third-party mediation in the multidisciplinary collaboration processes, then the personal skills and leadership approach of the leaders strongly affect the effectiveness of these processes (Wondolleck and Yaffee, 2000). According to Folke *et al.* (2005), leaders can help build mutual trust, engage individuals through partnerships, manage conflicts and mobilize resources from participants or participating organisations. Therefore, when the leaders possess limited personal skills with public relations, they may impede the relationships between their staff with other partners' or stakeholders' (Wondolleck and Yaffee, 2000). Similarly, inadequate personal skills of the leaders, in this study, can make their staff's collaborative tasks with other agencies more difficult [P35, P22]. Inadequate personal skills can also worsen the personal relationship between individuals. These then negatively affect the collaboration of individuals within and between organisations for collaborative governance of MPAs.

In addition to the interpersonal skills of leaders, leadership style is also important for mobilizing resources from individuals and organisations for collaborative governance processes. Leadership, in environmental protection and natural resource management arenas, can be understood as the ability to influence individuals and mobilize organisations or stakeholders to realize a long-term vision for ecological sustainability (Egri and Herman, 2000). Environmental leadership can be constructed based on interpersonal skills, knowledge and experience of leaders. Collaborative enforcement and governance activities or programs at one of study MPAs have been slowly implemented because of an inadequate leadership style used at this site [P28, P22].

According to Gray (1985), leaders not only need to have legitimate authority, but also possess appreciable skills for successful collaboration. Occasionally, the leaders need a flexible and sensitive approach to gather individuals or organisations and their resources for collaborative processes. One participant revealed that it was sometimes hard for him to invite other agencies involved in consultative activities (due to the position and organizational type of his MPA authority). So he asked a person at a higher position who has stronger legitimate power to sign invitation letters for the participatory activities or consultative meetings. This person then empowered the steering role (by a letter) to the MPA manager. This not only ensured that invited people participate in activities or meetings, but also helped them recognize the MPA manager as coordinator for the collaborative activities or meetings [P1].

In collaborative governance processes with various stakeholders, while technical knowledge and experience of managers is appreciated, they should be seen as mediators or facilitators, rather than experts as in a traditional management model (Selin and Chavez, 1995), to facilitate the processes. The managers must be active and flexible in collaborative activities to achieve desired objectives [P1]. When the managers have adequate interpersonal skills and leadership approach, they can reduce the difference in interests and perceptions of individuals within and between organisations and strengthen their personal relationships.

Personal relationships between key actors at a central level or position can generate a linkage or collaboration between organisations (Lister, 2000). This inter-organizational collaboration can be successful when strong personal relationships are developed (Dichter 1989, as cited by Lister, 2000). Personal relationships can enhance social capital, including mutual trust and respect (Putnam, 1993) and then help disseminate information (Porter, 1998) and improve understanding (Rhoads *et al.*, 1999). When studying the relationships between non-government organisations and other organisations for implementing development projects, Lister (2000) found that the relationships between among organisations depend on the quality of personal relationships even though these are constrained under some mechanisms or contracts. In other words, personal relationships of individuals can be either driving or restraining forces for the development of collaboration between organisations or agencies in which they are embedded, if these are strong or weak

In this study, weak personal relationships were identified as a perceived barrier to collaboration between individuals and agencies. Participants thought that they could bypass some steps or formalities in collaborative processes to quickly solve related problems, for example, some collaborative activities can be accepted or undertaken through ‘telephone calls’, instead of ‘formal letters’, if there are good personal relationships between key actors [P35]. Strong personal relationships could encourage actors to generate opportunities for sharing resources and information in collaborative activities. However, it was stated that some collaborative activities conducted by a MPA authority are not supported by related agencies because of weak personal relationships among agencies’ heads [P21, P22, P28].

From the discussion above, it is clear that barriers to inter-individual collaboration are interrelated and inter-influenced. Inadequate personal characteristics and leadership approach of leaders can

worsen the personal relationships among leaders and staff of different agencies. In turn, it becomes more difficult to compromise and reconcile strategies or interests of individuals and vice versa. Inter-individual collaboration can thus be improved if efforts are undertaken simultaneously to minimize all these barriers as a whole and subsequently improve the collaborative governance processes.

5.4.2 How do the addressed barriers affect inter-organizational collaboration in the collaborative governance processes of MPAs:

In addition to the barriers to inter-personal collaboration discussed above, this study has identified some barriers or obstacles to inter-organizational collaborative governance of MPAs. These are (i) differences in organizational types of agencies; (ii) power conflicts; and (ii) a lack of an incentive sharing mechanism among participating agencies. Further elaboration, discussion and analysis of each barrier will be presented below.

Difference in the agency's organizational type are a major barrier to inter-agency collaboration. This barrier can be recognized when there is a range of organisations and stakeholders designed with different organizational types engaged in governance processes. For example, administrative management agencies can easily collaborate with each other, but not with MPA authorities – a government business enterprise, to govern and solve common problems [P30]. In fact, the agency's organizational type with specific responsibilities and formal authority is defined in formal legal documents. This belongs to the institutional arena. It implies that institutional problems may be shaped, but not easily revealed, in the institutional development process. . The problems can be manifested through the institutional operation - governance processes.

When the MPA authority has a different organizational type compared with other related government agencies, it is excluded from the network of administrative agencies. For example, the MPA authority is not invited to meetings of these agencies, where they can communicate and share information each other [P21, P35]. The influence of the MPA authority on general governance processes of the province, even activities operating within the MPA, is very weak. This lack of information sharing and communication is one of the most important factors that increase transaction costs and slow down governance processes (Challen, 2000). In other words, the

difference in organizational types between the MPA authority and agencies has reduced the effectiveness of MPA collaborative governance processes.

Moreover, this barrier and its impacts have varied depending on the history of the establishment of particular MPAs. In reality, in Vietnam, most MPAs were established prior to the establishment of relevant sets of rules (**Chapter 4**). Indeed, there are no available legal documents to prescribe whether the MPA authority should be designed as an administrative management agency or another type. Furthermore, if the authority is designed as an administrative management agency, the finance and power for MPA site management and governance will be shared among the MPA authority and other agencies (as summarised in App. 5). This results in competition for financial allocation and management powers between the agencies [P35]. These barriers related to the difference in agency's organizational type has been more directly addressed at Nha Trang MPA and other typical MPAs, but not in other protected areas such as Con Dao and Halong. The question arises as to why organisational type resulted in different effects at different marine conservation sites? In this case, external context provides reasonable answers to this question as follows.

First, Con Dao and Halong sites were established by the Prime Minister or adopted as national significance, whereas Nha Trang and other later typical MPAs were established by the provincial level (i). The influence of Provincial People's Committee and other provincial sectoral agencies seems to be primary for collaborative governance of MPAs at provincial level. The MPAs with national significance (e.g. Con Dao, Halong Bay) can have interventions, support and influences from national level, in addition to provincial level (see more in **barrier 4** above). Therefore, the MPAs at national level can still collaborate with other agencies, even though they have different organizational types, because of the influence from a higher level (national level).

Second, Con Dao National Park is constrained by an institutional framework for special-use forests, while Halong is a World Heritage site that mostly follows an institutional framework of international conventions. Both institutional frameworks have been formed for a long time and much more 'mature' than the newly-shaped institutions for typical MPAs as Nha Trang MPA, so related government agencies better understand and accept how to work or collaborate with Con Dao and Halong Bay Authorities than typical MPA authorities as Nha Trang MPA (ii).

Third, these sites have different socio-economic conditions that partly influence the effects of the barrier to governance processes of these sites (iii). Specifically, there are more diverse stakeholders' and related agencies' interests at Nha Trang MPA site, rather than Con Dao site – an isolated island with emerging tourism activities. So conflicts in resource uses and the power exercised at Nha Trang is much more complicated than that at Con Dao. Halong has very complex conflicts because of various stakeholders and related agencies as Nha Trang, but the differences in agency organizational type do not significantly impede governance processes of Halong Bay because this site was adopted as an international significance (the first (i) reason) and there is a more “mature” institutional framework (the second (ii) reason) applied for this site.

In other words, the same barriers can have different effects for different sites because of their different contextual conditions. These include (i) level of the sites, (ii) the completion of institutional arrangements applied for the sites, and (iii) socio-economic conditions of the sites. Henceforth, the contextual forces play a significant role in collaborative governance processes of MPAs in Vietnam. They can interactively influence each other and then affect the governance processes. A barrier can have more impact on a site under this context than others. Furthermore, the ‘maturity’ of institutions can advance governance processes. The actors can use available institutions to make the right decisions to overcome other competitions or obstacles. Once again, formal institutions are apparently recognized as a vital element for collaborative governance processes.

This research has detected conflicts between MPA authorities and other agencies, local authorities and other stakeholders mostly due to asymmetric distribution of formal authority to make decisions for resource control or uses. All the related organisations and stakeholders associated with the MPA attempt to hold power over, and benefits from, these marine areas as much as possible. A MPA authority like Nha Trang Bay Authority is a newly-established organisation with an insufficient institutional framework and limited resources. Thus, voluntary sharing of power from existing agencies to a new one like a MPA authority seems to be difficult as perceived as the social nature of inter-organizational systems. However, power conflicts can be solved more easily, if the ‘position’ or level of the MPA authority is high in the organisational structure (the position or level of MPA authority is a topic highly concerned by MPA managers and government officials and will be discussed in **chapter 7**). This is demonstrated through the example above. The power conflicts which occurred at Con Dao or Halong (national or international significance, respectively), can be easier to solve than those at Nha Trang Bay (provincial-level site). As participants [C1, P1]

presented above and discussed earlier, the local authority cannot intervene much in decision making for development activities operated at the land belonged to Con Dao site because this site was decided by the Prime Minister and has been regulated by a higher level with specific legal documents for that sector [C1, P1].

In addition, a barrier to interagency collaboration arising from power conflicts can be overcome if there is an attention or intervention from a higher level. An approval from a provincial people's committee (PPC) can significantly aid interagency collaborative governance because all the agencies and partners must abide by decisions of the PPC. Moreover, this barrier can be mitigated further if it is institutionalized into an interagency collaborative mechanism and prescribed in formal legal documents [P21, P29, P34, P35, P22]. These should also cover economic incentives.

Economic incentives are crucial attributes of effective environmental institutions. These shape behaviour of an individual and group (Hanna, 1998) and lead to success and effectiveness of institutional implementation (Swallow and Bromley, 1995, Hanna, 1998, Hilborn *et al.*, 2005). Understanding economic incentives is important (Swallow and Bromley, 1995, Hanna, 1998), but an establishment of incentive and reward mechanisms that direct resource users and managers to desired behaviour or expected reactions, is a challenge (Hanna, 1998). Currently, there is no formal incentive sharing or benefit payment mechanism for partners, who get involved in institutional enforcement for MPA governance and management in Vietnam. This impedes interagency collaborative governance in the cases studied.

The use of economic incentives is a fundamental dimension of institutions responsible for sustainable governance of natural resources. Irrespective of the type or number of property right regimes applied, natural resource management can be successful depending on firstly the cultural, economic and biophysical context (Ostrom, 1990) and secondly whether environmental institutions can satisfy all basic functions including creating economic incentives (Hanna, 1998). In other words, MPA governance at study sites is unlikely to succeed if economic incentives are not institutionalized as formal rules.

All the three perceived barriers to interagency collaborative governance identified in this chapter, including the (i) difference in agency's organizational type, (ii) power conflict and (iii) a lack of incentive sharing, are interlinked. The initial design of a MPA authority, whether an administrative management or government business enterprise, can affect its future ability to resolve power

conflicts and financial issues. The more powerful agencies (administrative management agencies) can exclude a new participant (MPA authority) from participating in the interagency governance network. Currently, most MPA authorities in Vietnam have been approved as a government business enterprise. They may have a voice in discussing related issues, but do not have authority and resources for making and implementing decisions. As defined by Hardy and Phillips (1998) with regard to power of an organisation in an inter-organizational network, it can be said that MPA authorities in Vietnam have a discursive legitimacy, but not formal authority and critical resources. Moreover, according to Jentoft (2007), power of an organisation can be exercised in different ways, positive or negative, depending on power holders' interests. Powerful stakeholders or organisations may use their power to maximize their advantages by redefining issues or influencing the participation of other stakeholders or organisations into the network (Hardy and Phillips, 1998). They may even drive negotiations or regimes within the scope of multilateral organisations to meet their interests (Lemos and Agrawal, 2006). It seems that the MPA authorities with a particular described design of management type and power within the certain institutional conditions of Vietnam have weak or insignificant legal influence for effective interagency governance processes of the MPAs.

The barrier related to the difference in agency's organizational type can be eased if there is a good incentive sharing mechanism among participating agencies because, in this case, participating agencies are more motivated to get involved in the collaborative processes. Similarly, when a MPA authority has strong mandates (for financial generation) to sustain a financial system for the MPA, thanks to its organizational type (government business enterprise), it can reduce resource dependence (one aspect of power) on other agencies. In this case, the collaborative governance processes can be improved. In other words, these three barriers to interagency collaborative governance are very much inter-dependent and are caused, in part, by an incompatible formal institutional framework.

In summary, barriers to inter-individual collaboration are mainly associated with personal characteristics, culture and perceptions that are partly shaped by socio-economic context. In the meantime, barriers to inter-agency collaboration are mostly derived from incompatible formal organizational institutions. The interactive model (**Figure 5.1**) developed above has high cognitive and deliberative values. It illustrates that an individual or organisation can influence each other and then affects the overall governance processes. Collaboration between individuals and organisations becomes a core value of interagency governance of MPAs in Vietnam. An incompetent inter-

individual collaboration can reduce the effectiveness of interagency collaborative governance processes and vice versa. Furthermore, it can be recognized that all the perceived barriers are closely influencing, and influenced by, each other. Grass-roots elements, such as, human-related competencies (including perception, awareness, and interpersonal skills) and formal organizational institutions, should therefore be strengthened to supplement each other to achieve effective governance of MPAs.

5.5 Preliminary conclusions:

This chapter has investigated perceived barriers to social interactions that influence MPA interagency collaborative governance in Vietnam. It has identified a number of critical barriers to these processes. Tensions in (i) personal agendas and interests, (ii) degree of personal relationship, and (iii) inadequacy in personal skills and leadership approach, are dominant barriers to the interactions of individuals within and between different organisations. Others, including (i) a distinction in agency's organizational type, (ii) power conflicts and (iii) lack of incentive sharing mechanisms, are major barriers to the collaboration between agencies within MPA-collaborative governance processes. Furthermore, this study has revealed that the barriers at each level within institutional structure are interrelated. The occurrence of one barrier may lead to the appearance of others. They all, in turn, affect the effectiveness of collaborative governance processes. There is also a mutual influence among individuals and organisations. Any barrier to the collaboration either between individuals or organisations may reduce or accelerate the whole collaborative governance process. Indeed, all the barriers at both levels, individuals and organisations, should be taken into account for studying effective governance of natural resources.

Although influential forces or barriers to collaborative governance have been studied by other researchers, the application of organizational and social learning concepts coupled with empirical analysis has been less common. The findings of this study show that barriers to inter-individual collaboration are mainly derived from human resource capacity, attitudes and competence, especially of the leaders. These are partly shaped by the social and environmental conditions in which these individuals are embedded. Barriers to inter-organizational collaboration are constructed based on the relative 'infancy' of formal organizational institutions. The barriers may vary from site to site and may be altered when personnel or the concerned institutions have been changed. Indeed, studies about barriers to effective collaborative governance should consider all

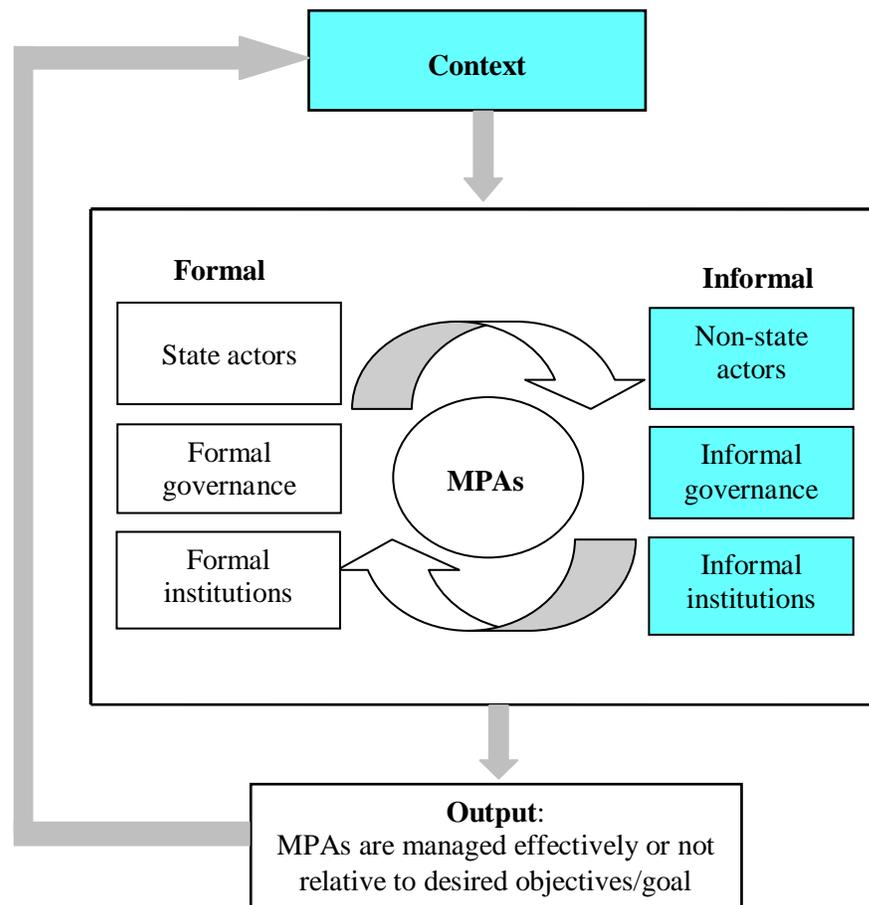
these underlying elements, including human behaviour, social conditions and institutional situation, to have broad outcomes.

This chapter has also demonstrated and further reinforced the cause-effect relationship between formal institutions and interagency collaborative governance presented in the **chapter 4**. Additionally, it has detected problems associated with capacity of actors and related organisations who get involved in developing and operating institutions. These problems have negatively affected the governance of MPAs. When formal institutions related to organisation and agency establishment are inadequately composed, a range of problems may emerge during the interagency collaborative governance processes. In reality, barriers related to human capacity can be easier to overcome, regarding to temporal scale and financial costs, than formal institutional problems. The ability to confront institutional problems and take action as an experiment of an adaptive nature to cope with these problems is an enormous challenge. It normally requires a long time, significant finance and great political will for these experiments. Solutions for individuals or personal issues can be taken into short or medium strategies, whereas institutional innovations should be a long-term direction towards effective collaborative governance of natural resources, in general, and MPAs, in particular.

Chapter 4 and **5** have presented the complexity, dynamics of formal institutions and perceived barriers of social interactions that influence the effective governance of MPAs in Vietnam. These chapters have underpinned the research objective three (in **section 1.2**) and shed light on major components (state actors, formal institutions and governance) of a formal setting of the developed analytical framework (in **chapter 3**). The next chapter (**6**) addresses the influence of informal institutional settings, including non-state actors, informal rules, norms and social capital, on effective governance of MPAs. Some major questions that will be addressed are: Does this setting influence the effective governance of MPAs in Vietnam? If yes, in what way? And what are key barriers to these processes?

CHAPTER 6: LOCAL COMMUNITIES AND INFORMAL INSTITUTIONS: THEIR INFLUENCES ON EFFECTIVE GOVERNANCE OF MARINE PROTECTED AREAS IN VIETNAM.

6.1 Introduction:



This chapter investigates the participation of local communities in governance processes of MPAs in Vietnam. Specifically, it explores the nature of constraints, including socio-economic context and informal institutions, to the participation of local communities in decision-making processes, viewed from a civil society standpoint (the highlighted parts of the developed framework presented above). This chapter addresses the following questions: How do local people interact with each other in governance processes of MPAs? Which socioeconomic forces are related to an active

engagement of local communities in these processes? What are the social values and customary regulations, traditional perceptions available at the local communities and other entities that contribute to effective governance of MPAs? How might socioeconomic factors and informal institutions influence these processes? What hinders or motivates local communities to get involved in these processes? And what are pre-conditions necessary for a community self-governance model of MPAs in the socio-economic and institutional context of Vietnam?

In this study, participants were asked about the status of, and issues rising from, the MPA governance processes. They were also asked to identify constraints to local communities' engagement. A 'backsolving' approach (Edwards and Steins, 1999) was then applied to ask for in-depth information. Some questions related to major outcomes and consequences of participatory governance at each MPA that were extracted from secondary information and mentioned by participants were raised by the researcher for further discussions. Causes or reasons for these outcomes and consequences were probed and then addressed by participants based on their knowledge and experiences. Finally, influential factors were then analysed to understand the nature of these constraints. Some pre-conditions toward a community self-governance model for the MPAs were identified among local communities and discussed with government actors (see more details about data collection methods in **section 2.2**).

This chapter is structured into five main sections. Section 1 reviews participation of local communities or public citizens in governance and management of natural resources, as explored by previous studies. It helps understand why the participation of local communities is important to environmental governance. Section 2 presents a brief overview of local communities' engagement in the governance and management of fisheries resources in Vietnam. Section 3 presents research findings that are divided into 2 sub-sections. The first describes influential factors that constrain the engagement of local communities for effective governance of MPAs in Vietnam. The second sub-section introduces necessary conditions towards a potential community self-governance model for effective governance of MPAs in Vietnam. Section 4 provides a discussion of findings from this research and comparison with other similar studies. Finally, conclusions are summarized in section 5.

6.2 Understanding the participation of local communities in environmental governance and natural resource management.

Environmental conservation policy and practice has been undertaken through three main paradigms: the classic approach, the neo-populist approach and the neo-liberal approach (Blaikie and Jeanrenaud, 1997). The classic approach views nature as separate from human beings. The environment has been thought to be independently managed by human beings. Humans use 'nature' as a 'resource' to serve 'humans' and are not concerned about negative impacts from environmental degradation back on 'humans' (argued by Kapoor, 2001). With this paradigm, a top-down approach has been applied to environmental and natural resource management. Government has become the most powerful actor for implementing this approach (Blaikie and Jeanrenaud, 1997). The second paradigm, the neo-populist approach, uses participation and empowerment of local people in integrated conservation and development activities towards more sustainable use of biodiversity. It considers local people as a focal point while designing, implementing activities and making decisions for conservation and development (Blaikie *et al.*, 1997). This approach has been applied and tested by a number of researchers (Newmark and Hough, 2000, Salafsky and Wollenberg, 2000, Baral *et al.*, 2007). The third paradigm, the neo-liberal approach explores institutional, market and policy failures as constraints to environmental conservation, especially those relating to economic benefits and costs of biodiversity (Blaikie and Jeanrenaud, 1997).

Since the late 1990s in particular, reciprocal interactions between 'humans' and 'nature' have been increasingly studied (Gunderson and Holling, 2002). These are called human-environmental systems (Turner *et al.*, 2003, Newell *et al.*, 2005), socioecological systems (Holmes, 2001, Young *et al.*, 2006), ecosocial systems (Lemke, 2000, Waltner-Toews *et al.*, 2003) and social-ecological systems (Berkes and Folke, 1998b, Berkes, 2004). Of these, the human or social dimension, including organisations, institutions, human behaviour, social capital and social interactions between actors (Janssen and Jager, 2001, Pretty and Ward, 2001, Lansing, 2003, Pretty and Smith, 2004) has been increasingly studied to further explore and understand the nature of grassroots influences. These studies have found solutions for uncertainties and changes of complex social-ecological systems (Lee, 1993a, Grumbine, 1994, Dietz *et al.*, 2003). Studies about the participation of civil society and other stakeholders, their values and characteristics in environmental governance have thus become essential. In this situation, it has been suggested that the roles of the state in environmental governance and decision making should be shared with other

non-state actors, such as public, private and voluntary sectors (Bulkeley and Mol, 2003, Newman *et al.*, 2004). Similarly, the term 'government' with a hierarchical structure or command-and-control operational style has shifted to 'governance' with a social networking and more flexible style of operation (Dwyer, 1998, Davis and Rhodes, 2000, Considine, 2001, Peters and Pierre, 2001, Banner, 2002, Newman *et al.*, 2004) for natural resource management and biodiversity conservation.

The participation of non-state actors, including local communities, in decision-making processes has been confirmed as a key point for effective environmental governance compared with government (Papadopoulos, 2007, Kluvankova-Oravska *et al.*, 2009, Newig and Fritsch, 2009). Local communities are perceived as direct users of natural resources and immediately influenced by environmental degradation. They are the roots of both causes and solutions for these problems (Bulkeley and Mol, 2003). Furthermore, there is an assumption that local communities may possess better knowledge about the resources and areas where they live than any other actors. Hence they should be the best manager of resources or at least they must be actively involved in resource management (Western and Wright, 1994, Sponsel *et al.*, 1996). Indeed, their participation is deemed to be crucial for any program of environmental governance (Kapoor, 2001, Layzer, 2002, Bulkeley and Mol, 2003).

Nevertheless, in reality, there are a number of questions and considerations related to the effectiveness of participation by local communities in environmental governance. These may include the purposes and desired outcomes; setting and level at which the local communities can become involved; and the techniques to get local communities involved in practical programmes. Participation does not only mean the attendance of local communities, but also their social knowledge sharing and cognitive contribution. Important considerations include identification of benefits from, and obstacles to, this process (Bracht and Tsouros, 1990, Bulkeley and Mol, 2003). Especially, how is the 'success' of one programme with participation of local communities measured? The participation of local communities can be viewed either as a tool, to achieve desired objectives, or an objective; a process or an outcome of a programme (Chess and Purcell, 1999); a means to ends or an end in itself (Warburton, 1997, Buchy and Hoverman, 2000). The 'success' of a participatory programme has indeed been realised differently depending on the viewpoint of the purposes of public participation and the assessment of standard principles (Warburton, 1997, Chess and Purcell, 1999, Buchy and Hoverman, 2000). Furthermore, institutionalizing public participation to achieve a more effective and sustainable 'success' is very complex (Osmani, 2008)

The participation of local communities, in addition to professionals and other stakeholders, in environmental management and conservation programmes is a must (Warburton, 1997). It has shown positive impacts and great potentials for sustainability of the programmes (White, 1986). This participation has been assumed to bring a range of benefits, at least in theory, for these kinds of projects and programmes. Below are some benefits of the participation of local communities suggested by other studies:

- The participation of local communities helps create a common stage for local communities and other stakeholders, such as NGOs, donors and government to share vision, views, information and interests related to resource management and conservation. This then enhances mutual understanding between participants (Wondolleck, 1988, Macnaghten and Jacob, 1997, Blake, 1999, Owens, 2000). Moreover, it not only helps foster compromise towards finding solutions for complex environmental problems, but also reduces time and cost for the implementation of collective actions because local communities and other stakeholders have higher acceptance and compliance through participatory activities (Perry and Dixon, 1986, Wondolleck, 1988, Kemmis, 1990, Shannon, 1990, Kapoor, 2001, Bulkeley and Mol, 2003, Newig and Fritsch, 2009).

- The participation of local communities can bridge the gaps between science-based decisions for environmental problems and traditional knowledge, values and characteristics of other actors (Kapoor, 2001, Layzer, 2002, Adger *et al.*, 2003, Bulkeley and Mol, 2003). That helps provide more complete information (Berkes *et al.*, 2000) to make decisions more appropriate to the local situation (Warburton, 1997). These decisions are normally more inclusive and deliberative (Macnaghten and Jacob, 1997, Blake, 1999, Owens, 2000) and more effective and durable (Christie and White, 1997, Chess and Purcell, 1999, Layzer, 2002).

- The participation of local communities in management activities helps spur local voices (Hirschman, 1970), and enhance local ownership, commitment and accountability (Zazueta, 1995, as cited by Tipple and Wellman, 1989, Kapoor, 2001). These make local people more responsibly engaged in environmental governance processes and feel more empowered and accountable for making decisions (Platteau, 2008).

- The participation of local communities helps build a regular and stable mutual communication system among local communities and other stakeholders. This in turn helps

timeliness for interpreting programme's contents, procedures and results to minimize misunderstandings and conflicts among stakeholders. Furthermore, it can increase transparency and democratic legitimacy of the participatory process for decision-making (Moote *et al.*, 1997, Warburton, 1997, Plein *et al.*, 1998, Mason, 2000, Kapoor, 2001, Bulkeley and Mol, 2003).

- The participation of local communities can help bring local communities and other stakeholders closer together to construct a network of relationships. Social capital can be enhanced and expanded through this network. Thus, local communities can be empowered and gain more influence in the decision-making process conducted by the network (Osmani, 2008). Mutual trust and understanding between individuals within the network is a foundation for mobilizing new issues and gathering innovative solutions (Lebel *et al.*, 2006).

In contrast to the benefits mentioned above, there are concerns or dangers that have emerged from some programmes with participation of local communities. Some researchers (Amy, 1987, Carpenter and Kennedy, 1988, Moote *et al.*, 1997, Davis, 1996 cited by Buchy and Hoverman, 2000, Kenney, 2000 cited by Conley and Moote, 2003) state that local communities get better involved in participatory programmes when there is mutual trust. However, this normally takes much time and is administratively costly at the initial period of the programmes. Furthermore, participants may supply biased or wrong information through participatory activities that may affect the consequences of the programmes. The involvement of non-state actors does not significantly correlate with the improvement either of local knowledge use or the potential for achieving more sustainable outputs through social learning (Newig and Fritsch, 2009). Conversely, when local communities do actively engage in participatory programmes, there is a concern that the contribution and effort from local communities or other stakeholders for these programmes might be over-exploited or used for free while professionals are being paid for a similar contribution (Taylor, 1995 cited by Warburton, 1997). Similarly, the involvement of local communities may be rushed and they may have exaggerated expectations about the outputs and outcomes of the programmes through participatory activities and consultative meetings. These expectations in turn may influence the sustainability of the programmes, when local communities do not recognize the expected 'rewards' from participation (Davis, 1996 cited by Buchy and Hoverman, 2000). In general, participation of local communities in environmental governance has brought some benefits and created some problems, although the benefits have significantly outweighed the problems (Warburton, 1997).

More recently, however, the 'pros and cons' of local community participation have been reconsidered (Newig and Fritsch, 2009) and affirmed as not always 'good' (Khwaja, 2004). In some cases, many failures and few successes have resulted from participatory programmes (Stellman and Ascher, 1997) and no single participatory approach works well for all situations (Lawrence and Deagen, 2001, Platteau, 2008). It depends on the characteristics of the communities and the environment in which these communities live. According to Christie and White (1997), decision-making processes with participation by local communities have higher successful possibilities when facilitated at small isolated islands that have low potential to be destabilized by external forces. Property regimes applying to natural resources also influence the participation of local communities in resource governance and management. Local communities more actively participate in resource governance and management if their resource-use rights are assured (Berkes, 2006). This issue is somewhat problematic for marine resources such as fisheries that are movable and renewable (Cole-King, 1995).

The participatory approach is also affected significantly by other contextual conditions, such as the dominant political regime, social heterogeneity and ethnic fragmentation (Platteau, 2008). Theiss-Morse and Hibbing (2005) state that social heterogeneity can influence the outcomes of participation of local people in such programmes. Normally, people prefer to join groups that are homogeneous rather than the heterogeneous. In other words, social factors may affect the degree and effectiveness of participation by local communities. Smith and McDonough (2001) suggest that managers should try to achieve a fair decision-making process, rather than concentrate on the techniques to get local communities involved in participatory governance of natural resources. The participatory process cannot be successful if applied where there is a serious problem with equality (Platteau, 2008).

Typically, people are not satisfied by, nor will they support, decisions that may bring unfair outcomes to them (Lind and Tyler, 1988, as cited by Smith and McDonough, 2001). They may delay the implementation of collaboratively made decisions when an unfair or exclusive deliberation process is perceived (Newig and Fritsch, 2009). Indeed, social dimensions or factors should be considered very carefully in developing participatory processes. Furthermore, contextual conditions should also be taken into account for operating this approach in practice. The resource managers must be adaptable in applying social knowledge to achieve fairness in the participatory process. In the latter case, the participation of local communities can be more effective and sustainable.

Bowles and Gintis (2002) have identified an interlinked relationship between public participation and effective governance. Communities are part of effective governance because they can address certain problems that cannot be dealt with by either individuals, markets or governments acting alone. While public participation and public accountability are presented as imperative conditions for achieving effective governance (Scholte, 2002), Osmani (2008) argues that effective governance is a foundation for a sustained and equitable development that helps encourage all stakeholders, especially at local government levels, to participate more effectively. In other words, improvement of public participation is one way to constructively enhance the effectiveness of environmental governance.

6.3 Fisheries communities and their participation in management and governance of fisheries resources in Vietnam:

Vietnam has a coastline of 3260 km and an exclusive economic zone (EEZ) of more than 1 million km² that is three times the mainland area. This large EEZ provides significant natural resources, mainly fisheries and petroleum products. Potential for expanding marine-based economic development activities for the country is considered underutilised. Fisheries activities started much later than other agricultural activities, such as rice farming or forestry, in Vietnam. According to Nguyen (2002), ancient Vietnamese people were originally wet-rice farmers. Marine fisheries activities remained at a rudimentary level due to lack of fishing technology and knowledge (in the preindustrial age). As the rural population expanded, some poor farmers moved to coastal areas for fishing as available land area for farming became scarce. Initially, there were two types of fisheries communities. One included people residing at coastal areas to establish coastal fisheries villages (*Làng đánh cá ven biển*). Another was composed of communities who lived on floating boats and migrated seasonally to different areas for fishing activities. These are mobile-fisheries villages (*Vạn chài*). Today, both of these are at the same level in the administrative management structure, but have different cultures and living styles. While the former is mainly governed by formal institutions and social connectedness, the latter is typically comprised of groups of 20-25 blood-related fisher households and strongly governed by ancestral norms.

In Vietnam, at least since 1993, when an Environmental Law was first issued, policy makers, scientists, civil society and other interest groups have paid more attention to environmental issues

and their solutions. They have been encouraged to work together to find resolutions for these issues. Decree No. 79/2003/ND-CP⁷⁵ provided legislative guidance for implementing democratic regulations at low levels (commune, hamlet). Specifically, the Decree provided legislative guidance for establishing social associations at village level and determined the extent of activities to which those local communities can get involved. In practice, public participation in management activities has been promoted by forming common slogans, such as “Government and people do together” (*Nhà nước và nhân dân cùng làm*) and “People know, People discuss, People do and People supervise” (*Dân biết, dân bàn, dân làm và dân kiểm tra*).

In relation to aquatic resource management, participation of local communities has been identified by the fisheries sector as a potential tool for undertaking a strategy of sustainable fisheries management (Hoi *et al.*, 2006). It was transformed into illustrative actions and activities proposed by this sector in its sectoral strategies and specific programmes. For example, in programme No. 131⁷⁶, the decentralization and engagement of civil society has been encouraged as a crucial tool to help protect aquatic resources and habitats. A range of practical projects or models, namely co-management or community-based management, have also been initiated and fulfilled in different locations with various purposes and approaches (SCAFI project report, 2009). Some of these have been conducted for mangrove preservation and rehabilitation (e.g. Can Gio project). Others have been implemented for fisheries management in lagoons (e.g. Tam Giang lagoon projects), coastal aquaculture management (e.g. Ben Tre Clam site) and some have been recently carried out for marine conservation (e.g. Ran Trao MPA, Nha Trang bay MPA, Culaocham MPA) and fisheries management in reservoirs (e.g. Lak lake project).

In addition, there is a substantial variation in the approach and level of local communities’ participation in these projects. Some projects have used mass organisations to engage local communities in management activities. For example, local people have become involved in management activities through local fishing associations at model sites in Tam Giang lagoon⁷⁷.

⁷⁵ Decree No. 79/2003/ND-CP, dated on July 7, 2003, signed by Prime Minister, promulgating the regulation on the exercise of democracy in communes.

⁷⁶ The programme No. 131 on Protection and Development of Fisheries Resources toward year 2010 was approved by the Government in 2004.

⁷⁷ This project has been conducted by Hue University of Agriculture and Forestry and financially supported by the International Development Research Centre, Canada.

Another project - Integrated Management of Lagoon Activities (IMOLA)⁷⁸ using this approach has also been conducted at other areas of this lagoon. Each fishing association is allocated a water surface area to manage. The participants must pay a membership fee when registered into the local fishing associations. They follow consensus rules that were collaboratively developed and agreed by members of the associations and approved by people's committees and fishing associations at a higher level. The significance of this approach is that the local members are granted legal rights to access natural resources. Consequently, local members have access rights to the natural resources, use them for their livelihoods, but must comply with, and collaboratively enforce the agreed local rules to manage the allocated water area (Truong *et al.*, 2010). Similarly, a group of social elites has been used in other sites, such as Ran Trao MPA⁷⁹, to convince other local people to become involved in development and enforcement of local rules. Members of this group may take turns in accessing financial loans in return for their contribution.

The Productive Cooperative is another form of a bridging organisation to engage local communities in natural resource management for their own sustainable exploitation. Rang Dong Clam Aquaculture Cooperative in Ben Tre Province has been an excellent example of this model. Local people have been formally empowered to protect and manage natural clams in a given tidal area of 1000 ha. They voted for a management board with a fixed term. All management issues must be democratically discussed in plenary meetings of the cooperative. There has been transparency and accountability in financial coordination and enforcement of the rights and duties of members. All the activities of the management board and members are monitored by another team elected by local members (Cao, 2008).

Another model is where a group of representatives is selected by the local authority and communities. This model has been applied by Nha Trang MPA and Culaocham MPA. These are called Village MPA committees and MPA Clubs, respectively. Such committees can assist in integrating administrative management activities of a village and conservation activities of the MPA. There has been a strong commitment amongst this committee, local authority and MPA management board. The opinions and recommendations of local communities for management activities and decision-making are normally transmitted to management bodies through this

⁷⁸ IMOLA project was jointly funded by Food and Agriculture Organisation (FAO) of the United Nations, Italian and Vietnamese Government.

⁷⁹ Ran Trao MPA was established as a community-based MPA model. That was funded by MCD - Marine Resource Conservation and Community Development Organisation.

committee⁸⁰. However, the voice of local communities sometimes cannot be directly reached or deliberated with the MPA authority because there is a limited dialogue between the local communities and the MPA authority.

Recently, an independent evaluation mission was organized by the National Directorate of Aquatic Resource Protection and Conservation (DECAFIREP) to assess existing aquatic resource management and conservation programmes in Vietnam (SCAFI-project-report, 2009). It concluded that some programmes have been stable and achieved certain desired results. Some others have been in their orientation phase. However, gaps in the development of operational and collaborative regulations amongst local communities, government agencies and other stakeholders are of concern for these programmes. Furthermore, the resource boundary for management has not yet been explicitly declared by government and adopted by other stakeholders.

The participatory process has been applied to aquatic resource management and conservation activities based on the formal encouragement of the Ministerial agency of Vietnam. These models and programmes have been carried out under various organisational forms and approaches. Most of them have been funded by international organisations. Although this approach seems to have potential for sustainable and responsible fisheries management, positive results and shortcomings have generally not been formally published or widely communicated yet. Their outcomes have not yet been disseminated to interested audiences and incumbents.

In summary, there are a range of studies around the world that investigate the participation of local communities in management and governance of natural resources. These studies have identified motives and obstacles, advantages and disadvantages, benefits and constraints for this process. When viewed as a process, participation should consider both socioeconomic and political factors. When participation is considered as an outcome, cost-effective and cost-benefit analyses are important. In this study, a key research idea is whether the participation of local communities in governance and management of natural resources, in particular, and other types of common properties, in general, is a crucial initial step for successes in the sustainable use, conservation and management of natural resources in Vietnam. Although the participation of local communities has not always been effective and efficient, it can, at the very least, play a role towards more democratic, transparent, multi-dimensional and interactive dialogues and be a pillar contributing to

⁸⁰ Technical Report of Hon Mun MPA pilot project

effective governance (as reviewed in **section 6.2**). The local communities and other stakeholders thereby can contribute their resources for better management and governance of natural resources. In the current social, political, economic context of Vietnam, the participation of local communities must be perceived by all the actors, including state and non-state, in the society as their rights and duty. This can present opportunities and challenges for all actors in the management and governance processes of common-pool resources.

6.4 Research findings:

As reviewed in **section 6.2**, participation of local communities is not a ‘panacea’ for all of natural resource management and governance programs. It can be effective in certain situations, but not all. Research ideas related to participation of local communities have been scrutinized elsewhere around the world. However, these have been only recently studied in Vietnam (**section 6.3**). The participation of local communities and why such participation is essential for participatory governance of MPAs in Vietnam are an important focus for the present research. The following statements by various participants and incumbents about the governance of the MPAs provide evidence of this need:

“I reckon that the MPA authority formed collaborative programmes to work with local people through village MPA committees. This is a very good and practical approach. We (local authority) cannot do anything, even enforcing ordinances or other related legislative documents, if local people are not fully involved. Of course this MPA was established to conserve natural resources and environment for local communities but it will not be easy for the MPA authority to complete its tasks, if the local people don’t agree” [C7].

“The participation of local communities in resource management is important for long-term protection. When the government staff (lonely) protect the MPA, the result could be nothing because they would not spend whole day and night time for sea protection under the hardship of wind and wave. Furthermore, no matter whether they (MPA staff) work hard or not, they still receive enough monthly salary. They don’t really care whether fish are still there or not... But for the local fishermen who depend on marine resource like us. We are very ready to protect the area where we are working and living ... as we protect our life from bad threats” [L4].

“That is very important if they (local communities) are well aware of environmental protection. They will help us much to protect (environment). We (government staff) cannot protect the

resources as well as they (local communities) expected, especially marine resources. They (local communities) can monitor and manage them better than us” [P6].

Findings of this research are presented in two main parts. The first is about perceived socio-economic influences on the participation of local communities in governance of MPAs. The second describes needs or demands for a community self-governance model and pre-conditions for the success of this model as suggested by participants.

6.4.1 Perceived socioeconomic influences on public engagement in governance of MPAs in Vietnam.

The survey participants identified three main factors for successful engagement of local communities in participatory governance processes of MPAs in Vietnam. These are (1) awareness of local communities, (2) economics and (3) social capital. These forces are elaborated as follows:

6.4.1.1 Awareness of local communities:

The participation of local communities in MPA governance can depend on whether they understand the objectives and outcomes of these governance activities or not, especially as these activities positively or negatively affect the living conditions of local communities. When the local communities understand these activities well, they can actively participate in them, otherwise they ignore them [L21, GD2]. For those who have a limited awareness of environmental protection activities, they care more about their personal benefits. They just participate in activities that bring direct benefits to them [P22]. However, others may actively participate in the conservation activities because they are aware of serious pollution at their area and they think they must protect the environment [L14].

The awareness of people about environmental issues has increased over time thanks to awareness-raising programmes conducted by MPA authorities. One participant stated that:

“When some people contacted the commune to establish the MPA at this area, we didn’t know what MPA is, what it will do and what the result will be. After working with the MPA authority since the first workshop in 1998 at Nha Trang Research Institute, officials of the commune and local

communities have understood more about the MPA. At the beginning, we thought that some foreigners come here to discuss and invest money for doing business. Day after day, we have understood more that this is a good MPA. It gathers the participation of national government level through Ministry of Fisheries, the provincial and local authorities. This MPA brings lessons learnt from abroad to apply into this area” [C7].

Development of awareness has progressed not only with local government officials, but also with local communities. Their awareness has been enhanced much. Local people can recognize more their responsibility in protecting the common environment and they care more about their environmental behaviour and practices. The improvement of their awareness and perception can help strengthen the relationships between communities and MPA staff. Local people have become more willing and active in participation in MPA management activities.

“At the outset of the MPA establishment, the people thought that this MPA is established to prevent fishing activities and to create obstacles to economic incomes of local communities [C7]. “They were very angry when they saw a MPA boat parking at the village because they hate the enforcement team, who confiscated their boats or others because of their illegal exploitation. But no more conflict now. They are very happy and open-hearted when meeting with MPA staff” [C5]. “They have perceived more, day by day, that conservation is for all the people. They all have agreed to conserve coral reefs and want to protect them more strictly” [L14, L21].

When the local communities have a better awareness about the MPA, they can use cost-benefit effectiveness as a principle to compare activities conducted by the MPA authority with other projects’ invested in this area. They can recognize long-term benefits brought by the MPA compared with others. They then support the activities of MPA authorities. A participant stated that:

“The MPA authority helps local communities and tries to use the local resources to assist local communities. It differs from other development projects that generated big problems, in terms of resettlement and livelihoods, for local communities” [C7]. The awareness of local communities about objectives of programmes or activities was advised by this participant as important for outsiders who first work with local communities that “you (the outsiders) need to explain well about the plan, program and objectives of activities for the local people and ensure what benefit the people can get

from your activities/plans. Thereafter, they (local communities) can understand and support you (the outsiders)” [C7].

In summary, awareness and perception of local communities and authorities has been addressed as an underlying factor influencing their participation in MPA governance activities. They are much more aware of MPA’s objectives and its management and governance activities thanks to environmental education programmes/activities conducted by the MPA authority and its staff. Furthermore, based on the improved awareness and perception, especially the recognition of apparent outputs and outcomes brought by the MPA authority and other development projects, they can decide what activities they should get involved in and support. In other words, the awareness of local communities not only influences their participation, but also affects the long-term sustainability of MPA governance processes.



Figure 6.1: Rubbish collection conducted by local people within Halong Bay.

Photo by Thu V.T. Ho

6.4.1.2 Economics:

(i) Economic difficulties and its influences:

Most participants in Nha Trang and Con Dao responded in interviews that they felt the establishment of the MPAs has influenced economic conditions of their family. Especially, families with boats and fishing gear, who usually fished in the area now used as a core zone of the MPA (and excluded from fishing), may lose up to 60% of family incomes [L14]. Fishers have to go further offshore, incur higher costs (for diesel and other consumables) and get fewer yields. They have lost fishing grounds and spent more money for longer fishing trips [L12]. In addition, the price of diesel has been increased, so they are currently in very difficult economic circumstances [C5, L15]. However, some others, who have a bigger boat and diverse fishing gear, can go further and have been less affected [L28, L14].

“Honmun (HM) is a very familiar area to us. We have fished at this area for a long time. This is in good condition and a closed area, so it is very important for local people here. It has been a major fishing ground for fishing gear like ours, but we cannot fish there anymore since this area has (sic.) been prohibited for MPA establishment. I think the local people, in general, always tolerate difficulties. They have to comply with the law and regulations. Their boats are small, so they cannot go to fish beyond the HM area. We lost about 60% of incomes” [L14].

“I, normally, catch at HM site in the past, now have to go further. In the past, I could come to fish there in the rough season and go to further offshore areas in the calm season. I am, however, not allowed to come to HM anymore, so I have to stay at home in the rough season. I have lost much income from the zoning of the MPA” [L18].

Most of fishers agreed that fisheries resources have been depleting due to an increase in the number and capacity of boats, so the establishment of a MPA can be a solution [L12, L14, L17, L18, & L8]. The MPAs can benefit fisheries resources in the future because dynamite and cyanide fishing, which are dangerous for natural resources and humans, are not allowed to be conducted within the MPAs. So the local people highly support these activities [L24]. However, most of the local people have been living on islands for a long time. Fishing seems a unique livelihood and culture of the people there [C5, C7, L15]. They all cannot change to other activities like trading or others as easy as the people on the mainland [L15]. Some other participants endorsed this point with following stories about resettlement of local communities for a resort development project:

“There are more than 5000 residents living on the islands. Currently, there are some problems with the resettled communities because they have been living with fishing activities for a long time. When they moved to the mainland they may have a better house thanks to the compensation money paid by the resort developer, but they have problems with livelihood activities” [C7]. Furthermore, at the new place, “they don’t have places for boats’ parking. They find it very hard to continue with their existing job (fishing). Some of them have to use their house ownership paper for secured loans for daily expenses. Some others sold their new land for living expenses and came back to buy a piece of land on another island” [C5]. Moreover, one participant explained further that “local people have no plan for using a big (compensation) money that they got (from the resort developer) after that such a short time and cannot manage the money. Some others have small boats, so they are either not easy to sell or operate at the new mainland area as well” [C8].

In addition, some other participants mentioned that difficult socio-economic conditions have influenced much the participation of local communities in MPA governance activities. The local communities can get involved in governance activities if they have better economic conditions [L15, L24]. Moreover, most local people (about 80% for a Nha Trang Bay MPA⁸¹) have been living on fishing-related activities. The loss of fishing activities has also affected the governance activities of the village [L21]. The difficulty in economic conditions may not only influence the participation of local communities in the governance processes, but also threaten the consequences and efforts that the MPA authorities have achieved and spent for. Participants presented that:

“If we (the MPA authority) can implement very well economic supportive programs, they (local communities) will be very interested in our MPA activities and willing to get involved in these” [P22]. “I worry too much for the MPA that the local communities may venture to fish in the core zones again due to the current difficulties in the economic situation. So the result of conservation activities is very much at risk. Fishing activities may return to the situation as when the MPA was not yet established” [C5]. Some other participants further warned that “although I heard about rules and regulation of the MPA authority for a long time, I might come there again for fishing because of economic difficulties” [L14]. Or “if there are so many prohibited regulation settings and no zone is considered for our fishing then ‘a hungry man is an angry man’” [L4].

It seems economic supportive programs from the MPA authorities are very important to local people in this situation. These can be provided by different means, approaches and activities. The

⁸¹ Socio-economic assessment report by Honmun MPA pilot project in 2005

supportive programs should be diverse in type of activities for different ages of target people, higher priority for women, and not only for a short-time. Participants expressed that:

“Local people here want to have economic support activities. Especially, women do not have any economic activities. If the MPA authority can help local people, in terms of economic activities, they will get involved better in the conservation activities” [L21]. Others continued: “The government should have some spirit and capital support for them (local communities). I agree that conservation is for future and for next generations, but the local people, at present, want to have finance for upgrading boats or investing other economic activities and supplies of vocational support for young people, who can do other jobs instead of fishing. When the children have better education and awareness, they can understand more about conservation and help conserve (marine resources) for a long time” [L14].

Other participants had similar thoughts:

“I think environmental education is important, but we still need practical and realistic activities, especially, economic support to ensure that the people can have some other alternative incomes when stopping fishing at the protected areas. All the information through papers or talks is still vague and blurred” [L28]. Moreover, women should be concerned much in economic supportive programmes. “At these fisheries villages, the men are working as fishers and the women are mainly housewives and look after their family. So they just rely upon fishing incomes (from the men). They really need some sea-independent activities to support their family” [C5].

(ii) Economic support:

Based on an initiative of integrated conversation and development and suggestions of local communities, all MPA authorities at the study sites have tried to undertake socio-economic support activities for local communities. Some incentives brought by MPA authorities through these socio-economic support programmes have been identified by local communities. In this research, they can be summarised and divided into direct and indirect incentives. Direct incentives are benefits provided by the MPA authorities to individuals or families residing within the MPAs. For example, these are a supply of subsistence, an increase in incomes through additional livelihood activities, vocational training or capacity building programs. Indirect incentives are assumed as something benefiting the whole society in general and which in turn improves the social welfare and living quality of local communities. These may include: an improvement of social welfare systems, better

infrastructure, an increase in the voice of local communities, resolving gender sensitization, an improvement of environmental quality and natural resources.

Most participants appreciated the improvement in environmental quality at study sites. The local communities at Con Dao site mentioned the improved quality and sustainability of fresh-water from the watershed of the forest [L28, L7]. Rubbish collection including civil and floating garbage that improved the environment, was mentioned by other local communities [P17, L8 L12, L13, L14, L18] in the two remaining sites (Nha Trang and Halong).

In relation to indirect incentives from the improvement of social welfare systems, the local people in Nha Trang expressed that these programmes have improved their living conditions very much. Especially, the supportive activities that were designed based on demands and recommendations of local communities. Some of these activities were frequently mentioned by local participants [L14, L17, L24], such as building of a Learning Community Centre, improvement of the community market, renovation of a community kindergarten, installation of an electrical system and building of a village common path.

“The most visible benefits the local people recognized are welfare systems, such as electricity, rubbish collection, schools, composting toilets for local communities as directly required by the local communities. The MPA authority has a credit scheme to give loans to local communities. They also support the traditional ceremony, such as Whale Festival” [C7].

In contrast, some participants identified other direct incentives that have not been effective and sustainable. Some activities, for instances, rattan weaving and sport-net making, were created by the MPA authority in collaboration with other private companies to increase incomes for local people. Although these were welcomed by local people, there were still some problems, in terms of a limited market and transportation difficulties. While a limited number of local people were able to get involved in potential activities like net weaving and aquaculture, other activities like rattan basket making engaged many more people, but encountered obstacles with transportation of materials from the mainland to islands. Although the outcomes of these socio-economic supportive programmes have not diffused widely, these have been high appreciated by local participants.

“I think the rattan weaving and credit scheme are the most effective activities conducted by the MPA authority” [L24]. “The MPA authority has discussed much with the local communities about

Alternative Income Generating (AIG) activities, but that is not easy. Some activities may be suitable for local people but not easy for the MPA authority to maintain and vice versa. For example, rattan weaving is suitable for local communities but transport from mainland to islands is difficult” [L21].

“In terms of economic improvement, I have not yet recognized any change thanks to the MPA activities. But I can see some improvements in environment due to granted development funds for building market and upgrading the paths. That’s good” [L17].

Some participants suggested that the economic supportive programmes developed for local communities should be based on local materials and resources, such as handicraft - snail curtain, lobster shells. These products can be sold to tourists or at restaurants on the islands [C5]. These activities can have a large market for a significant number of participants engaged [P28]. Similarly, local people can benefit by becoming involved in tourism or ecotourism services conducted within the MPA [P17]. Indeed, the MPA authority should help create careers for local people by utilizing resources on the islands and making actions on other aspects, such as, supportive policies, finance and training. That seems more sustainable and applicable for economic supportive activities that help motivate local communities to get more involved in conservation activities.



Figure 6.2: A glass-bottom basket boat designed by Nha Trang MPA Authority as an alternative income generation activity for local people.

Photo by Thu V.T. Ho

(iii) Benefit sharing mechanisms:

There have been some benefits achieved from MPA establishment, especially the improvement of environmental quality and other welfare-system-renovation programmes as described above. However, local participants were still concerned, in relation to these benefits, who receive the benefits from these achievements, the transparency and accountability of this process, and an acceptable mechanism for sharing these benefits. Some participants expressed the following views:

“The conservation activities have helped make a better environment and more fish at the core zone. Tourism grows very much” [L14, L18]. “Tourists are the people who mostly receive benefits from the MPA. For example, they can enjoy the good environment. The government and tourism companies can collect a lot of fees like sightseeing fee and other payments when tourists enter into the MPA and other recreational sites. The local people have not yet received much benefit from these”. This participant continued that “the management of the MPA is good. But I am still not happy with tourism companies, who are receiving much benefit from the conservation. That’s not fair benefit sharing between tourism and local people” [L17].

However, another participant contended that local people cannot share in the benefit from MPA achievement because of their limited education level and working experience:

“I agree that all the benefits within the Bay have been shared between the tourism operators and other rich people, not local people. It is very difficult because the local people have low education and poor-tourism-hospitality skills, so they cannot serve in the high quality resorts newly built on islands. Furthermore, all the high-quality resorts built in the area are for rich people to stay and enjoy the environment there, not for local people. These situations are similar to all the other recreational activities invested in this Bay” [P28].

According to participants the development of a good benefit sharing mechanism is important. The benefits that local communities can receive from the MPAs are various and can be supplied by different ways. The tourism sector, of course, can have better benefits from the MPA. However, the local communities can catch better yields when the MPA environment is improved as well [C7]. A supply of 10-15% from entrance fees back to local communities can be visibly recognized as sharing benefits from the MPA achievements [L21]. Supportive policies issued by the high governance level can be another benefit for the local communities. In this way, the government should advocate all the development projects in this area to give priority to employing local

communities [C5, P28, & P17]. Furthermore, the developers must deduct some percentages of their profits for reinvestment into local communities, environmental protection and resource recovery [P28, C7]. All the developers must make this agreement or commitment prior to starting the development projects [P28]. Such a commitment can make the society more equitable. At least, local people can have some benefits from the results of environmental protection and resource conservation [C7]. In other words, the mechanism must ensure that all the people should equitably share both benefits from, and costs for, activities they are involved or related to. In addition to environmental improvement, policy approvals that support local communities to have better opportunities to get involved in other economic developments of the areas, can provide potential to reduce socio-economic difficulties of local communities and increase their participation in the MPA management and governance.

In summary, there has been a very close relationship between economics-related influences and participation of local communities in the governance of MPAs. Economic conditions directly influence the participation of local communities in conservation and governance activities, especially, when the local people lose a certain proportion of income because of the MPA establishment. Ignorance of the need of economic support for local communities may threaten the success of the MPA and its sustainability. The fishers may illegally fish at MPAs due to difficult economic conditions. Although the MPA authorities have attempted to create alternative-income-generation activities for local communities, most of them have narrowly benefitted local communities and not been sustainable due to limited local infrastructure and resources. The creation of sustainable and significant socio-economic benefits for local communities and other stakeholders has become more challenging. Furthermore, an improvement in environmental quality has been recognized by local communities, but early and tangible benefits from the MPA establishment (e.g. an increase in fishing yields through over-spill effects) have been difficult and created higher pressure on MPA authorities. Concurrently, tourism benefits, such as from hotel services, trades and entrance fees, which can be more potential benefits for local communities, have instead accrued to private sector and government. This inequitable benefit sharing has increasingly created obstacles to the participation of local communities. Moreover, forming and maintaining an equitable and transparent mechanism for sharing these benefits have been even more difficult than the generation of economic benefits for local communities. This benefit-sharing mechanism not only needs a consensus of local communities and other stakeholders, but also requires support of policies issued by high-level government agencies. Another factor that

influences the participation of local communities in governance processes of MPAs is social capital.

6.4.1.3 Social capital:

Social capital “comprises relations of trust, reciprocity, common rules, norms and sanctions, and connectedness in institutions” (Pretty and Ward, 2001). It can help solve cooperative problems (Putnam, 1993) by connecting local people and other stakeholders together in social collective activities of the communities including marine conservation and MPA management and governance processes. In this study, some forces related to social capital that can affect the engagement of local communities in natural resource management were identified, including (i) the origin of local people, (ii) blood relationships and (iii) traditional culture, norms and taboos.

(i) Local people with diverse origins

Most participants stated that local people residing at fisheries villages, whether on islands like communities at Nha Trang and Con Dao, or floating communities as Giang Truc Vong (GTV) of Halong (HL), are from different areas. Communities on islands of the Nha Trang site were established a long time ago (since in 1847) and have rapidly increased after the liberation (1975). Floating fishing villages in Halong were established in the 1930's. They were re-established and became more crowded over the last tens of years, after separating due to the (French and American) wars in Vietnam [L8]. Meanwhile, communities of Con Dao were formed after 1975 [L28, L7]. Most people migrated to these fisheries villages to look for better livelihood conditions [L14, L21, L1], to receive support from the government [L8, L9] or avoid the war [L24].

The different origins of groups have influenced social connectedness at the fisheries communities. Floating fishing communities as GTV in HL site were culturally-rich villages with full characteristics of ‘traditional-floating-fishing communities’. However, traditional culture and norms have disappeared over time due to ‘the rise and fall of history’. One book recorded all village norms in 1938 is remaining, but not in use. These fishing communities moved to different areas to avoid (French and American) wars. Some of these communities were separated. Some others were re-formed with ‘new comers’ having no traditional perceptions and culture. These various aspects have accumulatively contributed to the communities losing inherent social connectedness and other social capital.

“As it was the poor time of our country in 1945-1946, my paternal great-grand father moved from Giang Truc Vong village to Cai Lan. At that time, poor fishermen used very small boats only, not big boats, for offshore fishing. After the Revolution in 1945, Japan staged a coup d’état, the villagers gradually moved to Halong, Thien Cung area. Till 1961-1962, when peace was restored, the villagers moved to the main area or surrounding areas, which were called Black Area for group living... We (fishers) only live on boats without having houses. A group of 3-5 small boats of brothers, sisters or relatives go together and meet each other when night downs to talk about fishing without knowing anything about laws... Currently, 77 households are originally from Giang Truc Vong. The other 30 households of temporary residents have come from Yen Hung, Hai Phong and from other places. In total, there are over 110 households at the present. The people heard that the state builds a ‘Cultural Centre’ here... and gives supportive programmes for local people... Moreover, this place can be used for doing business from tourist services. So, the population is increasing. At the beginning, they (people from mainland) came here for some small businesses, such as selling soft drinks and selling fuel for local people. Later, they also brought tools to help local people here fix mechanics instead that we have to take them (boats) up to the mainland for fixing. Gradually, this village has been developed and crowded” [L8].

“The traditional norms and cultures are ok with those who are old age like us, but to the younger ages, it is very difficult to tell them listen and follow. Moreover, our village was just reformed and has been here for more than 10 years... Currently, they (local fishers here) are strongly competing with each others. The MPA authority delivered them regulations. They (local people) did not look at them and threw them away” [L8]. “Each family just cares (for) themselves. ‘Your lamp lights up only for your own family’ (đèn nhà ai nấy sáng). I have four boats of my relatives like my brothers, sisters, grand-mother, staying nearby me here. We just communicate with each other. We don’t care (about) others. The neighbours here do not protect each other. For example, when I chased and shouted for help because of stealing I found that no one cared. They worried to make enemies of them... There is the discrimination of HT people (people from the mainland), particularly for temporary residents” [L10].

Discrimination between people from different areas or origins, especially the temporary resident groups [pers. com. with L15] has occurred in Nha Trang as well, but is not serious. Con Dao site has a specific identity as a ‘war prison’ from the Vietnam Wars. Most of the people now living there moved from various outside areas after the war (after 1975) [L28, L7]. In contrast with old villages like Giang Truc Vong presented above, the ‘young’ communities with diverse origins were formed on Con Dao as a ‘land’ with a blurred traditional culture and unclear discrimination by origins [L8].



Figure 6.3: A floating village – Giang Truc Vong, located within Halong Bay
Photo by Thu V.T. Ho

(ii) Blood relationship

In addition to family relationships clearly illustrated with traditional-floating-fishing communities such as GTV above, blood relationships have also been noted with other fisheries communities on islands, especially ‘old’ communities like Bich Dam at Nha Trang site. Blood relationships have been formed due to establishment history of the village. Some individual fishermen families initially moved to these areas and then developed into a community of family groups. They normally live together and have close blood relationships. This relationship has been existing with local people’s perception for a long time. Sometimes, this relationship has created social classes in the communities.

“Truong family is the oldest... He (an ancestor of Truong family) was a founder of the village. The local people here worship him in the village temple... All the heads of a village-festival board (over time) are only from Truong Family... because the local people think they are the younger

generations of the village founder” [L25]. Meanwhile, “the Vo and Nguyen families, who are the next oldest ones, have served as assistants to heads of the village-festival board (Truong family) for a long time” [L25].

“Originally, this village was established by Truong Family, so this Family wants to lead the village, although there are not enough capable ones to take leading roles. It does not mean that the Truong Family forbid other families to take leading roles from them, but other families don’t dare to take this duty due to their social perception and the relationship between the Truong family and others” [L21].

The blood relationships have manifested through the governance of conservation activities. The local people still have strong blood relationships, which have affected the decision making at the village. Therefore, there have been some difficulties when organized conservation activities at these areas because of blood relationships.

“The village MPA committee’s members, sometimes, did not make good decisions. They are not transparent or tend to strictly declare or solve problems that relate to their relatives. They may select persons(s) or activities that may not be mostly suitable for conservation programmes because of blood relationship” [P22]. Therefore, this participant suggested that “we (government staff) should collaborate with local communities and monitor them through a process of conducting activities... I mean we should keep our eyes on all the activities to make sure they are transparent and work well... They (local people) cannot complete the MPA activities well by themselves (without our monitoring) as expected” [P22].

(iii) Traditional culture, norms and taboos:

Most traditional culture, norms, and taboos in the study sites have been inherent in fisheries communities for a long time. However, their origins are largely now unknown by local people. The Whale Festival has been recognized as important to local communities because most of them are fishers [L13]. They believe the following years will be better than the former years if the festivals are organized [L14]. The festival is organized once a year with money contribution by each household. The local people also invite monks for praying in the festival [L13]. One participant [L25] further explained about traditional cultures and belief being with his community as follows:

“Annually, the Whale Festival and other traditional ceremonies are still organized following an original complex procedure. The Whale Festival is organized for three days. Furthermore, we (local fishers) have worships on the full moon days and Heaven-and-Earth worships in every 10 years... In relation to fishing activities, ... the fishermen are not allowed to fish whale, dolphin and one species of sea- turtle having three bands on its carapace. All of these animals are worshiped at this village. For social relationship, although the fishermen may have some conflicts with each other, they must help each other when they are on the sea. If they meet any on-the-sea incident with other boats, fishers must actively rescue or help each other even though they may not like each other on the mainland” [L25].

These traditional values and perceptions were detected at ‘old’ fisheries communities (e.g. Bich Dam in Nha Trang and Giang Truc Vong in Halong). But, these values were not evident in communities such as Con Dao that was established recently (since 1975) based on the movement of people from different areas to for better livelihood conditions. Norms are perceived as laws of the communities. These norms, sometimes, interfere with the human rights of people. Any norms’ breakers are bound or beaten as regulated by village norms which differed from the official laws. All the local people have to follow these norms [L25]. However, these traditional aspects have become blurred over time due to its irrelevance to current modernized living styles of the younger generations [L25, L21, L8, & L20]. The gradual disappearance of traditional culture and norms has created constraints for administrative management of communities, as recognized by village heads. Some participants suggested that the re-establishment of traditions and norms is needed to help manage the communities [L21, L20].

“I usually suggest to reform the village norms in the village meetings... the enforcement of local norms help administrative management of the village very much. For example, at the village festival this year, I suggested to form a security team led by the Village-Festival Board. This team helped to keep order for the festival. In recent years, one team including border military staff and other young people of the village were responsible for this task. However, all members of this team were young. So they could not enforce drunk-and-disorderly violators, who are older than them, in the Festival. The Village-Festival Board is more effective with these old violators. The festival in this year was so successful based on this establishment” [L20].

In summary, the research has shown that fisheries communities at study sites residing on islands or floating boats have some cultural and social differences from terrestrial communities. They have been formed based on the people who migrated from other areas due to different reasons. Some

moved to an island to avoid wars or complete a special duty serving wars. Some others migrated to the area by chance for better natural resources and living conditions. Others were born at these villages. Therefore, traditional cultures of these original island communities have been diminished or lost because of the migration of different people from other areas. This has weakened the social capital of local communities there. After a certain period together, some communities have become more united and allied. However, their connectedness has obviously been fragile because of poor social capital and the influence of blood relationships, especially when benefit conflicts occurred. A weak social connectedness has affected the participation of local communities in collective activities including marine conservation and environmental protection.

Although traditional perceptions, culture and norms have gradually disappeared in fisheries communities at study sites, their roles are very significant in diversifying cultural life of these communities. They have also led local people towards more responsible behaviour with natural resources. Restoration of these significant norms has been recognized as important by responsible people. It requires comprehensive support from government coupled with strong effort of old people in the communities. These ideas become weaker when the few old people who understand the traditional culture and norms of the communities have died. Strong and urgent actions are needed. Lastly, understanding the establishment history and traditional cultures of local communities will help resource managers select an appropriate approach to get local people involved in MPA activities. This also helps integrate their belief and social values into these activities for a better governance of MPAs.

6.4.2 Pre-conditions necessary for a community self-governance model for MPAs

A concept of self-governance of natural resources has been perceived as an approach in which a group of resource users are involved in forming, developing and adapting their own rules over time for constraining resource uses, monitoring and sanctioning, and conflict resolution (Ostrom, 1999, Schuster, 2005). This concept has been used in irrigation (Ostrom, 1992, Sarker and Itoh, 2001, Bacho and Bonye, 2006), fisheries (Tang and Tang, 2001, Castilla and Gelcich, 2008) and forestry resources (Ostrom, 1999, Gibson and Becker, 2000). In this study, a community self-governance model was introduced to, and discussed with, research participants for marine resource conservation and management in which local communities play key roles in developing their own

rules or regulations, and governing marine resource uses and other related activities using these rules.

This section examines relevant pre-conditions to effectively implement the community self-governance model at MPAs in Vietnam. Evidence from interviews with key participants, including local fishers and MPA managers, is provided in support of the conditions. Some of these statements can be presented as follows:

“Recently, they (MPA authority) took us (local fishers) to coral-reef areas and said to us that the coral-reef areas are for conservation and the people can fish outside of coral reefs. But there is nothing outside the coral-reef areas for us to fish. There is a suggestion that the MPA authority can allocate some areas and then empower these areas to local communities. The local communities will protect and govern the areas. The local people will afterward receive benefits from fishing at these areas as well as taking tourists to these areas for recreational activities. We like this idea” [L28].

“Currently, we are developing regulations with this idea (area governed by local people)... For example, there is a sea-turtle conservation initiative that we devolve the management rights to resorts located nearby nesting-areas of sea-turtles. We just organize training courses about sea-turtle conservation for resort staff. In the nesting season, we go with resort staff to the field to help them understand about sea-turtle nesting characteristics and then help them conserve sea-turtles. I think if this program is successful, we will duplicate this idea for the MPA management” [P5].

“Last year, we proposed a small pilot project to socialize MPA conservation activities for private sector, local people, village MPA committees... For instance, there are good coral reefs at Hon Mot island, where can be established a community-based MPA management site. The MPA Authority can help install mooring buoys, marker buoys and other technical issues. The village MPA committee will be responsible for managing this site. The local communities or village MPA committee can use benefits from tourism services for management activities of this site and other welfare-system developments for the communities. The MPA Authority should manage only the large common areas” [P34].

The idea of a community self-governance model or similar entity has been initiated and discussed by local people, MPA practitioners and managers at the study sites for marine resource conservation. Practical activities, approaches and conditions to realize these ideas successfully are of concern to participants and the researcher. Four main conditions have been mentioned and

discussed by participants as essential to help local communities become ‘real governors’ of a MPA. These are (i) legitimacy; (ii) capacity building for local communities; (iii) management costs and benefits sharing mechanism, and (iv) regular support from, and supervising by, the government.

(i) Legitimacy:

Legitimacy refers to the acceptance and justification of shared rules by a community (Bernstein, 2005). Particularly, it relates to the juristic procedure and rationale about decisions that are acceptable to participants (Adger *et al.*, 2003) and is also concerned with who has the right to make rules and how this right is created (Bernstein, 2005). According to Leach and others (1999), legitimacy is not only prescribed by a statutory system, but also customary rules including social norms. Thus, when any organisations or actors are legitimized via democratic processes, their decisions are sanctioned by institutions and abided by other participants and related people.

In this study, participants mentioned legitimacy as the most important requirement for local communities to become ‘real governors’ of a MPA. The participants see legitimacy as legal rights for local people to engage in development and enforcement of rules and regulations for the MPA. According to the participants, local communities must have legitimacy to take lead, or at least to get involved, in the development of operational rules for MPA management and governance.

“Any regulation or decisions related to fishing should be discussed with us to get through the list of species and fishing zones, which are permitted or not permitted for fishing. They (MPA officials) cannot decide by themselves without any discussion (with local fishers). We (local fishers) see and learn that this is a jurisdictional government, but the way they are applying is not sustainable. Therefore, we (local fishers) might accept these regulations or decisions, but we will not comply with them” [L4].

In relation to legitimacy, some participants said that other stakeholders or outsiders must recognize and accept that local communities have legal rights to enforce approved regulations for management and governance of MPAs. For governing the area - as a community self-governance model, local communities need to have legal rights for managing and collaborating with other stakeholders to govern the area [L21]. Otherwise, they cannot ask violators to leave the MPAs [P1]. In addition, the local communities as MPA governors should be supplied portable radios or boats (required equipment) and some ‘legal tools’. For example, a certificate that mentions that

local people are members of the MPA authority and they have legal rights to protect the MPA, should be signed and provided by responsible agencies/people. It means that the local communities need to have legitimacy and equipment to govern the area [P1].

In relation to legitimacy, the MPA authority should be responsible for helping local communities obtain legal rights from responsible levels. These can be developed under various forms. The MPA authority can make a plan, in regarding to policies, legislative mechanism and legal rights, to submit to the Provincial People's Committee (PPC) for approving and then all the users must follow the regulations approved by the PPC [P34]. It needs to have an organisation or agency, such as local or government authorities, to approve the legal rights for local fishers [C5]. The legal rights or legitimacy can be constituted in one of a number of forms, such as a special certificate, authorized card, or membership card approved by a MPA authority or local authority [P5].

(ii) Assistance with a management costs and benefit sharing mechanism

Some participants [L21, C7] mentioned the importance of financial provision for management costs. Benefit sharing is another aspect of finance. Research participants discussed the need for a benefit sharing mechanism and benefit categories that the participants or local people should receive from the model. In relation to benefit sharing, research participants stated that access rights to fisheries should be a reward for local people to get involved in marine conservation. Access rights to fisheries for local people were highlighted as a serious issue, especially at Con Dao (CD) site where the number and capacity of fishing boats operated by outsiders are much higher than islanders. One participant stated that:

"I think that this area should belong to the local people here and outside boats should not be permitted to access and catch fish here. However, the fact is that any boats can come in and go from this area, even the outside boats (that) catch much more fish than the local people do. We feel dissatisfied and angry with this, especially local fishermen who were arrested by the MPA staff (when fishing within the MPA). They said that the MPA enforcers only keep a close watch on local fishermen. They were very poor at capturing outside boats and let them come and 'steal' all the fish" [L4].

Furthermore, implicit access rights to fishing have caused more conflicts among local resource users and between insiders and outsiders. The outsiders were perceived by local people to have

more advantages than islanders. While the local people have to follow the MPA regulations strictly, they don't have any special rights compared with outsiders [L24]. The conflict can become more serious when the outsiders from the mainland catch fish at three or four times higher than islanders [L28]. The fact is that local fishers have small boats, so they just fish at near-shore areas, where it is easier to enforce and be fined by the MPA staff. Meanwhile, the outsiders have bigger boats that can catch more fish and are difficult to enforce. Consequently, most fines are for local residents [L4, L28]. This fact has increased the level of antipathy, if not enmity, between local people and MPA enforcers.

In addition to access rights to fishing, some research participants recommended other categories of benefits that can be shared with local participants. These can be a monthly allowance or salary for people who intensively work for the site [L21, L24]. Another option is that participants should have the rights to undertake aquaculture [P6] or other economic activities like tourism services [L1]. In other words, the approval of special access rights to resource exploitation for local communities must be considered in this model [L15].

(iii) Capacity building for local communities

In addition to legitimacy and financial matters as described above, participants considered that building sufficient capacity for local fishers to take over the MPA governance tasks from government actors is important. Most of the participants agreed that enhanced capacity of local fishers through a capacity building program with all aspects related to resource conservation and management is necessary [P1, L24, L21]. The capacity building programs should include theoretical knowledge and practical skills. For example, what conservation is, how local communities can manage, how they can protect the environment and resources [L24] or technical knowledge, educational level, leadership and approach to work with local communities [C4]. Similarly, some other skills, such as organisation and communication skills were also suggested [P1, L15, & P22].

“I think we need more time to improve the knowledge of local people until they understand MPA management clearly, especially the young people, who will take the responsibility in the near future... In parallel, we also need time for capacity building for people, who are in charge for managing the site” [C4]. “It is necessary to have collaboration and discussion between the MPA

authority and local communities to ensure that they (local communities) have a consensus in MPA management approach” [C5].

(iv) Regular support from, and supervising by, the government:

In addition to the three essential pre-conditions, discussed above, for local communities to operate a community self-governance model, participants recommended regular support from, and supervising by, the government. This ensures that the MPAs governed by local communities are ‘on the right track’ to not only achieve the desired objectives of MPAs, but also match policies and strategies of the national MPA network.

“If we (government officials) decentralize the rights to local people, the government must put in effort to help make strategies and supervise the implementation (conducted by local communities)... The government should make the effort to support and promote these activities” [P17].

“We (government actors) need to decentralize the management rights to local communities, but these should be under the supervision and consultation of government actors and instructed by government guidance, otherwise they (local communities) will become a ‘unique boss of a private area’. That is not good. It means that we just need to decentralize some of the necessary rights... The first is the rights to effectively manage, use and exploit (resources) at given water areas. The second is the rights to monitor each other through mailbox, telephone, or other means to report illegal cases to the MPA authority. It ensures equality for the communities otherwise the management will collapse. All the people (resource users including insiders and outsiders) must follow the local norms or village conventions” [P28].

In brief, in this model, local communities will play a role as ‘direct actors’ to take actions for development of rules and using them for management and governance of the MPAs. The MPA authority (on behalf of state actors) becomes a ‘supporter’ for technical or legal issues [P34] or a ‘supervisor’ to ensure the fairness of the governance processes [P28, P22]. This model can be taken into practice and operate successfully and sustainably if aforementioned pre-conditions are met. Furthermore, the implementation of this model should be periodically reviewed by communities as ‘direct actors’ with participation of government and other stakeholders as ‘supporters’. This model can be adapted based on the local context of the ‘human’ element (socioeconomic, institutional, and political) and the biophysical conditions of the ‘natural’ element.

6.5 Discussion and analysis:

6.5.1 How do perceived socioeconomic factors influence public participation in environmental governance of MPAs?

As argued in the **section 2** and **3** above, the participation of local communities has been assessed as a crucial element for achieving effective environmental governance. In this study socioeconomic factors, which were mostly highlighted by participants, substantially influence the participation of local communities in governance of MPAs. These are (i) awareness and perception of local communities, (ii) economic relations and (iii) social capital. The degree to which these factors may indirectly or directly influence the effectiveness of environmental governance is discussed in the following passages.

An increase in awareness and perception of local communities about environmental problems and ecosystem resilience as well as about the potential impacts of environmental degradation on resource users and the society is vital for implementing environmental education and consensus-building programmes (Burke, 2001). It has been perceived by various actors including resource scientists and managers that the increase in awareness and perception will promote people to better understand and appreciate the environment and to have environmentally-responsible behaviour (Gunderson *et al.*, 2000). According to Uzzell (1999), environmental-education programmes should be designed to help their target audiences move from an ‘acquiring learning’ phase to a ‘developing concerns’ phase and then to a ‘finding solutions’ phase.

At the study sites, local communities have increased their perception and awareness about the environmental problems that occur in their areas. They have developed a consensus to take actions to protect their environment. Specifically, the people participated more actively in activities to manage and govern the MPAs. Mutual trust in the relationship between local communities and MPA staff, on behalf of government actors, has been built and improved thanks to the increase in perception and awareness, and the participation of local communities in the governance process. It is noted that the environmental education programme to increase awareness and perception of local communities should be undertaken at the outset of the MPAs. It should attempt to make local people understand common-shared goals and objectives of MPA establishment and activities necessary to achieve them. The local people also need to understand internal and external threats to their environment and life as well as the approach needed to address these threats. Otherwise, they

continue with activities without a sense of the potential impacts of their actions. One example of overexploited forest resources occurred with a site Loma Alta, Ecuador that was caused by insiders and outsiders because the local communities did not share common perceptions about existing threats to their forest, such as, overharvesting by neighbouring users, and linkages between the watershed and forest (Gibson and Becker, 2000). In addition to the participation and awareness of local communities, they should gradually increase getting involved in meetings and in practical actions. It is important for them to perform their commitments through practical actions towards the goals of the MPAs.

Nevertheless, the behaviour and actions of people not only depend on their awareness, knowledge and perception, but are also influenced by contextual conditions and individual interests (discussed previously in **Chapter 5** and with additional development in **Chapter 7**). Alessa and others (2003) have shown a correlation between knowledge, awareness of visitors and their environmentally-careless behaviour at Pacific Rim National Park and Reserve. They record that the visitors, who have greater knowledge and awareness of ecosystem resilience, engage more in environmentally-careless behaviour than visitors holding lesser ones. They assume that the visitors possessing greater knowledge and awareness are more interested in exploring ‘real world’ situations and enriching their existing knowledge by ‘handling’, instead of ‘looking at’, specimens. Furthermore, individuals, who have better experience and knowledge of ecosystems, desire to share them with others. This behaviour has negatively affected wildlife. This behaviour has thus somehow been formed based on personal interests and specific contextual conditions.

The local communities, at study sites, have changed their behaviour in support of environmental protection and resource conservation thanks to their participation in environmental education and activities organized by MPA authorities. However, they have not totally committed nor has there been an agreed consensus towards environmentally-responsible behaviour because of their own economic constraints and existing subsistence needs. The local communities agree that conservation is for future and for next generations, but they still need subsistence or support for their current life. They may illegally fish at forbidden areas if they have no income [L14]. Similarly, Gibson and Marks (1995) argue that many wildlife conservation programmes in Africa have failed because they cannot supply sufficient economic incentives to local people who lived on hunting activities and depended on wildlife in protected areas for subsistence.

It appears that economic constraints have directly influenced the participation of local communities at study sites in conservation and governance activities. This is especially so, when the benefits are not derived from conservation outcomes and the sharing mechanism of these benefits is inequitable. Based on a policy initiative of integrated conservation and development, MPA authorities at the study sites have conducted alternative livelihood support programmes. These consist of both direct and indirect incentives (**section 4.1.2.2**). However, most of these economic benefits came from external sources, including international and government agencies, instead of stemming from the outputs of local conservation efforts. The local communities have appreciated benefits from development support, such as improvement of the social welfare system, and for socioeconomic development of the whole community. They still have not clearly recognized direct economic benefits derived from conservation outputs and outcomes for individuals or their households. For example, increases in fish yields or in income from tourism services. Local communities indeed have not yet been persuaded that conservation can be closely related to their socioeconomic development. In other words, the MPA authorities have not proved the mutual linkages between conservation programs and socioeconomic improvements as expected from MPAs' outcomes. In this case, the local communities may become aid recipients from development support (Newmark and Hough, 2000), rather than collaborators or partners for long-term governance processes of the MPAs.

In addition, McNeely and Scherr (2003) confirm that increasing incomes returned from conservation outcomes has transformed local communities' attitudes about biodiversity and made them more appreciative and better engaged in biodiversity conservation. Similarly, Pretty and Smith (2004) argue that some protected areas have been successful thanks to social programmes conducted within these areas, from which local people can receive wild-resource-related incomes. They have then in turn been better engaged for the long-term management of resources through increased collective incentives. It is evident that economic benefits derived directly from biodiversity conservation and environmental protection closely correlate with the participation of local communities in environmental governance. The MPA authorities in the Vietnam study sites should consider linking conservation efforts of local communities with development benefits. The local communities should directly receive benefits from their conservation efforts to ensure their long-term commitment for active participation in this process.

Another concern related to economic matters is the need for the establishment of a transparent and equitable mechanism for sharing benefits. This research findings show that direct benefits from

conservation, for example, hotel services, trades, entrance fee collections, have not yet been equitably distributed to local communities, government agencies and other stakeholders at study sites. This has discouraged the participation of local communities in these conservation activities. An equitable distribution of incentives directly related to the natural resource existence and conservation can help enhance the local commitment to the biodiversity conservation (Sekhar, 2003, Spiteri and Nepal, 2006). According to Gillingham and Lee (1999), even where wildlife-related benefits have been accessed by local communities, mutually-beneficial partnerships between local communities and the state for wildlife management have still not been established because of the inequitable distribution of benefits and empowerment. The establishment of an equitable benefit sharing mechanism is essential, but not easy, because benefits themselves are perceived differently depending on the situations of beneficiaries (Tisdell, 1999). For example, access rights to fishing are significant for fishers, rather than business developers, and even more meaningful for poorer than wealthier fishers. Local communities and other stakeholders are not homogenous and the equity issues of benefit sharing should be considered at different scales: local, regional and national (Spiteri and Nepal, 2006). Natural resource conservation can be sustainable and successful if it ensures fair resource sharing, and that local communities have enough capacity to exclude others (Olson, 1965). Economic-related incentives hence play important roles in getting local people involved in governance processes of MPAs. They have always been big challenges for MPA authorities. They not only need to generate benefits derived from conservation, but also establish a benefit-sharing mechanism to ensure transparency, equity and sustainability, for local communities and other stakeholders. It means this mechanism must not only be accepted by most people within the same local communities, but also must avoid conflicts between local communities, state and other stakeholders.

Economic benefits can be a driving force for immediate participation of local people in MPAs governance, but may be an inconsistent influence. In the long term, social capital is needed to foster environmentally-responsible behaviour in local communities. According to Pretty (2003), regulations and economic incentives may help change local communities towards environmentally-friendly behaviour and practices, but may not change their personal attitudes (Gardner and Stern, 1996 as cited by Pretty, 2003). Consequently, people can return to their old ways when incentives terminate or regulations lose their effects. A long-term governance mechanism should rely on a combination of economic incentives, regulations and social capital (see more about social capital in **section 6.4.1.3**). In this study, some participants identified a number of causes that shape the social

capital of local communities, in relation to marine resource conservation. These are different origins of local people, influence of blood relationships, and traditional culture, norms and taboos.

The results showed that social capital of local communities has been reduced and forgotten because of the specific establishment features of communities and historical changes. A rapid change in population and culture at study fisheries communities may lead to a circumstance in which traditional culture, customary regulations or general principles for forming these informal institutions are not handed down from one generation to another (Ostrom, 1994). Furthermore, poor social capital has affected the achievement of a consensus in participation of local communities in governance processes. It has also made interactive linkages between the actors more fragile. In turn this reduces the effectiveness of the governance processes.

At the study sites, connectedness between individuals, who are blood relations or come from communities using the same fishing gear or having the same origins - namely, a bonding linkage (Pretty and Ward, 2001, Pretty, 2003, Grafton, 2005) has existed. Whereas the linkage between people, who are not blood relatives, or not from the same origins, and use different fishing gears (a bridging linkage after Pretty and Ward, 2001) and the social linking amongst local communities and other stakeholders, particularly government actors, is weak. In this situation, some responsible people at the villages saved profitable opportunities for their relatives or people with a closer bonding linkage [P22]. This has worsened the mutual trust within local communities when implementing activities or making decisions relating to conservation. The strong bonding linkage coupled with a weak social linkage has led to high transaction costs for the governance processes because of low mutual trust, poor information and knowledge exchange between local communities, government actors and other stakeholders (Grafton, 2005).

Furthermore, conflicts in resource use between fishers having different fishing gears are more serious when the bridging linkage is weak, fishing grounds are limited and there is resource depletion. It was contended that fishers working with different gears are competing for fishing grounds. Fishing activities with smaller boats and gears are impeded by the bigger boats, so these fishers just want to make relationships with people having similar activities. Although fishers with different fishing gears can communicate, they are not as friendly towards each other [L14].

In brief, in the situation that (i) natural resources are decreasing, (ii) a social linkage is weak, and (iii) the increase in awareness and perception of local communities about environmental protection

is in need, the establishment of a transparent and equitable benefit sharing mechanism is necessary to engage the local communities in MPA management and governance. The linkage between development and conservation benefits should be considered to sustain this participation. All these points should be formally institutionalised to help reduce social conflicts and increase sustainable participation of local communities. Restoration of informal institutions including social norms and traditional cultures is required.

6.5.2 What are pre-conditions necessary for a MPA community self-governance model?

The results of this study have shown that the development of a community self-governance model has the potential to enable local people to govern effectively in some parts of MPAs. With this model, they can become ‘real governors’ of natural resources and ‘owners’ for sharing benefits achieved from their efforts for enforcing and governing the resources. Some relevant conditions for this model have been identified and discussed by participants. These are (1) legitimacy; (2) assistance with management costs and benefit sharing mechanisms; (3) capacity building for local communities; and (4) regular support from, and supervising by, government actors. Such a model has been assumed for this research, and participants have suggested as conditions for success.

In relation to a self-governance model, other researchers have also identified essential principles for successfully protecting common-pool resources. Similar to **legitimacy** defined in this research, other terminologies, such as **autonomy** (Ostrom, 2001, cited by Gibson *et al.*, 2000) or **legal authority** (Lowry *et al.*, 2005), have been referred to as one of the attributes needed for self-organizing resource management institutions. It helps local users to have legal rights to construct rules for controlling resource access. Without this autonomy local communities cannot get involved in the development of forest-management institutions, even though they are aware of resources erosion and have recognized the need for change (Gibson *et al.*, 2000c). In other different contexts, local communities can get involved more over time to address local environmental problems when having a certain level of legitimacy or legal responsibility to make decisions (Larson, 2005). Similar to the study sites in Vietnam, legitimacy has been identified as one of underlying conditions to support local actors in governance of MPAs. When the local actors have no legitimacy, they cannot be adopted by other resource users as legal actors. They have no legal power to contribute their voice to the development of rules and to enforce the rules at assigned

areas. In other words, without legal rights or legitimacy local communities' representatives or local authorities are also seen as other stakeholders and therefore have no legal power in governance processes (Dietz *et al.*, 2003, Ribot, 2003). In addition, local actors can be more active in participatory governance activities, when they have legal rights for enforcing rules and also economic incentives.

Economic benefits from, and support for the costs of, undertaking participatory governance processes is important to local communities (Swallow and Bromley, 1995). More involvement in the governance processes means they will have more chances to discuss and contribute to decision making. However, such involvement cannot ensure that all the decisions made will be accepted by all the participants. Tangible outcomes and incentives from access rights are necessary to help foster public trust and sustain participation (Moote *et al.*, 1997), at least for a short term. In relation to economic benefit sharing, local communities at study MPAs in Vietnam identified several options, such as, fishing quota, assignment of certain areas for local fishing, supply of water areas for aquaculture, or monthly allowance. In general, these options have related to special access rights to resource uses or economic benefits for local actors. That should be more sustainable if local people can receive some benefits for their efforts in environmental governance.

The importance of economic incentives to participation by local actors in environmental governance has also been stated by other researchers. Local communities normally have little interest in resource management where they recognize few visible economic benefits (Larson, 2005). Access rights over resource uses for local communities generate economic benefits that make them become good stewards of resources. Otherwise, these discourage them from protecting resources (Agrawal, 1999). Gibson and Becker (2000) conclude that economics-related factors i.e. incentives from management of high resource value and devolution of resource access rights equivalent to local's valuation and ownership, are two of three necessary conditions for successful management of resources by local people. Local communities and resource users are likely to consider less destructive exploitation activities in the long-term interests of natural resources when there are policies supporting their economic incentives from resource protection activities (Gibson and Becker, 2000).

Even when local communities or local representatives are given devolved political power or legitimacy, financial support and incentives for the governance of natural resources, will they have enough capacity to successfully govern and achieve the goals and objectives of the MPAs? Local

communities need a comprehensive capacity building programme. According to Nalbandian (1999), local communities need to get involved in capacity building, including senses of responsibility, in which they learn to make collective decisions for diverse, but always conflicting, interests. They next need to enhance a sense of responsibility amongst themselves for participating in and obligating their collective decisions. In other words, they must work together to solve collective problems through participatory decision making with respecting values of representation, individual rights and social equity. Furthermore, researchers have emphasised the importance of technical capacity building for local communities in natural resource governance, especially understanding of broader environmental problems, such as, fish habitat restoration, disease infestation, soil erosion (Bradshaw, 2003).

In addition, participants, in this study, argued that local actors must understand clearly conservation theories and practices when they get involved in decision making and environmental governance. They not only need to make right decisions, but also know a suitable approach to successfully take these decisions into practical actions. Local decision-makers must also have ability to communicate with other local people and stakeholders and possess good standing to ensure compliance with the approved rules. In other words, local actors not only need enhancing technical knowledge through training, but are also encouraged to employ the social behaviour that is necessary for good governance. Comprehensive capacity building, including both technical knowledge and social behaviour, will be essential for providing good local actors for a sustainable local self-governance model.

Lastly, local actors at study MPAs in Vietnam still need an external environment that provides regular support and supervision from government actors for implementing a self-governance model. For example, providing guidance for developing institutions, strategies and policies of the MPAs to ensure there are no mismatches between national, regional and local levels. Additionally, other researchers have found that regular support of government actors seems essential for a community self-governance model. Pomeroy and Berkes (1997) state that fishers can develop their rules for governing a given area. However, these rules can only be taken into effect when their legitimacy is recognized by the government. Only government can legally organize the endorsement and defence of legal rights of local communities. Furthermore, the government can reform the legal framework to help local communities to have more responsible self-steering mandates and also establish a less hierarchical and more collaborative relationships with local actors (Banner, 2002). Civil society can only function well if the government creates the enabling

conditions for them to operate (Rudd *et al.*, 2003, Osmani, 2008). The government not only helps developing institutional frameworks for devolution of legal rights (Pretty, 2003), but is also heavily involved in capacity building (Bradshaw, 2003, Osmani, 2008), mediating relationships between groups of resource users (Swallow and Bromley, 1995) and contributing finance, if necessary (Larson, 2005). Long-term institutional support from government and other stakeholders increases the successful possibility of resource management programmes participated by local communities (White *et al.*, 2002). Similarly, the communities also need support from all local available organisations to incorporate their identity, culture, management style and structure into existing infrastructure at the local area (Banner, 2002). In other words, the community self-governance model can be realised if the local community possesses their own sufficient capacity, and regular institutional and financial support from government and other stakeholders. These are just initial results for developing a community self-governance model of MPAs in Vietnam. It needs to be tested through further research and compared with other similar initiatives that have been investigated somewhere else.

6.6 Preliminary conclusions:

This chapter argues that the participation of local communities is important for effective governance and management of marine protected areas at study sites. However, their participation is constrained by some socio-economic contextual conditions and informal institutions. These include (i) low awareness and perception of local communities about the environment and the impacts of environmental degradation, (ii) the high proportion of local communities dependent on marine-resource-based livelihoods, (iii) exaggerated expectations of local communities about incentives from conservation and management of the MPAs, and (iv) decreasing social capital and social linkages due to the increasing population and influences of non-traditional thoughts by young people. This chapter also provides evidence that helps better understand the influential processes of socio-economic context and informal institutions on social interactions within local communities and their participation in MPA governance. These have negative impacts on the effective governance and management of MPAs in Vietnam, and natural resource management, in general.

Further this chapter demonstrates some major conditions necessary for establishing a community self-governance model of MPAs. Most of them are driven by social interactions and requirements,

including (i) legitimacy; (ii) capacity building for local communities; (iii) management costs and benefits sharing mechanism, and (iv) regular support from, and supervising by, the government. Other natural attributes and characteristics, such as, a geographic scale of MPAs and biological and ecological characteristics of target conserved species (static or migratory species, diversity and connectivity of ecosystems), may have influences on governance issues, but have not been considered in this chapter. Any governance and management model should need to take into account of these natural factors to ensure the geo-biophysical scale and the governance and management scales of the MPAs are compatible. Basically, the identified conditions can be a crucial platform for other further empirical research, at these sites or similar contextual locations, in the future.

This chapter has demonstrated how socioeconomic context and informal institutions affect the effective governance of MPAs in Vietnam, through acting on social interactions within local communities and their participation in these processes. This has also elucidated informal governance processes - the third component of the multilevel analytical framework developed in **chapter 3**. In other words, this chapter partly contributes the achievement of research objective three (**Section 1.2**). Some additional research findings about influential forces on direct interactions between state and non-state actors will be presented in the next **chapter (7)**. Development of an overarching interactive governance framework derived from variables identified in **chapters 4 to 6** and their cumulative influences will also be presented in **chapter 7**.

CHAPTER 7: AN OVERARCHING INTERACTIVE GOVERNANCE FRAMEWORK FOR MORE EFFECTIVE MANAGEMENT IN MARINE PROTECTED AREAS IN VIETNAM.

7.1 Introduction:

In preceding chapters, I have presented and discussed the complexity and key restraining forces of formal institutions (**chapter 4**), perceived barriers of social processes to inter-agency collaboration (**chapter 5**) and causal variables (socioeconomic and informal institutional) that affect the participation of local communities (**chapter 6**), which in turn affect the effective governance and management of marine protected areas (MPAs) in Vietnam. This chapter places the three identified groups of variables surrounding a central point, as represented by two actor groups (state and non-state), to form an overarching interactive governance framework of marine protected areas studied. This chapter also uses institutional and governance issues of these MPAs to further argue and discuss critical considerations that may lead to more effective governance of the national MPA network.

This chapter is structured into three major sections. Section 1 presents influential variables on social interactions between formal and informal actors that affect the effectiveness of MPA governance and management. This section then discusses and argues the inter-influencing processes between the three variable groups and their cumulative outputs and outcomes. Section 2 discusses salient issues drawn from this research and recommendations made by participants from different MPA sites. This section attempts to scale up the institutional and governance issues of individual MPAs studied to achieve more adaptive institutions and governance structure that might improve management effectiveness of a national MPA network within the particular socio-economic and political context of MPAs in Vietnam. The last section of this chapter is the conclusions.

7.2 An overarching interactive governance framework of marine protected areas:

7.2.1 Influential variables on social interactions between formal and informal actors in the governance of MPAs:

Social interactions between state and non-state actors are a focus of this study. Participants in this research identified three variables that mostly influence the relationships between state and non-state actors for social activities and interactions. These are (i) mutual trust, (ii) interactive communication and (iii) reciprocity. These variables are elaborated in the following sections:

7.2.1.1 Mutual trust:

Participants mentioned that a lack of mutual trust between local communities and MPA staff is a major variable restraining their collaboration in enforcing rules and other activities of MPA governance. Mutual trust was eroded by suspicions that emerged in the collaborative governance processes. They explained that the MPA staff may receive some ‘under-the-table money’ from outsiders or other stakeholders [L14, L4], so the enforcement process operated by the MPA staff seems to not be transparent. Some local participants were upset because there has been a lack of fairness among fishing groups that use different fishing gears and between these fisher groups with other stakeholders who operate other activities at the same location.

“I think that is not fair that the Dam Dang net (a traditional fixed fishing net exists only at the Southern-central part of Vietnam, currently operated by government fishing co-operatives) is still fishing in the core zone and sometimes, I also saw trammel nets operating there. The core zone should be prohibited from all fishing activities” [L18]. “I think we should ... improve the collaboration between local people and other stakeholders... The tourists don’t throw the rubbish into the sea. The high position people (government staff) are not allowed to fish at the core zone as well. It means that all the people must follow the regulations strictly whether they are tourists or government staff... In my opinion, there should be no fishing activity within the core zone. They (enforcers) must not have ‘black hands’” [L14].

“When they (enforcement staff) arrested outsiders who fished big fishes by electric shock or poisonous chemicals, they recorded images and video to display on local broadcast channels.

However, they didn't treat these cases strictly, so these illegal cases still happen repeatedly. Other government agencies might not know about this (perfunctoriness) but villagers here know (it) very well...." [L4].

By contrast, state actors claimed that they cannot trust the local communities because of their limited capacity and negative behaviour [P22, P7]. It seems there are opposite viewpoints between local communities and MPA staff. These have accelerated their mutual distrust. While local communities have suspicions about the staff of MPAs when enforcing rules, the staff have behaved with them in a strict manner using a 'hard' enforcement approach. There is a general perception that local fishers should receive a 'soft' approach such as public education or dialogue, to clarify unclear points and build mutual trust. It should be at least at the initial period when the MPAs have not yet brought benefits to reduce the socio-economic impacts generated by MPA establishment and the fishers have not understood the rules. However, one MPA staffer claimed that their duty is to arrest violators in the MPA. They can explain to the local communities that the long-term benefits of the conservation are for local people's children and younger generations, but they just use hard methods to treat violations [P7]. Consequentially, local communities and MPA staff are dissatisfied and dislike each other [L4]. Furthermore, the local fishers have not collaborated with the MPA staff in the enforcement process. They don't agree to inform the MPA staff when they recognize illegal fishing boats operating within the prohibited areas [L12, L13, & L14].

7.2.1.2 Interactive communication:

With regards to mutual trust, participants in this study contended that regular communication can help enhance the mutual trust between the local communities and other stakeholders. In particular, there should be an information sharing mechanism, so the state and non-state actors can share information and better understand each other. An informal dialogue is likely useful for the actors, especially local communities, to get involved in the deliberations, and contribute to the decision making process.

"The relationship can be closer if we (fishers and MPA staff) always foster it. The MPA staff can make a better relationship if they usually come to visit local fishers when they (the local fishers) have any problem or any event at the villages" [P22]. "There have been fewer meetings between the MPA staff and local people, compared to that in the past, so the relationship is not as good as before" [L24]. However, some public education materials may help strengthen the mutual

understanding. “I think the people (local communities and MPA officers) now have a better relationship and understand each other. We (MPA officers and village collaborators) have distributed leaflets and booklets to the (local) people. They may not read it all, but can share (information) with each other through meetings or chatting. I think we need to do more on public education and need more regular meetings and communication between the MPA authority and local communities. We can organize the meetings at the commune where it is easier and more convenient for local people and the MPA staff” [L15].

“The high levels (government actors) don’t listen to the local people because they think they have a higher education (and knowledge) to make decisions. There has not yet been a dialogue between local communities and government officers” [L14].

The communication mechanism can also help reduce the cost of management processes. The local people and the MPA officers can contact each other through the mechanism to organize activities. Technical means are necessary for local communities and government agencies to communicate with each other. Some participants stated that local communities should have radio systems at all village-MPA committees to communicate with the MPA authority [L24]. When the local people recognized any illegal cases made by outside boats, violators can move out of the core zone before the local people can reach the MPA authority using their boats [L4]⁸². Additionally, communication does not mean only technical means, but also skills and the approach the actors use to communicate with each other. Participants stated that communication skills can weaken the relationship between formal and informal actors because of the approach that enforcers use while enforcing laws for illegal cases:

*“We (local communities and MPA staff) don’t have a good relationship because they (MPA staff) don’t communicate politely with us (local people) and also have corruption problems” [L14].
“When the MPA enforcers saw us there (in the core zone), instead of telling us in a sympathetic way...., they asked us with an impolite voice... I felt very dissatisfied with that (communication approach)” [L4].*

⁸² Previously, there was a radio system connecting all the villages located within Nha Trang Bay MPA. The system was equipped by Hon Mun MPA pilot project. It was assessed as a useful and convenient tool, as feedbacks from villagers, for communication among the MPA authority and village-MPA committees. However, this system was cut off to reduce operational cost of the MPA when the project finished.

7.2.1.3 Reciprocity:

Reciprocity is understood to be the exchange of items with roughly equal value at a certain time or relationships over time (Coleman, 1990 and Putnam, 1993, as cited by Pretty and Ward, 2001). Participants expressed that reciprocity not only maintains, but also strengthens, the relationship and social interactions between civil society, MPA-related stakeholders and government staff. The reciprocity can be a special fishing right, financial allowance etc. to compensate the efforts of local people who extensively participate in the MPA governance and management activities.

“If they (government actors) want to protect the natural resources, they should collaborate with the local communities. However, they banned the local people from fishing so that no one (local people) wants to collaborate with them because they don’t have any incentives from that (collaborative process)” [L1]. “As they have salary from the government, we don’t. How can we collaborate with them?” [L4]. “The local people should be informed what kind of incentives they will have if they complete the conservation and enforcement duty” [L24].

7.2.2 How are the social interactions and relationships between state and non-state actors influenced by the variables identified from the governance of MPAs?

In this study, mutual trust between state and non-state actors was identified as a central variable influencing their interactions and relationships. This result has strengthened previous research (Baland and Platteau, 1996, Pretty and Ward, 2001, Brown, 2002, Olsson *et al.*, 2004, Grafton, 2005) about the roles of social capital in natural resource management. Mutual trust can be a foundation for all the social institutions, and negatively or positively influence those who are trusting (Cook K, 2003, and Misztal, 1996, as cited by Folke *et al.*, 2005). Schuett and others (2001) state that mutual trust, in addition to respect and honesty, is an underlying variable that to establish the relationship between individuals working as a team. It can help participants ‘leave personal agendas at home’ to work together to achieve common-shared goals. Mutual trust can also help improve the effective management and governance of natural resources by reducing transaction costs, and increasing knowledge and information exchange. When people trust each other, they can save time and money by confidently investing resources into collective activities, instead of monitoring each other (Pretty and Smith, 2004). Furthermore, with mutual trust, resource

managers, regulators and resource users can share their own knowledge and information, including both traditional and scientific (Grafton, 2005), to enhance the understanding of each other (Berman *et al.*, 1999). It in turn increases the effectiveness and efficiency of collaborative management and governance processes. Mutual trust is not easy to be built because it inevitably takes time and effort by participants, but it is easy to be broken (Gambetta, 1988). However, trust can be solid, if all the tasks, goals of the collaborative project, roles of actors or participants and ground rules for the collaboration are discussed at the outset of the project (Pahl-Wost and Hare, 2004).

There are inter-influences between mutual trust, communication and reciprocity on the interactions and relationships between state and non-state actors in the governance of the MPAs studied. When mutual trust between participants is absent, their communication and interactions in the collaborative processes will not be effective (Ostrom *et al.*, 1994). They then cannot attain a consensus on their roles and the approach for the governance and management of natural resources (Cortner *et al.*, 1998). Meanwhile, the interactive communication is perceived as a general process of deliberation wherein state and non-state actors can share considered issues and enhance mutual understanding to arrive at a high agreement on important decisions (Schusler *et al.*, 2003, Pahl-Wostl and Hare, 2004). Communication can help build mutual trust between participants through dialogues without domination and distortion for social learning (Yankelovich, 1991, Hahn *et al.*, 2006). Similarly, reciprocity also increases trust and contributes to the development of the long-term commitment and engagement of participants to achieve the common-shared environmental goals (Pretty, 2003, Pretty and Smith, 2004). In brief, as part of social capital (Pretty and Ward, 2001), mutual trust, communication and reciprocity interact with each other. These can lower the costs, and enhance the relationship between the participants, of the collaborative working processes. Nevertheless, there are some considerations regarding how the identified influential factors affect each other in final outputs and outcomes of the governance and management of MPAs, when the analyzed components (formal and informal institutions and governance) are placed together into the same framework.

7.2.3 How are causal variables of the participation of local communities, formal institutions and inter-agency governance inter-influencing each other?

Complex systems such as human – natural systems have been conceived by scientists as partially decomposable structures. They can be partly performed through the manifestation of classes and

subclasses of variables, but their overall outcomes are not a sum of these variables' (Ostrom, 2007). In this research, an overarching interactive governance framework of the MPAs (**Figure 7.1**) was formed based on the causal variable groups that have been identified, described and discussed in **Chapter 4, 5 and 6** using a multilevel analytical framework developed in **Chapter 3**. This figure illustrates the inter-influences of the causal variables on governance of MPAs. These variables relate to formal institutions; interagency collaborative governance; and non-state actors' participation in environmental governance and the influences of informal institutions on this participation. However, the overall influence of these variables on the outcomes of MPA governance and management processes must be considered.

There are linked causes between these influential variables on the effective governance and management of MPAs. When one variable affects a component of the framework, it may also influence the other groups that, in turn, affect the overall outputs and outcomes of the governance and management. For example, when there is overlap in the division of responsibility between MPA authorities and other agencies at the provincial level, some problems occur with the collaboration between these agencies and impede the effectiveness of the governance and management of the MPAs. Similarly, when the MPA management mandates are inconsistently assigned to responsible agencies at the national level, sectoral agencies at lower level are disordered. These engender confusion for the in-charge policy makers, MPA managers, practitioners and local communities in implementing MPA governance and management as discussed in **Chapters 4 and 5**.

Problems with overlapping responsibility and inconsistent mandates have also occurred with MPA management and governance and the implementation of other coastal/oceans management programs in other countries. For instance, in the Philippines, there are some overlaps in responsibility allocation and management mandates over some geographic areas between the Department of Environment and Natural Resources and the Department of Agriculture - Bureau of Fisheries and Aquatic Resources at national level (the same jurisdiction) (Lowry *et al.*, 2005). Meanwhile, the division of responsibilities and power between Commonwealth and State governments (across jurisdictions) has also been a source of tensions in the implementation of an integrated oceans management program in Australia (Foster *et al.*, 2005). Specifically, all the states, in Australia, have mandates to develop distinct policies and strategies for their coastal areas assigned. While the states control inshore waters (3 nautical miles from the coast), the federal government is responsible for the outside area (3 to 200 nautical miles from the coast) and some

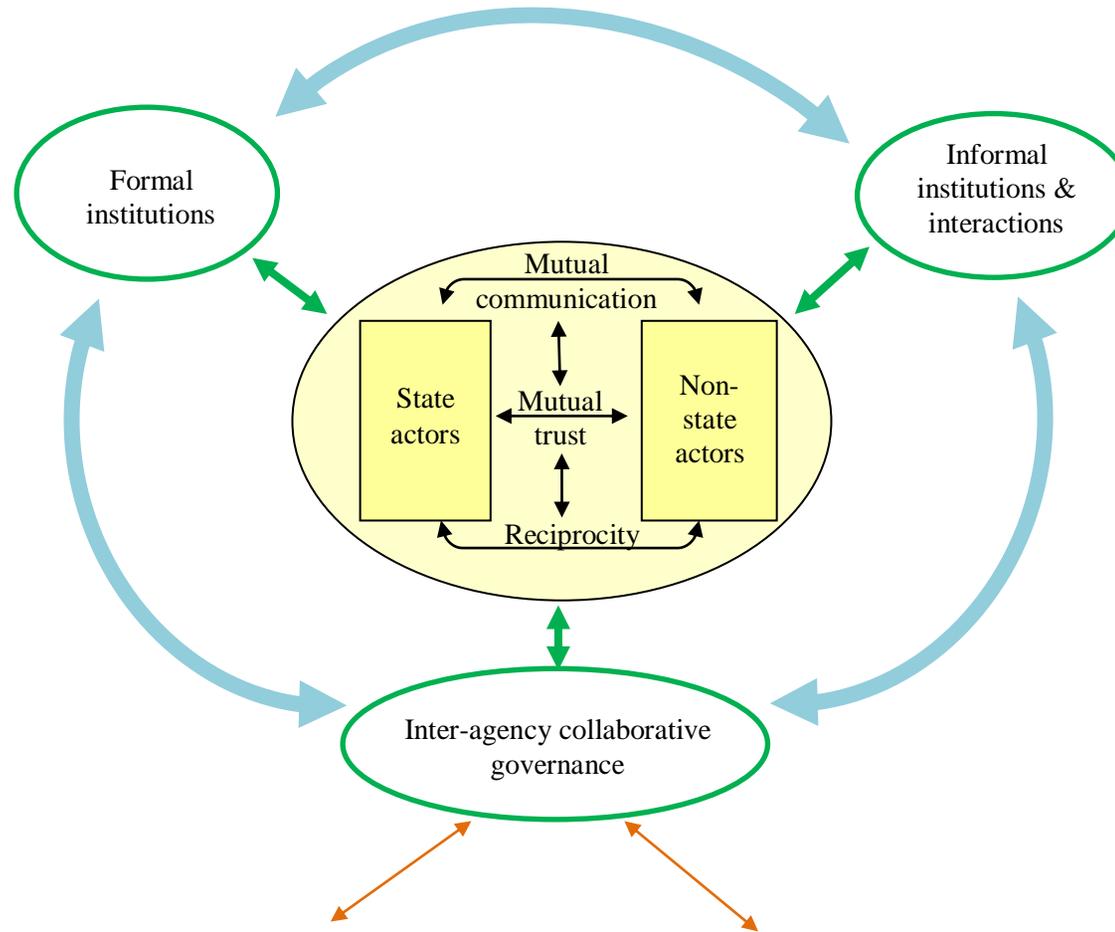
special areas. States and federal priorities are not always the same and the federal can influence the activities by financial allocation (Alder and Ward, 2001).

Implicit formal institutions can influence mutual trust between state and non-state actors and then worsen the participation of non-state actors in the governance of MPAs. When MPA authorities in Vietnam have not been clearly approved by responsible agencies as an administrative management agency or a business enterprise, they have to play a dual role for conservation and community development. That has created conflicts between the MPA authorities and other agencies responsible for community development (e.g. City and Commune People's Committees) and tourism operators for competing benefits from tourism services operated within the MPAs (described in **Chapter 4**). This has also generated problems in the collaboration between the MPA authorities and other governance actors in the MPAs (discussed in **chapter 5**). Additionally, under this unclear management design, MPA authorities have rights to collect entrance fees (but it was authorised to another agency – City People's Committee in the case of Nha Trang Bay MPA) and operate economic services. As a result, local communities have viewed these authorities as major beneficiaries of MPA conservation outcomes while local communities have not received tangible benefits from this process (discussed in **Chapter 6**). Consequently, the MPA authorities are seen as more isolated from the viewpoint of other state agencies and of local communities. This has also partly worsened the mutual trust and collaboration between the authorities, local communities and other agencies in the governance and management of the MPAs.

Figure 7.1 illustrates the mutual interactions and overarching influences of different components of the governing system on the governance and management of MPAs, in particular, and social-ecological systems, in general. All the actors in the systems are inter-linked, and one actor's costs can be another's benefit. The proper scope of governance processes is an achievement of the balance between the state and community, or between the government and civil society (Rudd *et al.*, 2003). In particular, the performance of governance, in the resource management arena, is considered in three dimensions, including (i) the way in which individuals or organisations are permitted access to resources, (ii) the way that general decisions are made and operationalized and (iii) the match of spatial scale of management and capacity of the institutional structure (Tang, 1991, Briggs, 2001, Rudd *et al.*, 2003, Hilborn *et al.*, 2005).

Influential variables from formal institutions:

- Implicit and inconsistent MPA-related policies and strategies across levels
- Overlaps in allocation of responsibility and strategies and policies across sectors
- Unstable organizational structure responsible for MPA governance
- MPAs established based on insufficient information and by external motives
- (in)congruence between rules-in-use and rules-on-papers and a temporal-scale mismatch problem of formal institutions
- Insufficient staffing and capacity building programs relating to MPA management



Influential variables from informal institutions and interactions:

- Awareness and perception of local communities
- Economic relates: economic difficulties and its influences, economic supports and benefit sharing mechanism
- Social capital: various origination of local people, Blood relationship and traditional culture, norms and taboos

Barriers to inter-individual collaboration:

- Difference in personal interests
- Weak personal relationship
- Inappropriateness in personal skills and leadership

Barriers to inter-organizational collaboration:

- Power conflicts
- Management type of agency
- Lack of incentives sharing mechanism

Figure 7.1: An overarching interactive governance framework of MPAs in Vietnam.

Summarising, there are three main influences on the effectiveness of institutional operation and sustainability of the social-ecological systems that characterise marine protected areas. First is the decision making processes, relationships and coordination mechanisms between actors that are constrained by formal institutions. Second is the difference in, or influence of, customs, behaviour and social systems, and the degree of mutual trust, communication and reciprocity between state actors and non-state actors (including local communities and other stakeholders). Third is the roles and capacity of these actors to adapt to changes of social, political, economic and cultural context. Therefore, overall interventions to any or all of these influences may improve adaptive capacity of governing system for better governance and management of a national MPA network.

7.3 Towards more effective governance and management of a national MPA network in Vietnam: Improving adaptive capacity of a governing system

Hierarchical approaches have been studied and developed by scientists for marine resource conservation and governance. A hierarchical geophysical approach (as referred by Roff and Taylor, 1997) has been studied, discussed and applied in marine conservation to clearly define boundaries, habitats or biodiversity values of marine protected areas. It also helps assess human impacts largely contained or occurring within the boundary. These may in turn help address a suitable management approach and tool for the specific spatial scale (Roff and Taylor, 1997, Zacharias and Roff, 2000). Similarly, a hierarchical ecological framework with different levels for marine conservation has also been proposed, based upon frameworks for terrestrial ecosystems developed by Noss (1990) and other authors. The levels include genetic, species-population, community and ecosystem. This framework was applied in marine conservation programs by firstly placing the programs into specific levels and then selecting appropriate management approaches for the areas (Zacharias and Roff, 2000). This approach was also used by the Convention on Biological Diversity.

However, some drawbacks have been encountered when utilizing these frameworks in practice. Specifically, biological data collected from biodiversity and ecological surveys over large areas are normally expensive (MFish and DOC, 2008). These may not be accessed by their users (Roff and Taylor, 1997) and the biodiversity values can be altered by human impacts (Heap, 2006). Furthermore, biological community types associate closely with geophysical properties and the habitat types of the site (Connor, 1997, as cited by Roff and Taylor, 1997). Meanwhile,

these habitat types can be assessed using remote sensing and resource mapping (Roff and Taylor, 1997, Zacharias and Roff, 2000, Heap, 2006, Harris, 2007, MFish and DOC, 2008). Geophysical information and benthic habitat types, instead of biophysical features, have thus recently been suggested for more realistic applications in establishing representative MPA networks, shaped under a hierarchical system, at a large scale in many countries (Roff and Taylor, 1997, Mumby and Harborne, 1999, Day and Roff, 2000, Bonn and Gaston, 2005, Heap, 2006, Harris, 2007, Lund and Wilbur, 2007, MFish and DOC, 2008) or even at a regional or global scale (Spalding *et al.*, 2006, Spalding *et al.*, 2007).

MPAs and MPA networks can be established differently based on various principles and different approaches. A MPA should be generally assessed as “representative” (Kelleher *et al.*, 1995), while a MPA network should meet three significant principles including “comprehensiveness”, “adequacy” and “representativeness” (abbreviated as CAR principles), as suggested by the Australian and New Zealand Environment and Conservation Council (TFMPA, 1999); or “adequacy”, “representation”, “resilience” and “connectivity” (UNEP-WCMC, 2008). However, “resilience” has not yet been used commonly, compared with the remaining principles (UNEP-WCMC, 2008). Depending on factual conditions and purposes of a MPA or MPA network, these principles may be applied at different levels. For example, a “representativeness” principle is suggested to apply at the species/individuals or communities level for establishing a representative system of MPAs in Australia (TFMPA, 1999). In other systems, “representativeness” is applied at a habitat or ecosystem level (Roff and Taylor, 1997, MFish and DOC, 2008).

Furthermore, these principles may be translated into different meanings due to the implementation perspective, whether based on a biophysical or social approach. Based on a biophysical approach, the size and shape of MPAs are delineated using the “adequacy” principle to meet biophysical requirements of conserved species or the connectivity of ecosystems. This principle is aligned with the application of an ecosystem-based approach (Harris, 2007). In the meantime, the “appropriateness” principle, including socio-economic, sacred, customary or traditional issues or political and jurisdictional features (Berkes *et al.*, 2000, Rudd *et al.*, 2003, Aswani *et al.*, 2007) is used to design the size and shape of MPAs formed by a social approach. The future applicability and efficiency of the principles when used for establishing MPAs or conservation activities must also be considered. In short, a hierarchical geophysical MPA network is usually established through a complex process that needs broad principles accounting for social features, geophysical characteristics and benthic habitat types.

When a hierarchical geophysical MPA network is formed based on the aforementioned principles, the next consideration is who would be responsible and be delegated appropriate authority to govern this network effectively? According to Cumming *et al.* (2006), the variation of ecological processes in a specific spatial scale should be aligned with an institutional structure responsible for managing existing impacts and potential threats to that scale. Otherwise, the resilience of social – ecological linkages would decrease or even collapse. In this case, a phenomenon of mismatch between geophysical and institutional scales happens. In other words, a MPA network would be more effectively managed by an equivalent level structure of management bodies. It means that MPAs located at each level of the hierarchical geophysical system should be managed by compatible bodies. These have suitable mandates, enough power and capacity, and have close proximity to the MPAs to make adequate, strong and timely decisions for the MPAs' governance and management. Some considerations relating to the organisational structure of MPAs and governing arrangements in that these MPAs are embedded, are discussed based on recommendations and data achieved from participants involved in this research as follows:

7.3.1 Should a geopolitical scale be used as a sole criterion to design an organisational structure for governing a hierarchical national MPA network?

In Vietnam, a national network of fifteen MPAs located along the coastline was proposed and recently approved⁸³. These MPA sites are the surrogates of six marine biodiversity regions of the nation that were classified based on the distribution of reef-building coral species (Ministry of Fisheries, 2006). Some MPAs of this network were initially established as pilot models to share experience and lessons learnt to other subsequent MPAs. Most of them were established based on biological values rather than social-economic conditions of local communities [N2, N1]. Furthermore, each MPA has been established within a specific context. For instance, MPA managers and practitioners have relied much on the experience of international human resources and have mostly followed a learning-by-doing approach [N1, Pers. Com.]. Some constraints have been encountered in the governance and management of these MPAs. Specifically, policy makers have been confused with a new MPA concept, while MPA managers have been concerned about an incomplete formal institutional framework. There is no fundamental guidance to help responsible people or agencies to design an organisational

⁸³ National Marine protected area Planning to 2020 was approved by the Prime Minister, on May 26th 2010, through a decision No 742/QĐ TTG.

structure of MPA authorities, make decisions and regulate activities operated within the MPAs (as discussed in **Chapter 4**). Indeed, the development of an institutional system that includes necessary legal documents and a complete national organisational structure for successfully governing marine protected areas has been highly supported by researchers, policy makers, managers, practitioners and other stakeholders in this country.

One participant recommended that a geopolitical scale should be used as a basic principle to design the national MPA organisational structure:

“If the MPA is located across geopolitical boundaries of different communes, there will be some problems in coordination and collaboration between these communes. So the MPA authority should be under jurisdiction of the City People’s Committee (directly above these communes). If the spatial boundary of one MPA covers a geographic scale governed by one government administrative authority, it should be directly under jurisdiction of that authority. That will be more convenient in coordination for managing the MPA” [P28].

Should the geopolitical boundary be solely used as a basic principle for developing a national MPA organisational structure? The understanding of a compatible mechanism between human management systems and natural systems has been widely argued by other researchers (Holling, 1995, Holling and Meffe, 1996, Folke *et al.*, 1998). This is not a new, but complicated, concept. The geopolitical scale can be a useful criterion to be considered for establishing a national MPA organisational structure, but cannot be a sole principle. In fact, there are nested geopolitical institutional arrangements for governing administrative duties over geopolitical boundaries. These include a political-administrative system, such as, provinces, cities, districts, communes (**Section 4.2**), formal institutions and regulations. It would thus be possible to save finances and time if the national MPA organisational structure is combined into the political-administrative system. This could also be practical [P28, P30]. Collectively, this approach seems likely to be acceptable to existing formal actors because the geopolitical scale is inevitably available, visible, measurable and static.

However, this approach might not be ideal for coping with uncertainties, such as natural disasters, social and biophysical issues in the future that occur continuously over geopolitical boundaries. Like other human and natural systems, MPAs are not as simple as often assumed. They are normally dynamic, unpredictable and complex (Folke *et al.*, 2002b). Environmental problems, especially water issues, can also be dispersed beyond certain jurisdictional

boundaries to areas where their governing bodies have no or limited influences on the source and progress of the problems (Cash and Moser, 2000).

Furthermore, the evaluation of governance organisational structure, whether it is effective or not, is not only dependent on how easy it can be formed or how convenient the embedded actors can perform their duties. Performance outputs and outcomes compared with the desired goal and objectives should be considered. Specifically, the governance organisational structure should harmonize and support the needs of nested actors, including state and non-state, and other stakeholders related to this MPA network. Within this structure, the actors can effectively execute extensive theories and experiences to solve environmental, social and institutional issues to balance long-term social interests and ecosystem integrity (Ascher, 2001). Therefore, the national MPA governance structure should not only rely upon the geopolitical principle. It should be designed to mobilize the collaboration between formal and informal actors across jurisdictional boundaries to cope with the complexity and uncertainties of social and environmental problems.

How have other national MPA networks been established and governed? According to UNEP-WCMC (2008), there are about 30 national and 35 sub-national ecological MPA networks that have been developed around the world. Most of them have been designed using a hierarchical approach. For example, the Australian National MPA network is designed with regional networks nested within a larger National MPA network (ANZECC TFMPA, 1998). In particular, each State or Territory establishes its own MPA network that contains MPAs located within waters from low water mark to three nautical miles. The Commonwealth is responsible for MPAs out of the territorial sea to EEZ (up to 200 nautical miles). The Great Barrier Reef MPA is exceptional, while being located within the territorial sea, still under jurisdiction of the Commonwealth (ANZECC TFMPA, 1998). It seems this national MPA network is designed using a geopolitical hierarchical approach.

On the other hand, the Canadian National MPA Network is considered an ecological hierarchy of habitats, but not a geographic hierarchy (Day and Roff, 2000). Similarly, the New Zealand MPA network is established using a physical environmental hierarchy of habitats (Ministry of Fisheries and Department of Conservation, 2008). However, these hierarchical MPA networks have been established by adopting different strategies. Australia uses a policy framework to guide States to develop State-MPA networks and then scales them up as a national MPA network. Canada and New Zealand developed a framework to implement policy through establishing a national MPA network. Despite these differences, these networks have significant commonalities, such as (i) a national policy framework broadly and solidly

developed in advance was used as guidelines for the implementation of the networks and (ii) a participatory approach was used to engage state and non-state actors and related stakeholders to contribute comprehensive efforts and inclusive knowledge (scientific and traditional) to the national MPA network establishment. This may help integrate the activities and resources from different conservation systems to achieve overall goals of, not only MPA networks, but also the whole ocean, as called for by the Convention on Biological Diversity (CBD) (UNEP-WCMC, 2008).

In brief, when the MPA network is designed as a hierarchical system, an organisational structure of MPA management authorities governing this network should be designed as a compatible hierarchical system. It should contain other potential public organisations, in addition to government agencies, to mutually support each other. A geopolitical boundary can be one, but not a sole, criterion for developing the national organisational structure. Additionally, other biophysical hierarchical characteristics of habitats should be considered for establishing a national MPA network and its compatible management structure. Currently, most MPA authorities in Vietnam are designed closely to the political-administrative system. Another question concerns what level is appropriate for a MPA management authority to be located within the nested political-administrative system. The next section will discuss the advantages and disadvantages of a MPA authority when located at different levels.

7.3.2 At what level should MPA authority be located?

As presented in **chapter 4**, participants of this study, especially formal actors from government agencies, have expressed concerns about the level of the MPA authority, compared with other agencies, in the existing governing system. In fact, the national MPA network has been recently formed in Vietnam and organisational structure related to the governance of MPAs has been inconsistent (**chapter 4**). A scenario analysis was used to discuss with MPA managers, practitioners, policy makers and other stakeholders throughout this study about the appropriate level of a MPA authority in the hierarchical systems formed within the current political context of Vietnam. Several options were offered regarding whether a MPA authority is located at a national level, a district level or just as a community-based organisation. Several variables were identified during this study. The principal variables are: (i) legal power in decision making; (ii) financial support from the government and other organisations; (iii) collaboration between the MPA authority, other sectoral-agencies and local authorities; (iv) technical support from research institutions; (v) capacity building for staff; and (vi) the integration of available resources for community development and conservation tasks.

Table 7.1 summarizes strengths, weaknesses, opportunities and threats, based on the given variables, which may happen to a MPA when it is designed for a particular scenario across levels. While the strengths and weaknesses are viewed from the internal perspective of a MPA authority, opportunities and threats are external factors. Moreover, internal strengths and external opportunities are advantages that the MPA authority should utilize, whereas internal weaknesses and external threats are disadvantages the authority may be confronted with during governing and managing the MPA.

Table 7.1: A SWOT analysis of MPA authorities across levels of a political-administrative system⁸⁴

Scenarios	Strength	Weakness	Opportunity	Threat
At national level	<p>Have stable structure of staff decided by central level to deploy responsibilities at the site</p> <p>Hold formal decisions and legal documents from central level, so have stronger power in decision making</p> <p>Can get routine funds from the national budget lines for conservation</p> <p>Higher independent in operating and managing the site to achieve designed objectives</p>	<p>Hard to integrate with similar objective programmes conducted by local authorities</p> <p>Some conflicts in power with local authorities (province/city/district where the MPA located)</p> <p>Harder to collaborate with other technical departments at the provincial/district level</p>	<p>Attract high attention and interventions of communities, media and central government when problems happened</p> <p>Have high attention from international and national organisations for technical, facilities and financial supports</p> <p>Receive high contributions from researchers, both international and domestics thanks to a high biodiversity values of the site</p>	<p>Higher pressure of development and economic investment thanks to the high biodiversity value of the sites</p> <p>Conflicts between resource users due to complicated uses at the sites</p> <p>Jealousy from other provincial/local agencies about the external supports (especially international sources)</p> <p>The MPA may have too ambitious objectives compared with capacity of staff, in terms of quantity and quality</p>
Provincial level	<p>Have a structure of staff and legal rights decided by provincial level to deploy responsibilities at the site</p> <p>Can get routine funds from the provincial budget lines for conservation</p> <p>Be able to integrate with other programs at province to minimize the costs and use up all the resource of the area</p> <p>Can collaborate with other provincial departments for managing the sites, if the management board has wise and flexible working approach</p> <p>Stronger influence in decision making of the PPC</p>	<p>Limited staff and unstable management structure</p> <p>Legal rights are not strong enough to prevent development activities that may affect the MPA</p> <p>There may be power conflicts with other existing provincial departments who partly responsible for the site (power conflicts)</p> <p>Limited finance</p>	<p>Attract attention and interventions of communities, media and responsible agencies when problems happened</p> <p>Attention from international and national organisations for technical, facilities and financial supports, if advocacy and lobbying provided by the province and management board</p> <p>Contributions from researchers, both international and domestics, but not high due to a limited biodiversity values of the site</p>	<p>Hard to balance economic investment, development and conservation due to limited awareness of officials about MPA</p> <p>Conflicts between resource users due to high biodiversity value</p>
City level	<p>Have better coordination from the city where there are all the legal rights and facilities for enforcement and management activities</p> <p>Be easy collaborate with other functional divisions of the city to integrate and conduct community development programs for local communities</p>	<p>Limited staff, facilities and finance</p> <p>Weak in decision making because of under umbrella of the province</p> <p>Not easy to get technical support from provincial agencies</p> <p>Limited capacity in management of the site</p>		<p>Weak recognition by national and international organisations for technical and financial supports</p>

⁸⁴ This SWOT analysis was conducted and summarized through interviews with participants of the study.

Scenarios	Strength	Weakness	Opportunity	Threat
Belong to a provincial dept.	Easy to collaborate with other provincial departments Mobilize all the resources, especially technical supports of all sections belonged to the responsible department for enforcement and management of the site Can consult the PPC quickly to approve legal documents for managing the MPA, on behalf of the responsible department	Limited staff and finance MPA management board has weak voice because of under umbrella of the responsible department, so hard to get involved in decision making Get lower attention of the PPC in solving problem when happened	Attract attention and interventions of communities, media and responsible agencies when problems occur Attention from international and national organisations for technical, facilities and financial supports, if high advocacy and lobbying by the province and management board Contributions from researchers, both international and domestics, but not high due to a limited biodiversity values of the site	Very hard to balance economic investment, development and conservation due to limited awareness of officials about MPA Conflicts between resource users due to high biodiversity value
District	Close contacts with local communities Understand communities well, that is useful for better socioeconomic interventions to local communities Integrate programs of district with conservation activities of the MPA	Hard to get financial support from the higher level as well as from international and national organisations Weak legal rights for managing the site Limited technical knowledge/capacity for managing the site well Poor facilities	District staff may have more opportunity in capacity building for site management More chances for technical, facilities and financial supports from other organisations More opportunities to use up all resources for community development	
Village/ CBO	Get strong commitments and supports from local communities Gather all the local resources to manage the site, so the management cost can be reduced Close contacts and understand the situation and traditional, customary norms well, so that may help much in management of MPA The local people and CBO have close relationship and trust	Limited staff and finance Limited knowledge and experience in management of MPA Limited communication and organisational skills Lack of legal documents to support the leadership of local community in management of MPA Time consuming for capacity building	Local people have more opportunities with subsistence, for example: working directly in MPA and other livelihood activities emerged from MPA Improve the pride and ownership for local people Local communities may have more opportunities of welfare service development in parallel with development for conservation	Conflicts between local people if there is not equal benefit sharing mechanism achieved from MPA management

It should be obvious and easy to recommend the level of a MPA authority in the national organisational structure, if all the points identified in **table 1** can be quantified or scored. However, these points may be perceived differently depending on the perspectives and viewpoints of evaluators. A standard set of criteria for scoring these points is essential, but difficult. In a national network of MPAs with various spatial scales, a management body of any MPA is not only required to understand the political behaviour of a specific scale. It also needs to comprehend various political, economic and social drivers and constraints of neighbouring scales (Cash and Moser, 2000). Setting the appropriate level for an MPA authority in a national MPA governing structure is likely to be a complicated argument. Some participants argued and recommended as below:

“The MPA authority ... should be under jurisdiction of one administrative agency, which has legal rights in management, enforcement and other facilities/infrastructures. So the authority

can easily manage the MPA. For example, if the MPA authority is under jurisdiction of Nha Trang City People's Committee (NT CPC), they will have advantages in managing the MPA because the Nha Trang CPC has all the power, rights and resources needed for managing the MPA. They have rights to either permit or prohibit development and other related activities within the Bay... The NT CPC has strong powers and facilities for day-to-day management" [P28].

Or "the MPA authority should belong to Department of Agriculture and Rural Development (a provincial sectoral department) that has long history and experience with other (terrestrial) protected areas. This department also has an existing collaborative network with other provincial departments, so they (the department) can be easier to collaborate with other departments (than the MPA authority). Furthermore, this department has a good regulation/legislative system from national level (for terrestrial protected areas), so that is easy for the provincial agencies to work and follow" [P30].

"The MPA authority would be reformed as an administrative agency to have all the rights as a City People's Committee. In fact, there are four fisheries villages residing within the Bay and other economic activities, so the Halong Bay Authority needs to have more administrative management rights to manage all activities of these villages" [P17].

It seems options related to the governance level of a MPA authority recommended by participants are diverse from low to high levels in the governing system. The MPA authority can be designed as a division of a City People's Committee [P28], a division of provincial sectoral department [P30] or a higher level as a City People's Committee [P17]. Additionally, a hybrid governance organisational type can be applied for MPA authorities. These should be designed as an administrative management agency, but have a division or unit as a government business enterprise. This division is responsible for collecting conservation fees and other related services. The MPA authorities, in this case, can also get involved in developing and approving regulations related to biodiversity conservation and fisheries protection. The authorities cannot accomplish their duties if they are not an administrative management agency (to have these rights) [N1]. Hence, there is a commonality for suggested organizational types that the MPA authorities should be either under jurisdiction of an administrative management agency, or an agency that holds both duties and legal rights of an administrative management agency and a business government enterprise. It seems this model covers both MPA management tasks and economic activities within the MPA. In other words, this model relates to conservation and development. This might, indeed, encounter pitfalls occurring with an integrated conservation and development model applied in protected areas elsewhere (argued in section 7.3.3) and barriers apparent at the study sites in Vietnam (section 6.4.1.2).

While Halong Bay site could potentially be upgraded to a city level, Nha Trang Bay site was suggested to be at a lower level (a city division). It is not easy to compare these sites to understand or generalize specific principles that participants considered for the suggested designs, especially as they are different participants with distinct perceptions about each site. It seems that there is no ‘one-solution-fits-all’ or rather; it is not easy to come up with one universal set of principles that suits all different situations. However, the results summarized in **Table 7.1** and **Section 7.3.1** suggest a range of principles that can be applied to, or considered for, the design of MPA authorities. These include the geo-political area in which the MPA is located, biodiversity values, the extent to which the MPA establishment may affect local communities and other stakeholders, in terms of socio-economic and political impacts, capacity and resources of a MPA authority, and the collaboration and support of other related government agencies and organisations. These should be considered when deciding the specific level of a MPA authority in a national MPA governance structure. The next section will discuss a possible management model for a MPA authority, at any level, that should be responsible for development or not, in addition to conservation.

7.3.3 Should a MPA authority, or other sectoral-agencies, or independent organisations cover community development tasks?

An integrated conservation and development approach has been introduced to the management of protected areas in many countries (Brown, 2002). This has been funded and administered by international organisations, such as the Global Environment Facility (GEF), World Bank, Development and Environment Programmes of United Nations (UNDP and UNEP) over the last three decades (Wells and Brandon, 1993, Brown, 2002, Wells and McShane, 2004). Most of these programmes have achieved limited success compared with their designed objectives for both conservation and development (Newmark and Hough, 2000, Salafsky and Wollenberg, 2000, Brown, 2002, Brown, 2003, Wells and McShane, 2004). The reasons proposed for these poor results have been because of over-simplified assumptions of homogeneity of local communities, empowerment, relations between conservation and development towards sustainability as well as threats to protected areas that are not only from local communities, but also from outside of protected areas’ boundaries (Wells and Brandon, 1993, Newmark and Hough, 2000, Wells and McShane, 2004).

An approach to integrate conservation and development has been perceived and applied in different protected areas in Vietnam. Socio-economic impacts to local communities by protected area establishment have been considered and assumed to be mitigated by

development supportive activities. However, limited scientific studies on the outcomes of this approach have been reported. The capacity of MPA authorities to coordinate and collaborate with other stakeholders to implement development activities is another concern when applying this approach in the governance and management of the MPAs in Vietnam. As described in **chapters 4 and 6**, the MPA authorities have encountered obstacles relating to the overlap or mismatch in mandates and responsibilities with other agencies while undertaking alternative income generating activities for local communities. They have spent much time, finance and personnel efforts for livelihood objectives to create benefits for local communities, rather than incentives derived from conservation. In spite of these considerable efforts, most of these economic activities have resulted in unstable, unsustainable and limited-socio-economic outcomes for local communities. Another pitfall emerged is that when MPA authorities are responsible for conservation and development tasks, local communities usually pay attention to and consider short-term benefits from development activities supported by MPA authorities, rather than long-term benefits derived from conservation (**section 6.5.1**). They likely prefer to participate in development, rather than in conservation, activities. This may affect the achievement and sustainability of the MPAs. This raises questions as to whether development objectives should be (i) covered by the MPA authorities or (ii) assigned to other technical agencies or (iii) coordinated by independent parties/bodies, such as, non-government organisations, mass organisations or people's cooperatives?

Newmark and Hough (2000), in their observation and evaluation of protected areas through more than 15 African countries, suggest that protected-area organisations (similar to the MPA authorities at the study sites in this research) should delegate development activities to organisations that have appropriate mandates, expertise and experience for implementation. Protected-area organisations, in these cases, simply play a role as a facilitator for these activities. However, another side of this issue should be considered when development activities are transferred to another agency, specifically for the case of MPAs in Vietnam. This is how the local communities appreciate development benefits that are actually supported by the MPA authorities or derived as outcomes of conservation activities.

When the MPA authorities directly operate development activities, they may be more advanced in collaborating with local communities in governance and management of MPAs. Benefits from development activities can be delivered to local communities faster than other conservation activities that usually take a long time. So the MPA authorities can develop a strong positive influence with local communities when being viewed as development benefit suppliers. This can assist the MPA authorities to organize, operate or engage with local communities in conservation activities. For example, one environmental education staff

expressed that it is much harder for environmental educators to mobilize local communities for their activities than community development officers, whose activities are to help supply loans or other livelihood activities to them [Nguyen, NT MPA – pers. com.]. In this case, the development officers have better recognition by the local communities than the environmental educators. It seems that the assumptions about the causal relationship between development and conservation may be erroneous for integrated conservation and development projects as mentioned by other authors (Wells and Brandon, 1993, Newmark and Hough, 2000, Wells and McShane, 2004). However, it may be worthwhile in the study sites of this research where local communities usually have higher regard, or are more grateful, for someone who can bring something useful for their livelihoods.

Whether the development activities, within the MPAs, are transferred to other organisations or sectoral agencies, the MPA authorities need to have a strategy to help local communities and other stakeholders understand that development benefits stem from MPA conservation tasks and outcomes. Furthermore, this approach should clarify all the costs for, and benefits derived from, conservation activities and the proportion of these benefits that has been invested into communities operated by other organisations. This will help build mutual trust between local communities and MPA authorities and then help them engage more in the plans and activities of the MPAs. A close and transparent coordination mechanism between the MPA authorities and other development implementers is vital for consolidating and fostering the inter-connection between development benefits and conservation outcomes derived from the MPA (inter-agency collaboration in governance of MPAs was discussed in **chapter 5**).

In short, the development tasks should be transferred to other sectoral-agencies or organisations that have mandates, resources and expertise to accomplish. A solid coordination mechanism between MPA authorities and the development operators is required. Financial reports of MPA authorities should be communicated and transparent to allow local communities and other stakeholders to understand costs and benefits of MPA management. The next section discusses whether MPA authorities should be combined into an existing sectoral agency or designed as a separate body to collaborate with other agencies to govern the MPA.

7.3.4 Which type of MPA authority is preferred, one combined into an existing sectoral agency, or a separate body?

Participants considered the organisational design of a MPA authority. The considered view was that the MPA authority should be combined into an existing sectoral agency or established as a

new agency of the political administrative system. Another option is that the MPA authority can be designed as an independent management body following a ‘bridging organisation’ model. This new agency or body can collaborate with other related agencies to govern the MPA. These options were indicated through the following statements:

“A MPA network should be managed by an existing administrative management system... For example, the MPA should be managed by District People’s Committee if it solely located within that geopolitical boundary or higher level if it has a trans-boundary coverage. The national-level MPA should be the one that covers continuously two or more provinces” [P28].

“The MPA authority should belong to DARD (Department of Agriculture and Rural Development - a provincial sectoral department), which has long history and experience with other (terrestrial) protected areas... Meanwhile, the MPA authority is still new and has not yet had a formal institutional guidance from national level... Furthermore, the vice-director of the Department (DARD) should be a director of a MPA authority. So this person can have rights to participate in meetings organized by a provincial council and provincial people’s committee, so he/she (the MPA director) can have better influence for the MPA management” [P30].

According to Berkes (2007), the government would be an appropriate low-cost solution for governing simple ecosystems where there is no social and political controversy. However, coupled human - natural systems, such as MPAs, are normally complex and dynamic (Costanza *et al.*, 1993, Carpenter and Gunderson, 2001, Folke *et al.*, 2002b), so government actors who are delegated authority for governing the environment do not always resolve conflicts satisfactorily (Berkes and Folke, 1998a, Durant *et al.*, 2004). Specifically, where innovative changes in behaviour and technologies are needed, rather than the enforcement of formal regulations, the “command and control” governance style operated by government actors can become ineffective and inefficient (Dietz *et al.*, 2003).

In this study, government participants suggested that the MPA authority should be combined into the existing political system, or delegated directly to an existing government agency. However, the local people, relying upon their perspective and perception, complained about inadequate capacity, outputs and outcomes when the MPA authority was designed as a government agency. They thought that they can govern the MPA better than an existing government MPA authority [L1, L4]. Similarly, state-level solutions may not correctly address local problems and, in fact, might cause new problems for the local level (Cash *et al.*, 2006). According to McCay (2002), individual’s rationality and attitudes can be formed by the social context within which they are embedded. Actors at different levels, thus, have different perspectives and perceptions on the same problem or phenomenon (Cash *et al.*, 2006).

Therefore, an independent body with a neutral approach, that gathers and harmonizes perspectives and perceptions of both government and civil actors to manage resources, should be a potential alternative. In other words, a governing authority of MPAs in Vietnam, where there are diverse and always conflicting stakeholders and actors, should be delegated to a third party - a “bridging organisation” (Folke *et al.*, 2005, Hahn *et al.*, 2006, Berkes, 2009) or “boundary organisation” (Cash, 2001, Guston, 2001, White *et al.*, 2008).

A bridging organisation design has been studied and confirmed to have a number of advantages for social-ecological systems. It would need to use a combination of knowledge integrated from a variety of stakeholders and actors to play intermediary roles. It facilitates actors across levels and scales to build a consensus to achieve shared visions. This organisational form has been tried and demonstrated its advantages in a range of resource management programs. In particular, a bridging organisation can play an important role for inter-organisational collaboration in polycentric governance processes. It can help build mutual trust and solve conflicts among actors interested in the same environmental arenas (Hahn *et al.*, 2006). It can also facilitate, gather and connect actors, scientists and policy makers from different arenas, levels or scales (Cash and Moser, 2000, Cash *et al.*, 2006). A bridging organisation can enhance social capital of local people and other stakeholders (Folke *et al.*, 2005). An illustrative example for the success of a bridging organisation is at Ecomuseum Kristioanstads Vattenrike in southern Sweden. This is a municipal organisation that has no power or legal rights for enforcing rules and relies on the voluntary participation of farmers and other stakeholders. It has been successful in facilitating the integration of scientific and local ecological knowledge. This organisation engages related actors to form firm visions of governance processes and then integrates legal, political and financial support from various organisations to transform visions to outputs and outcomes. All of these enhance the adaptive capacity of the social-ecological systems (Hahn *et al.*, 2006). A bridging organisation design, thus, can be a great potential for management and governance of social-ecological systems.

A bridging organisation design has been used for policy making and implementation for marine management in different nations. A range of research (Cash and Moser, 2000, Guston, 2001, Cash *et al.*, 2003, Folke *et al.*, 2005, Cash *et al.*, 2006, White *et al.*, 2008) on bridging organisations have identified some institutional functions and characteristics that should be included. These are: (1) accountability to all the related agencies or stakeholders; (2) the use of “boundary objects” such as maps, reports, and forecasts that are co-produced by all the actor groups (or their representatives); (3) participation across the geographical boundary of the actor groups; (4) convening; (5) translation; (6) coordination and complementary expertise; and (7) mediation. Using these elements, bridging organisations have been used to develop integrated

marine and coastal management programs in other countries (e.g. National Oceans Advisory Group, Marine and Coastal Committee (MACC), Expert working Groups and Regional Working Groups who helped develop and implement Australia's Oceans Policy in Australia (Commonwealth Government, 1998); or the Ocean Management and Planning Group (OMPG) and Oceans and Coastal Management Division helped develop and implement the Canada's Eastern Scotian Shelf Integrated Management (ESSIM) Initiative in Canada (Foster *et al.*, 2005). These bridging organisations have played important roles in convening multi-stakeholder consultation meetings by gathering actors and stakeholders across sectors and jurisdictions.

In Vietnam, MPA authorities, such as Nha Trang Bay MPA, Culaocham MPA authorities, have received technical and financial support from international and non-government organisations through projects formed as parallel bodies or groups (e.g. Hon Mun MPA project, Culaocham MPA project). Specifically, these groups, established as a bridging organisation, together with the MPA authorities, have used a participatory approach to convene activities to develop management plans and other legal documents to manage the MPAs. Local communities and other stakeholders were invited to participate in these activities. However, these groups have been based on external temporary funds (international and non-government organisations), so they are not sustainable⁸⁵. While the groups, such as Hon Mun MPA and Culaocham MPA projects, can be perceived as bridging organisations, the MPA authorities are not because they are defined as agencies, on behalf of the government, to play roles of enforcers and implementers, rather than facilitators and mediators, for the governance and management of MPAs.

In general, bridging organisations can be formed by the government (e.g. Australia, New Zealand) and by other funding organisations (e.g. Vietnam). They have mainly supported the establishment of MPAs and development of legal documents for managing and governing these MPAs. However, the management and governance processes of these MPAs or MPA networks have been undertaken, by only MPA authorities formed by the governments, not by the bridging organisations. Based on the described advantages of a bridging organization model and difficulties encountered at existing MPA authorities in Vietnam, a bridging organisation can be considered a great potential for MPA authorities. If so, the next question to be considered is what characteristics this organisation should have.

⁸⁵ Evaluation report of Hon Mun MPA pilot project conducted by DANIDA

The bridging organisation that governs and manages a MPA should be characterised by the capacity and behaviour of individual members and political will of the government. As it is evident from the overarching interactive governance framework developed from this research (**Fig 7.1**) that there are different barriers and uncertainties that may influence the interactions between state and non-state actors in making decisions for the interactive governance and management of the MPAs. A bridging organisation consisting of representatives of both state and non-state actors may help confront the identified barriers. Members of this organisation should also be professionals from different sectors (Guston, 2001), including scientists, policymakers, policy enforcers, private sector and local communities. The organisation should undertake intermediary roles. The capacity of the bridging organisation and its members can be a challenge for completing its functions, especially where members included are from local communities (White *et al.*, 2008). Leadership is another requirement for this organisation to facilitate all the stakeholders to develop visions and implement activities through complex cross-scale or cross-level processes (Cash *et al.*, 2006).

The next point to consider is the level of political commitment of the government (Alder and Ward, 2001). When a bridging organisation is formed, the government should make a strong political commitment to follow the agreed outputs despite oppositions from some interest groups. The approval process of the Nha Trang Bay MPA management plan can be an illustrative example of a weak political commitment of the provincial government (**section 4.3.4.2**). Besides these characteristics, some inherent variables relating to specific individual and organisational characteristics and behaviour that are formed by the particular context of MPAs in Vietnam should be considered for the development and operation of the bridging organisation. Ground rules that stimulate mutual communication and reciprocal respect, and attempt to build mutual trust should be established at the outset. These will be important for the social interactions occurring within governance and management of the study MPAs. When the MPA management authority is designated as a bridging organisation, the national governance structure responsible for these bridging organisations should be adaptive, flexible and self-organizing in order to be able to adapt to an unpredictable and ever-changing socio-ecological system as a national MPA network. The next section concentrates on this question.

7.3.5 A more adaptive MPA institutional and governance system in Vietnam

Humanity has been increasingly recognized as being dependent on its environment for societal and economic development, and also a major factor in ecosystem dynamics (Jackson *et al.*,

2001, Hughes *et al.*, 2003, Pikitch *et al.*, 2004, Halpern *et al.*, 2008). A view linking social systems and ecological systems has been increasingly used by a number of researchers (Berkes, 1989, Ostrom, 1990, Lee, 1993b, Holling, 1995, Folke *et al.*, 1996, Berkes and Folke, 1998b, Hanna, 1998, Holling, 2001, Folke *et al.*, 2002b, Gunderson and Holling, 2002, Folke *et al.*, 2005) to study ecosystem management and sustainability. In addition to ecological systems that have been reported as complex and uncertain systems (Costanza *et al.*, 1993, Carpenter and Gunderson, 2001), social systems also consist of diverse arrays of institutions and social interactions shaped by various individual behaviour and social, political and economic structures and dynamics (Janssen and Jager, 2001, Lansing, 2003). Thus, social-ecological systems have been perceived as complex, dynamic and uncertain (Folke *et al.*, 2002b). There are also strong reciprocal feedbacks between social and ecological systems embedded within the social-ecological systems (Liu *et al.*, 2007). These systems, therefore, should be functioning as complex adaptive systems (Gunderson and Holling, 2002, Berkes *et al.*, 2003). Under these circumstances, a resilience-based management approach should contribute to sustainable social-ecological systems (Berkes *et al.*, 2003, Hughes *et al.*, 2003, Kinzig *et al.*, 2003, Walker *et al.*, 2004, Hughes *et al.*, 2005).

Resilience has been defined as the capacity of a system to absorb disturbance and re-generate and reorganize the functions, structures, identities and feedbacks of the system while undergoing change (Folke *et al.*, 2004, Walker *et al.*, 2004). In other words, resilience is about the capacity of the system, not only to persist or overcome the disturbance, but also to take the disturbance as an opportunity to restructure, self-organize and then build and increase the capacity to learn, adapt and transform to a new enhanced configuration (Scheffer *et al.*, 2001, Gunderson and Holling, 2002, Walker *et al.*, 2004). The resilience of a social-ecological system must cover an adaptive capacity to respond to dynamics and changes within and among both nested social and ecological systems in an informed manner (Berkes *et al.*, 2003). When MPAs in Vietnam are viewed as social-ecological systems, there are two major attributes that may help effectively govern and manage these systems (i) complexity of the multilevel institutional and governance structure of systems (ii) applying an adaptive co-governance through the deliberation, social learning and enhanced system resilience.

First, how complex is the multilevel institutional governance structure of systems? According to Holling (1995), there are three disciplines that need to be considered for the management and governance of social-ecological systems. These relate to social problems, environmental or natural issues, and institutional infrastructure. Indeed, the institutional infrastructure not only needs to be flexible and adaptable according to natural changes, but also be able to cope with social problems of the systems, otherwise these systems would not be sustainable (Folke *et al.*

1998, as cited by Cash and Moser, 2000). Hanna (1998) noted that well-designed institutions are necessary, but not sufficient for the sustainability of marine ecosystems when social issues (e.g. population pressure) exceed their threshold level. The institutions can be workable if these institutions are compatible to economic dimensions and ecosystem objectives (Hanna, 1998). Thus, the development of an institutional structure that matches ecological and social processes occurred at different spatial and temporal scales, is always relevant, but challenging (Ludwig *et al.*, 1993, Holling and Meffe, 1996, Folke *et al.*, 2002b).

In addition to the multi-discipline and multi-scale attributes of social-ecological systems, institutions are influenced by factual cultural, historical and social practices operating at a specific area (Mosse, 1997, Cleaver, 2000, Adger *et al.*, 2003). Therefore, the applicability and impacts of these institutions may vary from one to another site where there are different contextual conditions. Similarly, the scientific knowledge for forming institutions is also never complete (Wilson, 2002). It is, therefore, essential to have a knowledge base inclusive of social systems and ecological systems changing over different temporal and spatial scales, when designing institutions (Holling, 1995, Berkes and Folke, 1998a, Cash and Moser, 2000). A design of open and flexible multilevel institutions across scales that may facilitate self-organisation and support adaptive capacity of the social-ecological systems (Berkes, 2002) is suitable for the complex MPAs studied.

Flexible and open multilevel institutions across scales can be formed, developed and implemented by a governance organisational structure if this structure can be self-organizing and connect all the related actors and stakeholders across levels and disciplines. A multilevel organisational structure is another complex aspect of social-ecological systems. One object may have a different meaning to different levels of an organisational structure. For example, biodiversity conservation is viewed through the global lens as a global commons, but through the local lens as a source of subsistence for local communities (Berkes, 2007). This complexity has engendered vertical and horizontal interplays (Young, 2002b) and fragmented problems (Crowder *et al.*, 2006) while implementing institutions across levels. Furthermore, the reciprocal influence between the institutions implemented by the levels (local to global levels) has also been reported (Stokke, 2001, Young, 2002a). In this case, a flexible structure (Westley, 1995) of bridging organisations with its advantages (**section 7.3.4**) can reduce these problems occurring during the governance and management of complex and dynamic social-ecological systems.

Second, even if a flexible institutional and organisational structure is adaptive to complex and uncertain social-ecological systems, it is unclear what governance approach the embedded

actors or organisations should use to adaptively govern these systems. According to Kooiman (2003), there are three common governance types for resource management and conservation: hierarchical governance, self-governance and co-governance. These types are characterized by the governance responsibilities and authority levels. State actors make decisive interventions in the hierarchical governance type, whereas a self-governance type is characterised by particular groups, such as local communities or private sectors, as major governing actors. Co-governance seems to be a hybrid of the above types (Jentoft, 1989), which has participation by both state and non-state actors in the decision-making processes to conserve the resources and share the benefits from the governance processes (Borrini-Feyerabend, 2003).

In addition, there may be some sub-types belonging to each governance type, depending on the levels of participation and decision-making that is shared by participating actor groups. For example, within a hierarchical governance type, a protected area can belong to one of three subtypes i.e. whether the in-charge agency is a federal or national ministry or agency; a sub-national ministry or agency; or a government-delegated agency (e.g. a non-government organisation) (Borrini-Feyerabend, 2003, IUCN/WCPA, 2008). Within an ecological MPA network, different governance types may be selected and applied in different individual MPAs. For instance, in the Philippines, there are different governance approaches used for different MPAs, such as state-led, community-based and co-management approaches (Fernandez, 2007). One question raised here for Vietnam MPAs is in what ways the national MPA institutional and governance system can be used to improve the governance and management of all MPA sites?

Some participants, engaged in this study, recommended that local communities or authorities should manage small areas of a MPA. The MPA authority is responsible for a common area of the MPA [P34]. Some parts of a MPA should be allocated to local communities for managing [L28]. It seems the devolution of management authority to non-state actors, other than government agencies, has been stimulated and recommended by participants across levels to better govern the MPAs studied. Even if a flexible organisational structure and institutional arrangement for governing the MPAs is presumably formed and the management authority is devolved to the local level, capacity of this level is a concern to successfully govern the assigned areas [C4]. According to Berkes (2002), when all stakeholders including government and public actors collaborate with each other through partnerships and deliberative approaches, they can reciprocally supplement their strengths and weaknesses leading to effective resource management. They can also contribute to inter-disciplinary knowledge systems (Folke *et al.*, 2005), address different aspects of systems' complexity (Berkes, 2007), and then deal with multiple objectives (Gunderson and Light, 2006, Berkes, 2007) of the social-ecological systems as MPAs. In other words, an adaptive co-governance approach that mobilizes the participation

of various actors, operating at various social and ecological disciplines in flexible institutions and organisational structure, is potential for MPAs studied.

7.4 Preliminary conclusions:

This chapter has developed an overarching interactive governance framework to illustrate barriers to the governance of MPAs in Vietnam. It provides evidence that there is a connectedness between formal and informal institutions. These institutions influence each other and affect the effective governance and management of MPAs. Building mutual trust, communication and reciprocity help bring state and non-state actors together for more effective governance and management of MPAs. These must be considered when developing bridging organisations consisting of state and non-state actors.

This chapter also demonstrates that there is no single institutional and governance system that can be applied to all of the study MPAs. However, an open and flexible multilevel institutional and governance structure across scales that may facilitate the self-organisation and support adaptive capacity of the MPAs is suitable for the complex MPAs studied. Within this, MPA authorities designed as bridging organisations that are more self-organizing, adaptive and flexible, have more potential. This organisation is mainly responsible for conservation and should be a collaborative facilitator, instead of an operator, of development tasks. This design can enhance the adaptive capacity of an institutional and governance structure of the national MPA network, even though this network is designed as a hierarchical system. A flexible and adaptive institutional and governance structure that is governed (or governs) through an adaptive co-governance approach is essential to improve effective governance and management of individual MPAs and a national MPA network in Vietnam.

The next chapter (8) will summarize the thesis and research findings to answer the research questions (Section 1.2). A synthesis of significant practical and theoretical contributions of this research to the scholarly world that relates to natural resource governance and management is also provided in this chapter.

CHAPTER 8: SYNTHESIS AND CONCLUSIONS

8.1 Introduction

This final chapter synthesizes research findings and presents recommendations and conclusions. In particular, it summarizes and synthesizes the research process, and research findings about the accumulative influences of multilevel institutions and social interactions and contextual causes on the overall outputs and outcomes of governance and management of marine protected areas (MPAs) in Vietnam. First, it returns to the aim, the overall research question and four research objectives necessary for achieving the research aim. The major research activities, findings and interpretation are provided to demonstrate the achievement of the stated research objectives. The theoretical and practical implications of the research are presented with recommendations for improving institutions, organisation, governance and management of MPAs at the study sites. Finally, this chapter makes recommendations for further research.

8.2 Synthesis

This study has been formed and undertaken based on the current issues which relate to multilevel institutions and governance of marine protected areas (MPAs) in Vietnam. The overall research aim is to develop a better understanding of the nature of multilevel institutional development and operation and perceived contextual forces that could lead to more effective governance and management in multi-jurisdictional MPAs in Vietnam. This aim then led to the guiding research question: “*How is the governance of MPAs in Vietnam affected by multilevel institutions, social interactions related to the exercise of power, and socio-political contextual influences?*” Four research objectives were identified to achieve the research aim as follows:

1. To establish theoretical grounding relating to natural resource institutions, governance and management.
2. To develop a conceptual analytical framework that can illustrate and provide guidance on the inter-influences between institutions, governance, contextual factors and management outcomes.

3. To undertake empirical investigations of the institutions and interactions of actors involved in decision making, governance and management of MPAs in Vietnam based on the developed framework.
4. To provide policy makers, managers and practitioners with an operational tool for better understanding the accumulative influences of multilevel institutional development, change, operation and contextual conditions on the outcomes of MPA governance, and insightful recommendations to improve the effective governance and management of MPAs and MPA networks.

Below are syntheses of research activities, findings and interpretation relevant to the achievement of the stated research objectives:

8.2.1 Theoretical grounding and development of a conceptual analytical framework:

Based on theoretical concepts of institutions, organisational structure and governance, a research perspective, which views institutions and governance as essential elements of the operation of a governing system, was taken. Institutions consist of formal and informal rules, normally known as ‘rules-in-use’, and political organisations, which are conceived of as ‘hard structure’. Governance is perceived as ‘processes’ through which individuals and/or entities, as actors or organisations, exercise power to make decisions based on ‘rules-in-use’ in order to achieve desired objectives and goals of an organisation or a system of organisations. In other words, institutions and governance were respectively described as the ‘hard structure’ and the ‘processes’ of a ‘live body’. A ‘live body’ can be an operational or functional organisation, or a linked social-ecological system. Studying the operation or the function of the ‘live body’ involves the examination of the intrinsic nature of each embodied part (‘hard structure’ and ‘processes’), the interactions and mutual influences of these parts and external socio-political forces (**Section 3.2**). The inductive research process used in this study led to a theoretical conceptualisation to describe and interpret these complex social interactions between the actors and their perceived influences. For example, how do the actors use rules to enforce resource uses and how does the socio-political context influence this enforcement process leading to different consequences and outcomes. This research process (**Chapter 2**) also helped form the analytical framework, and identify influential forces according to specific contextual conditions of study sites and data collected from these sites.

The analytical framework was developed based on a synthesis of literature related to institutional analyses, governance and management practices of common-pool resources (CPR), including fisheries, forestry and water use (**Section 3.3**). For practical purposes, this framework was divided into three separate components, including organisations and actors, institutions and governance (**Section 3.4.2**). A participatory and iterative approach was used to identify perceived barriers to the effective governance and management of MPAs (**Chapters 4 to 6**). Ultimately, the barriers addressed were combined to develop an overarching interactive governance framework to understand the mutual influences between these components on governance of MPAs studied (**Chapter 7**).

Additional literature reviews in **chapters 4 - 7** summarized further theoretical concepts related to institutional organisation, collaboration, participation and interactions of actors in governance processes. **Chapter 4** briefly reviewed and introduced the existing organisational structure of Vietnam Government and the formulation of a multilevel institutional system across national down to local communities. Some detailed descriptions of vertical levels and horizontal sectors of the institutional system and their embodied agencies (e.g. the responsibilities of each agency, the types of legislative documents and their validity issued by the agency) were also provided in this review. **Chapters 5 - 7** reviewed and described attributes of governance that have been flexibly and adaptively used based on a particular property right regime and the external context of the common-pool resource systems. The concept of environmental governance was adjusted for use in **chapters 5 - 7** to suit the characteristics of the actors who participated in the research. Collaboration between state actors was the focus of **chapter 5**, and participation of the local communities in collaborative governance was a focus of **chapter 6**. **Chapter 7** considered the roles of state and non-state actors in the operational context to clarify the interactions and mutual influences of identified forces. In general, these reviews helped identify the respective characteristics and forces that can influence actors' decision making in the governance processes of MPAs and their consequences. While **chapter 3** presented the framework used for analyzing institutions and governance of MPAs, **chapters 4 - 6** identified, described and interpreted perceived barriers or influential factors to each component of the developed analytical framework to help better understand the ways in which these factors affect the consequences of MPA governance.

This section has summarized and synthesized how the theoretical grounding was established, and a conceptual analytical framework was developed, to demonstrate the achievement of research **objectives 1** and **2**, respectively. The achievement of **objective 3** and **4** is presented in the next section.

8.2.2 Empirical research, influences of institutional development and operation, and contextual conditions on governance and management of MPAs:

This section summarizes empirical investigations conducted at the field sites and interpretations of research findings by linking them back to the theories (the achievement of **objectives 1 & 2**) to demonstrate how **objectives 3** and **4** were attained as follows:

8.2.2.1 Undertaking empirical investigations of the institutions and interactions of actors for MPA governance and management:

The empirical investigations were designed to understand how institutions developed, changed and operated at the various study sites, how actors work together to make decisions for resource management and then identify barriers or forces causing problems. This study was undertaken using a ‘bottom-up’ approach to collect data. The researcher started discussions and collecting data with participants from local communities and subsequently with government and other organisational actors from the local to national level. This approach was conducted to learn on-going problems of MPA governance and management in general and thereafter identify the relevant actors to further discuss and understand primary influential forces and potential solutions of these problems (**Section 2.2.1**). The researcher used a number of data-collection instruments, including document reviews, focus-group discussions, semi-structured and open-ended interviews, participant observation and multi-stakeholder meetings, to conduct this research. These were employed in sequence as the results of preceding activities supporting the following research activities (as described in **Section 2.2.3**).

Triangulation was achieved by using various data sources (e.g. participants from different levels and sites, primary and secondary data collections), methods (e.g. focus group discussions, face-to-face interviews, meetings, post-research communication) and investigators (e.g. principal vs. research assistants) for the study. This triangulation served to enrich the data and verify interpretations (Denzin, 1978b), to reduce personal and methodological biases while enhancing the study’s generalizations (Decrop, 1999). It also helped signify multifaceted views of the research problems (Foss and Ellefsen, 2002a, Neuman, 2006b) (**Section 2.4**).

Furthermore, the critical ethnographic strategy (**Section 2.1.4.2**) helped reveal many substantial cultural, social and political meanings relevant to this study, especially the ways in which local people and government actors communicate and interact with each other. This strategy enabled

the investigator to integrate observed and collected data in various contextual conditions to analyze the transformation and evolution of institutions; their implementation and functioning; and decision making of actors, as well as identifying perceived barriers to the governance and management of MPAs. Meanwhile, the case study strategy (**Section 2.1.4.1**) led the researcher to select appropriate study sites for this study. Nha Trang MPA, Con Dao and Halong Bay sites were selected as major study sites because of their representative characteristics relating to institutional, geographic, cultural and socio-economic issues. Culaocham and Phu Quoc – the newly established MPAs, were visited by the researcher to gather additional evidence to supplement the data collected from the major sites (**Sections 1.3 & 2.2.2**). Moreover, the case study strategy complemented the critical ethnography by supplying a sharp and diverse picture of entities, including state and non-state actors, across various levels. It elucidated their interactions and their context, and, in turn, determined barriers and causes affecting MPA governance and management.

8.2.2.2 Influences of multilevel institutional formulation, development and operation, and contextual conditions on governance and management of MPAs studied:

The developed analytical framework was applied in empirical investigations to demonstrate the influences of institutions and social interactions on governance and management of MPAs in Vietnam. The linking of the empirical observations to the grounded theories further explained the research findings. In particular, this process helped link the performance of institutions, decision-making and social interactions to dimensions related to influential factors, including human behaviour; social psychology; traditional cultures; social capital; human capacity; formal institutional development and evolution; and socio-political context. For example, the relationship among state and non-state actors and their interactions have affected the enforcement of rules and decision-making for resource management and conservation. Furthermore, the processes for socio-political factors affecting the MPA governance and the ability of actors to overcome conflicts to promote better governance and management of MPAs were identified. The following summaries are a brief review and synthesis of the findings and insights drawn from **chapters 4 to 7**. These explain the nature and strength of mutual influences from institutional development and operations to social interactions on the outcomes of governance and management of MPAs through three major dimensional groups related to (i) formal institutions; (ii) human behaviour, traditional cultures and social capital; and (iii) current socio-economic context.

(i) Formal institutional formulation and development:

This study has demonstrated the complexity of formal institutional development and its problems, which affect the governance and management of MPAs. These problems are derived from the ways MPAs are perceived and defined compared to other types of protected areas (e.g. special-use forest national park, wetland) in Vietnam. The ambiguity in defining MPAs created other formal-institutions-related problems. The organisation or agency mainly responsible for developing MPA-related policies and strategies was not clearly defined at the national level (**Section 4.3.1.1**). MPA policies and strategies were difficult to be operationalized, in practical terms, at lower levels (e.g. local community, district or provincial levels). Specifically, there were overlaps in allocating responsibilities among agencies responsible for governance and management of MPAs (**Section 4.3.2**).

The overlaps and gaps in responsibilities and mandates between the MPA authority and other agencies and stakeholders generated power conflicts for managing and governing the MPAs. Particularly, the asymmetric distribution of formal authority between the MPA authorities and other MPA-related sectoral agencies and stakeholders not only influenced the collaboration between the MPA authorities with these agencies, but also led to conflicts with resource users. Consequently, collaborative governance and management of MPAs became more difficult (**Section 4.3.2.2** and **5.3.2.2**).

This research also revealed problems associated with the management type and organisational design of the MPA authorities in the institutional structure, which acted as barriers to effective governance and management of MPAs. The organizational type of MPA authorities was different from administrative management agencies. This generated a number of barriers to the collaboration between MPA authorities and other agencies in management and governance of the MPAs. Furthermore, the MPA authorities were assigned different mandates from site to site. Nha Trang bay MPA was not responsible for entrance fee collection (a major financial source for a MPA – collected by Nha Trang City People’s Committee), whereas the other two MPAs collected the fees (**Section 5.3.2.1**). Similarly, different MPA authorities were designed differently at the various levels of the institutional organisational structure (**Sections 7.3.2**). The incongruity in management type and organisational level generated inconsistency and incoherency, in terms of organisational design, among the MPA authorities in the national MPA network.

The inconsistencies in management type and organisational level among MPA authorities weakened the potential for sharing management experience between individual MPAs.

Different MPA authorities applied different rules-in-use sets that made the institutional systems even more confused and separated. Furthermore, the MPA authorities held mandates for both MPA management and doing business within the MPAs when they were designed as a government business enterprise (**Section 5.3.2.1**). This design led to advantages in generating financial income, and disadvantages in collaborating with other agencies and stakeholders. Drawbacks included: (i) the MPA authorities did not have adequate influence on decision making processes for management and development activities, even within the MPAs; (ii) the authorities were not able to become the coordinating body for the collaborative governance and management of the MPAs; and (iii) some operational legal documents for governance and management of the MPAs were not formally approved. If approved, these would be used to require other agencies or stakeholders to collaborate with the MPA authorities in managing and governing the MPAs (**Section 5.4.2.1**). In other words, there were problems of institutional misfits between conservation and development objectives within the MPA authorities because of the organizational type of MPA authorities.

The ambiguity in responsibilities and mandates of MPA authorities designated as a government business enterprise made the MPA governance and management more ineffective because the policies and strategies at provincial level favoured development rather than conservation. These negatively affected the collaboration between MPA authorities, other government agencies, development stakeholders and local communities, to implement effective management and governance of MPAs (**Section 4.3.1.2**).

The research also revealed that the instability of organisations responsible for MPA governance at national level affected the governance and management of MPAs in the field. When the organisational structure responsible for MPA governance at national level is inconsistent, the long-term commitment of MPA authority staff at the local level was weakened (**Section 4.3.3**). That raised questions about the appropriate management type and organisational structure of the MPA authorities, e.g. whether it should be designed as a bridging organisation or integrated into existing governing agencies, as well as the appropriate organisational level at which the authorities should be located (**Section 7.3**).

The empirical investigations identified a temporal mismatch between the constitution of formal institutions and the establishment of the MPAs that made the practical performance of these institutions ineffective. Some MPAs were established before formal regulations approved and came into effect. Problems of incongruence between rules-on-paper and rules-in-use were also detected. According to Dietz *et al.* (2003), the governance of resources only becomes effective when related rules are available and generally followed with reasonable standards for tolerating

initial violations. While there were formal legal documents for governing MPAs designed at national and provincial level, only MPAs at provincial and communal levels were actually established. This resulted in confusion when implementing formal institutions at existing MPA sites. Difficulties occurred in the development and approval of operational institutions for management and governance of MPAs because of the lack of constitutional and collective-choice institutions (**Section 4.3.5 & Chapter 5**). This lack can be viewed as one of the primary causes of other problems related to formal institutions and governance of MPAs.

North (1990) describes institutions as constraints devised by human beings to shape political, social and economic interactions of humans. The role of human capacity, especially government staff who become dominantly involved in the development and implementation of formal institutions, is always important in the analysis of formal institutions. The empirical study identified the capacity of government staff, including quality and quantity, as a fundamental barrier to institutional development and performance for effective governance and management of MPAs (**Section 4.3.6**).

While a lack of formal education programmes related to marine resource management and conservation was identified as a major cause leading to inadequate staffing for MPA authorities nation-wide, some other problems related to the insufficient capacity of government actors were also detected in different MPAs. These were (i) a lack of technical knowledge or background in marine sciences, (ii) a lack of long-term vision and strategy, poor operational planning, and (iii) underpaid staff leading to high turnover and continued lack of experience and awareness about conservation management (**Section 4.3.6**).

In addition to the limited capacity of government staff, a lack of appropriate incentive sharing mechanisms available in formal institutions decreased the aspirations of government participants and made collaborative governance and management of MPAs more ineffective (**Section 5.3.2.3**). Collectively, the insufficient capacity of government staff coupled with the lack of appropriate incentive sharing mechanisms in formal institutions raised doubts concerning the potential viability and sustainability of the national MPA network in Vietnam.

(ii) Human behaviour, traditional cultures and social capital:

The empirical examination of customary regulations, including human behaviour, traditional cultures and social capital, indicated factors that influence the participation and collaboration of actors in the governance and management processes of natural resources and biodiversity

conservation. Behaviour or actions of individuals may influence and be influenced by other individuals and organisations to which they belong (Forehand and Gilmer, 1964, Mariotto and Paul, 1975, Hackman, 1976, Terborg, 1981, Chatman, 1989). The interactions between actors that lead to decisions can thus be affected, not only by an individual's behaviour and perceptions of particular participants, but also by collective social psychology. At the study sites, the collaboration between actors for MPA governance and management was weakened by the difference in working approach and long standing sector-orientation of the actors (**Section 5.3.1.1**).

In addition, the empirical investigations showed that personal relationships, especially among leaders of related organisations, were a 'soft' but 'strong force' for collaboration between the organisations. The personal relationships either helped or impeded actors to overcome 'tacit obstacles' towards decision making for MPA governance and management. Weak personal relationships were addressed as one of the underlying barriers to the effective governance and management of MPAs at the study sites (**Section 5.3.1.2**). This finding supported the results of similar studies about personal relationships and their influences on common-pool resource management (Putnam, 1993, Porter, 1998, Rhoads *et al.*, 1999, Lister, 2000).

The effects of personal relationships were even more apparent at the study sites, where formal institutions are not sufficient to constrain decision making, coupled with a social acceptance of personal relationships as a powerful factor (**Section 5.3.1.2** and **Section 5.4.1**). The empirical examination demonstrated that the interactions between state actors in MPA governance and management were affected by individual values and behaviour, and shaped by historical establishment of the villages and social perceptions (**Chapter 5**).

Traditional culture, norms and taboos, and social capital that have been formed by local communities or civil society over time, influenced the participation of actors in, and the effectiveness of, MPA governance and management. Social capital has been referred to as relationships of trust; reciprocity and exchange; common rules, norms, and sanctions; and connectedness in networks and groups (Pretty and Ward, 2001, Pretty, 2003). The empirical investigations indicated that social connectedness of fisheries communities was weak due to the establishment history of the villages and the impact of the French and American wars in Vietnam in the past. Most fishers migrated from different areas to fisheries villages for better employment, socio-economic conditions or to avoid wars. People having shared origins or family relationships normally lived together and possessed closer relationships. These relationships negatively affected the sharing of collective benefits from the implementation of decisions for governance and management of natural resources (**Section 6.4.1.3**).

In addition, conflicts arose with regard to resource use between groups in these communities who used different types of fishing gear. There was ‘unspoken’ social classification over origins, family relationships, and/or types of fishing gear. While bonding linkages (a connectedness or relationship between individuals in the same social class) were available and fostered, bridging linkages (a connectedness or relationship between individuals of different groups) and social linkages (connectedness among people in general) were loose. These weak linkages affected their collaborative participation as a group in governance and management of the villages, in general. These also generated other social issues for resource and environmental management (**Section 6.4.1.3 & 6.5.1**). Weak social linkages made governance and management of MPAs ineffective because of the high transaction costs of poor information and knowledge exchange between local communities, government actors and other stakeholders (Grafton, 2005).

Furthermore, the rapid change in population and introduction of different cultural values from other areas blurred local traditional cultures that have been perceived as a glue to strengthen social linkages. Although some taboos, norms and traditional events still exist in these communities, many others were reported to be no longer observed. In general, the changes in traditional culture, norms and taboos in combination with low social capital in fisheries communities, negatively affected the aspirations and active participation of local communities in the governance and management of natural resources. There is a need to restore the traditional cultures and norms to not only help administratively manage the villages, but also support the governance and management of natural resources (**Chapter 6**).

(iii) Socio-economic context:

Previous studies demonstrated that participation of local communities in natural resource management has not been effective and efficient in all the cases. But it can, at the very least, play a role towards more democratic, transparent, multi-dimensional and interactive dialogues, and is a pillar of effective governance (**Section 6.3**). Factors affecting the participation of civil society in governance, in general, can also influence the effective management and governance of MPAs. This research identified barriers to effective governance and management of MPAs. The degree of awareness of local communities and other authorities on environmental outcomes affected their participation in the governance and management of MPAs. Specifically, these stakeholders became involved more actively when they understood the

objectives and significance of activities or events as well as their roles in the governance and management processes (**Sections 5.3.1.1 & 6.4.1.1**).

The study found that MPA authorities have contributed significantly to the improvement of state and non-state actors' awareness and perceptions about the environment. It resulted in strengthening the relationships between local communities and other state actors and then, in turn, advanced the governance and management of MPAs. When social awareness and perception about the environment was enhanced, the people developed viewpoints and participated in deliberations about final decisions. These also prompted them to support or participate in longer-term environmentally-friendly activities or projects implemented within their location (**Section 6.4.1.1**).

The research demonstrated that economic conditions of local communities directly influenced their participation in the governance and management of MPAs. This influence was even more apparent for someone who lost a certain proportion of income because of the MPA establishment. Benefits from conservation outcomes have changed attitudes and behaviour of local communities about biodiversity. These have resulted in people having a better appreciation for, and more engagement with, biodiversity conservation (McNeely and Scherr, 2003). Similarly, social programmes that bring wild-resource-related income to local communities, have contributed significantly to the success of protected areas (Pretty and Smith, 2004). Conversely, ignorance of economic impacts on local communities threatened the success of the MPAs and their sustainability (**Section 6.4.1.2_I**).

The MPA authorities studied attempted to create alternative income generation activities for local communities, but most generated little sustainable benefits to local communities because of limited infrastructure and poor resources at the study areas. The investigations identified the creation of sustainable and substantial socio-economic benefits for local communities and other stakeholders as being one of the most challenging tasks for MPA authorities. An improvement of environmental quality was appreciated by local communities, whereas early tangible (economic) benefits from the MPA establishment was hardly ever achieved and accumulatively engendered more pressures on the MPA authorities. This weakened the expectation and trust of local communities and other stakeholders in the prospect of the MPAs in producing a good future. This weak trust, in turn, decreased their efforts to participate in governance and management of MPAs (**Section 6.4.1.2_II**). In summary, local communities can participate actively and sustainably in conservation if they recognize and receive direct or indirect benefits from these activities. Conservation-related benefits may not only change people's actions, but also their perceptions, behaviour and habits.

This study also showed that developing and maintaining an equitable and transparent mechanism for sharing benefits was necessary for sustainable governance and management of MPAs. Gillingham and Lee (1999) have shown that even where conservation-related benefits have sometimes been accessible to local communities, reciprocally-beneficial partnerships between local communities and the state for wildlife management have still not been able to be established because of inequitable distribution of benefits and empowerment. Sustainable natural resource management can be successful if it ensures fair resource sharing, and local communities have enough capacity to exclude others (Olson, 1965). Within the MPAs studied the benefits from tourism enterprises, such as hotel services, trades, entrance fees, did not flow to local communities, but primarily accrued to the private sector and government. The establishment of a fair and transparent incentive sharing mechanism became even more challenging than the generation of economic benefits for local communities. This mechanism not only needed a consensus of local communities and other stakeholders, but also required high support of policies or other legal tools approved by high-level government agencies (**Sections 6.4.1.2_III & 6.5.1**).

In summary, the three dimensions, including (i) formal institutional formulation and development; (ii) human behaviour, traditional cultures and social capital; and (iii) current socio-economic context, synthesized above helped understand and interpret research findings from empirical investigations into a more-structured multi-dimensional approach. All these identified forces were connected to establish an overarching interactive governance framework (**Figure 7.1**). This framework illustrated the mutual influences of these forces on the social interactions in exercising their power towards final decision making. This was also an operational tool to help policy makers, MPA practitioners and managers, further detect constraints, principles and potential interventions relevant to the interactions of actors in MPA governance and management processes.

In addition, this study indicated that there is no institutional and governance system that can be applied to all of the study MPAs. MPA authorities that are designed as bridging organisations and embedded within an open and flexible multilevel institutional and governance structure across scales are suitable for governing complex and uncertain MPAs in Vietnam. An adaptive co-governance approach is essential to improve effective governance and management of these MPAs and a national MPA network in Vietnam (**Chapter 7**).

In brief, this section (**8.2.2**) has demonstrated the achievement of the remaining research **objectives (3 & 4)** of this study. These, together with the work discussed in **Chapter 7**, not only strengthened research results, but also built the foundation for recommendations for the

further improvement of effective governance and management of the MPAs studied and others with similar context.

8.3 Implications of the research findings:

8.3.1 Implications for the combined institutions and governance analytical framework:

This study found that the combined institutions and governance analytical framework (in **chapter 3**) provided a conceptualisation of interactions and mutual influences between embedded entities on outputs and outcomes of governance and management of natural resources. The entities included formal and informal institutions, governance processes, and behaviour of actors that is partly shaped by different socio-political contextual conditions. Specifically, the framework divided these entities into two groups – formal and informal settings, to illustrate complex interactions and their impacts on the governance and management of natural resources through a diverse array of social dimensions. The study demonstrated the operational applicability of the framework through in-depth analyses of each framework's component. Theoretical applicability of the framework was confirmed through a multi-dimensional approach used in this research. It showed how the framework could be applied to the analysis of institutions and governance for other types of natural resources with complex interactions between humans and nature to improve their governance and management effectiveness.

8.3.2 Implications for understanding effective management of MPAs based on improved institutions and governance:

The findings of this research have contributed some empirical and theoretical insights related to institutions, governance and management of natural resources. First, they support the premise that when individual sectors with multiple stakeholders are managed under different legal mandates, then gaps and overlaps between these stakeholders will occur in governance processes (Young, 2002a). Secondly, this research identified how social characteristics and personal attributes of actors, organisations and stakeholders influenced their actions and interactions in governance processes. Its findings show that these gaps and overlaps, occurred in governance and management processes, can be mitigated depending on the efforts of individuals and organisations involved in the processes. For example, good personal relationships, leadership and communication skills of organisational leaders may help actors overcome institutional obstacles to collaborative decision-making for resource management and

vice versa. Thirdly, this study illustrated how power conflicts and inequitable incentives shared among actors, state and non-state, negatively affected the collaborative governance process. These latter findings support the premise that decision making for environmental governance requires a perception of social justice (Hegtveldt and Markovsky, 1995). The asymmetric distribution of information, power and other transaction costs is likely to influence inter-organisational relationships (Imperial, 1999b). People are satisfied with decisions, and support decision-makers or authorities when they feel they are treated fairly and receive fair outcomes from these decisions (Link and Tyler, 1988). Equity is a key criterion for analyzing effective institutional performance (Imperial, 1999a) and achieving economic, social and environmental dimensions of sustainable development (Adger *et al.*, 2003).

This research contributes to concepts about the problems of mismatched scale within linked social-ecological systems (Cumming *et al.*, 2006). It supports a premise that temporal mismatch between biological systems (MPAs) and human institutions can degrade marine ecosystems (Crowder *et al.*, 2006). The study indicates that when the times for establishing MPAs and constituting formal institutions for management of MPAs are mismatched, severe problems emerge in governance processes. For example, actors have no idea how to design organisational structures for the management of MPAs or approve operational legal documents due to a lack of guidance from constitutional and collective-choice institutions. This creates incongruence between rules-on-paper and rules-in-use or a mismatch between regulated institutions and practical governance. Locally-managed marine protected areas are governed without formal constitutional and collective-choice institutions, whereas marine protected areas designed at the national level are defined in formal institutions, but not available in practice. This implies that the problem of temporal mismatch (e.g. between MPA establishment and institutional formulation) should be considered at the outset of MPA network establishment.

This research indicates that governance and management of natural resources requires mutual trust between government and civil society (**Section 7.2**). The support of government for natural resource management sites governed by a community is essential (Rudd *et al.*, 2003). Moreover, social capital of both state and non-state actors can sustain governance and management of natural resources (Pretty, 2003, Rudd *et al.*, 2003). The integration between formal and informal institutions is, indeed, essential for short and long-term effective governance and management of natural resources.

Finally, this study also highlights the importance of combining multiple theories related to institutions, governance and management to develop a comprehensive understanding of the interactions and mutual influences among these entities in the complex world of natural

resource management. The overarching interactive governance framework (**Figure 7.1**) developed from these research findings illustrates the complex interactive relationships among important factors related to institutions and governance. However, a diverse array of theoretical concepts (e.g. social psychology, organisation, social learning) is necessary for explaining multiple, interactive and cumulative stressors. These are driven by institutional, governance and socio-political contexts of linked social-ecological systems. This also supports the premise that problems generated by fragmented management and mismatches between entities become more complex and especially severe in systems affected by multiple, interactive and cumulative stressors (Crowder *et al.*, 2006). Moreover, the established overarching interactive governance framework also assists MPA managers and practitioners in addressing potential interventions or solutions to separately or simultaneously improve governance and management effectiveness of the MPAs.

8.4 Recommendations

8.4.1 Recommendations for formal institutions:

1. **Improve constitutional and collective-choice institutions related to marine resource conservation and management**, especially, through the devolution of rights and mandates for development and approval of operational institutions to local authorities. This research shows that it is very difficult for the local level - operational actors or acting agencies to develop, appraise and approve operational institutions without rights and mandates devolved from the national level or prescribed in constitutional and collective-choice institutions. When formal institutions are decentralized, flexible and adaptive, the operational levels must be more self-organizing and have active controls in making decisions within their assigned power for locally relevant cases. They can make timely actions, faster decisions and be more responsible for governing and managing emerging problems. These may not only reduce the time and transaction costs, but also ensure the operators to make right and more-responsive actions or decisions for these processes. The governance and management of MPAs in this situation would be more effective.
2. **Institutionalize the regular monitoring and support of in-line governing agency/level in legal documents decided at the national level.** The research shows that a barrier to interagency collaboration arising from power conflicts can be overcome if there is monitoring and timely intervention from higher levels. The regular

and appropriate support of a Provincial People's Committee (PPC) should be prescribed clearly in legal documents such as an inter-agency collaboration mechanism. For example, at Nha Trang Bay MPA, all agencies and partners must abide by decisions of the Khanh Hoa PPC. The MPA Authority could have better support from other agencies and partners for inter-agency collaborative governance in the MPA if there were frequent interventions made by the PPC for this process. The Authority, in this case, could have a management plan and other operational rules timely approved by responsible agencies and PPC. Problems of inter-agency collaborative governance could be significantly reduced.

- 3. Encourage the development of alternatives to formal institutions especially for operational rules**, such as Memoranda of Understanding and/or contracts, which vary depending on the rationale and scope of the MPA. It is evident from the research findings that some operational rules applied to a specific marine protected area require approvals and guidelines from high level authorities. These take a long time to be issued and sometimes create other unnecessary controversial issues. These also need to engage a number of responsible actors and agencies. Such legal documents may apply to a large spatial scale, but may not apply to the practical problems of a particular locality. These may also not meet the requirements and consensus of the to-be-governed actors. In this case, alternatives to formal institutions, such as Memoranda of Understanding and/or contracts, seem more suitable. These only require the engagement and agreement of major actors to develop and approve, and have more focus on local problems. Locally developed processes can be more effective, in terms of time and costs, for the approval of operational rules, as well as delivering more efficient and effective implementation. The products of these processes may also be timely and simply adapted to changing situations of the locations.

Nha Trang Bay MPA is an example which has spent a long process and much effort to discuss, but not yet attained, a formal inter-agency collaborative mechanism. Significant results in enforcement activities, however, have been achieved thanks to the collaboration with Provincial Border Military Agency signed as a bilateral contract by the two agencies. This type of contracts or agreements with other agencies or community associations is recommended to help the Authority effectively engage them in related activities for collaborative governance of the MPA.

- 4. Review and clarify responsibilities and mandates of related agencies to improve coordination of marine conservation activities.** Marine protected areas are usually

used by a large number of resource users and governed by a range of functional agencies. A diverse array of problems may consequently occur. Conflicts of power and resource uses may be unavoidable. It is evident from this research that there are some overlaps and gaps in responsibility allocation within and between state and non-state actors. These have impeded the governance and management of MPAs. Therefore, all responsibilities and mandates of the existing agencies and stakeholders as well as other regulated issues should be reviewed and clearly defined in formal legal documents to minimize conflicts of power within/between these agencies in governance and management activities. This process should be organized and conducted by national responsible agencies. Meanwhile, other management tools, such as regulated areas, quotas or timing, seasonal prohibitions *etc.* can be used to reduce conflicts of resource uses. These tools should be discussed, agreed and institutionalized in formal legal documents, if these are applicable. If this recommendation was implemented at Nha Trang MPA, this authority could have explicit and stronger mandates, and be more active for resource-use enforcement and management. This would significantly improve the natural resource coordination and governance processes in the MPA.

5. **Institutionalize a fair, appropriate and transparent incentive sharing mechanism among participating agencies and civil society.** The current study finds that inequitable and implicit incentive sharing can be an underlying barrier to collaboration between state-agencies and participation of local communities for effective governance and management of MPAs. The development and institutionalization of an equitable, accountable and transparent mechanism for sharing benefits from conservation will help foster aspirations, and maintain commitments of participating actors for better governance and management of natural resources. This mechanism could be established at Nha Trang bay MPA, for instance, by widely discussing and agreeing with relevant actors and stakeholders. It must also be clearly described in operational legal documents (e.g. management plan, inter-disciplinary collaborative agreement, management regulations) for related actors and organizations to implement. As a result, they would be more motivated to get involved in this MPA collaborative governance to achieve its outcome proposed.
6. **Prescribe priorities related to employment and routine sharing resources for the local communities (e.g. a certain proportion of benefits derived from conservation and environmental protection) in MPA management and development policies.** This recommendation was suggested by local actors and discussed with other stakeholders in the research to help improve the equity in conservation benefit sharing.

This is a substantial strategy to not only recognise tenure, but also increase ownership, of local communities over natural resources. These then help transform their behaviour and facilitate them to understand, appreciate and act the environment in a more environmentally-friendly manner. For example, Khanh Hoa PPC would be able to issue guidelines or regulations related to economic development within Nha Trang Bay MPA. Any developers or investors must commit to provide a certain proportion for employment of local communities and environmental contribution that are stated in their investment project proposal. This would help the developers demonstrate their responsibility with the place where they can earn benefits from. Furthermore, local communities would have better support and positive reactions with the developers. This reciprocal benefit sharing would lead them to doing more responsible actions with the MPA that might improve the outcomes of MPA management.

7. **Prioritize capacity building for marine resource conservation and management in national government policies.** Results from this study indicate that MPAs in Vietnam have had some problems with the capacity of government actors, including quality and quantity. Developing a campaign of capacity building (e.g. formal training and educational programs) related to marine resource management and conservation for government actors is recommended. It should be institutionalized into national capacity building policies to mobilize efforts, resources and support from available national and international channels over the short and long-term.

8.4.2 Recommendations for organisational design/structure of MPA authorities and other actors:

1. **Develop a national organisational system of MPA authorities based on a bridging organisational model.** It is evident that MPA governance and management are processes requiring the participation and consensus of multiple stakeholders, including state agencies, local communities, private sector, NGOs, media and others, to deal with internal issues and external threats. Therefore, the MPA authority should be designed as a bridging organisation (**Section 7.3.4**) to easily mobilize resources and support from the various related stakeholders and communities. Furthermore, they can reduce conflicts among these stakeholders. The MPA authority should facilitate and consult with stakeholders to operate, rather than focus entirely on, management duties. Major legal tools that the authority should use for its operation should be ‘semi-formal’ legal documents, such as Memoranda of Understanding, contracts, agreements *etc.* These are

signed between related actors or between governing and to-be-governed bodies rather than formal rules (see more explanation at **recommendation 2** of **Section 8.3.1.1**). All MPA authorities must be a member of this national organisational system that has intermediary responsibilities for facilitation and consultation about the governance and management of MPAs throughout the country. The establishment of a national organisational system of MPA authorities would help strengthen the voice and legitimacy of MPA authorities in influencing the development and approval of institutions for MPA governance and management. The recommended organisational system can be self-organizing and adaptive, and should be coordinated by a national-level agency. This system should be powerful enough to discuss MPA-related issues which occur at individual MPAs and work with other sectoral agencies to develop and receive approvals for a consistent set of policies and formal legal documents for the whole national MPA network. This would help reduce unnecessary competition and conflicts from other organisations.

2. **Strengthen the existing social MPA network.** The research finds the existing social MPA network useful for MPA-related stakeholders, including state and non-state actors, to mutually share experience, difficulties and lessons learnt (see page 8). However, there is not yet a stable organisational structure and operational mechanism for this network. It needs to be strengthened by reforming the management personnel and related policies for the network. These include a stronger commitment and support from the responsible agencies; technical and financial orientations by MPA-related NGOs; capacity enhancement for a network-moderation board; and strengthening motivation of network members.
3. **Establish an interactive dialogue as a formal mechanism for all actors, including state, non-state actors and other potential stakeholders.** When the MPA authority is designed as a bridging organisation to facilitate and consult the governance and management of the MPA, all the MPA-related information flows or data relevant to the completion of its duties need to be readily accessible to all the related stakeholders. This recommendation could be implemented at Nha Trang Bay MPA, for example, by firstly strengthening the roles and capacity of existing Village MPA Committees and the MPA Authority. Each Village MPA Committee can be an effective branch to help connect local people, the MPA Authority and other stakeholders if its members are enhanced their working and communication capacity. Next, the Authority should create interactive dialogues for local communities, Village MPA committees and other related stakeholders to communicate, share and get understanding their interested issues

related to the MPA. These can be formal or informal dialogues, forums and deliberations through meetings, workshops or any other technological means (e.g. websites, letter box). The mechanism for organizing dialogues as well as collecting, processing information and disseminating decisions, outputs or outcomes related to MPAs must be formal and transparent. It must be known to and trusted by the participants. This would help the MPA Authority complete their missions in management and governance of the MPA by connecting, facilitating and consulting actors in an effective and timely manner.

8.4.3 Recommendations for informal institutions:

- 1. Urgently restore informal institutions, including customary regulations, taboos, norms, traditional cultures and events.** This research indicates that most taboos, norms and traditional cultures of local communities residing within and nearby MPAs have been perceived as a ‘glue’ to help connect and constrain people for better administrative management at the village scale. However, these have been lost or rarely handed down from old to young people. Effective governance and management of MPAs through local community participation requires conserving existing informal institutions in communities and recovering parts that have been diminished. Currently, there are few elderly people, who mostly understand these traditional cultures and customary regulations within the communities, thus the recovering actions should be taken urgently before these people die. This recommendation could be realised at Nha Trang Bay MPA, for example, if there was consistent encouragement and financial support from government (local and higher levels) and strong efforts from old people and local authorities. They could organize activities, such as competitions and seminars, for young people to search, learn and understand the history and existence of their cultures and customary regulations. The activities would promote all social categories including ages, sexes, occupations and religions to get involved in sharing and providing their knowledge and experience about these.
- 2. Encourage the pride of local communities over conservation of local natural resources and culture.** It is recognized from this research that the pride of local communities over local traditional culture and natural resources made people more self-motivated in conserving them and handing them down to younger generations. This partly supports the governance and management of natural resources. This pride can be conceived, understood and fostered with the help of public media, information exchanges and communication among insiders and outsiders, or oral transmissions

from older to younger people within the communities. Regular communication, presentations and dissemination about the specialties and values of local traditional cultures and natural resources within communities would help maintain and encourage pride in local communities. The encouragement of local pride and recovery of customary regulations and traditional culture would be much more effective and efficient, if support and guidance from the government and professional experts (e.g. providing policies, techniques and finance) are consistently received.

8.4.4 Recommendations for governance of MPAs

- 1. Build up and foster interdisciplinary collaborative behaviour within and between state and non-state actors.** This study indicates that collaboration between actors is mostly constrained by the decline of traditional culture and social capital as well as sector-oriented strategies and interests. Moreover, the collaborative behaviour helps gather people and mobilize social resources to effectively achieve common-shared goals. In the short-term, it is recommended that policies that encourage actors within and between sectors to collaborate with each other for governing and managing natural resources, should be developed and issued. As reviewed and found in this study that human behaviour can be shaped and changed over time based on intrinsic values and contextual conditions. For building long-term interdisciplinary collaborative behaviour between the actors, it is necessary to have awareness raising programs through training or even formal education. This could provide a solid platform to shape and foster interdisciplinary collaborative and responsible behaviour or values towards sustainable development, including effective environmental governance and management.
- 2. Promote integrating formal and informal institutions in governance of existing MPAs.** This research reveals that there is a vacuum between formal and informal institutions as well as between state and non-state actors. In addition to actions to recover informal institutions and dialogues between the actors (as recommended above), the strategy and approach for applying and integrating informal and formal institutions for environmental governance is essential to improve effects of these environmental governance and management processes.
- 3. Conduct an adaptive collaborative governance trial with a MPA authority.** In this trial, the MPA authority should be established as a bridging organisation and use flexible institutions to govern the MPA (as discussed and suggested in **section 7.3.5**). The trial should be started with local or district level. One village of Nha Trang Bay

MPA could be a trial for this recommendation. Specifically, a Village MPA committee of this village should be formed as a bridging organisation. It consists of representatives from local communities, local authority (on behalf of state actors) and related stakeholders (i.e. tourism sector, fisheries associations). This organisation would gather related people to develop appropriate regulations to govern and manage the assigned marine area. The lessons learned and experienced at this site will be then communicated and applied at other sites and higher levels. This campaign can orient the whole national MPA network towards an adaptive collaborative governance and management approach to achieve a more effective, adaptive and resilient network.

8.4.5 Recommendations for effective management of MPA network in Vietnam

- 1. Develop practical guidelines for MPA establishment, governance and management fitting with socio-political conditions of Vietnam.** This study finds that the capacity of government actors is not sufficient for effective governance and management of MPAs. Technical support from abroad has been used, but is not sustainable. Several MPAs of the national MPA network have already been established, while others are underway. The development of practical guidelines that are suitable for the socio-political conditions of Vietnam, based on lessons learned and results from established MPAs and contributions of national and international experts, is necessary. These would be very useful for MPA-related policy makers, managers and practitioners when establishing new MPAs. The guidelines should be developed by a MPA-related interdisciplinary group of national and international experts that is coordinated at a national level. These should consist of all steps and formalities needed, including the selection of a site, establishment, organisation, governance and management of MPAs. The guidelines not only help related actors develop operational institutions for establishing and managing specific MPAs, but also provide a consistent set of criteria for achieving the overall goals and objectives of the national MPA network. Furthermore, the guidelines should be reviewed periodically to update information, share experience, and supplement new knowledge from national and international MPAs. Predetermined principles drawn from any particular model may not be applicable to all situations. Nevertheless, the guidelines or protocols would be very useful for practitioners and policy-makers, at least at the initial stages.

2. **Develop a national monitoring, evaluation and ranking system for adaptive management procedures for the national MPA network.** It is evident that the MPAs in Vietnam that have been established, governed and managed, have different goals and objectives. They, therefore, have different monitoring programs with respect to criteria to assess achievement of their objectives. However, from a national perspective, there should be a standard system of criteria and methods/guidance for measuring or monitoring the management and governance outputs and outcomes of individual MPAs in Vietnam. This system should be developed in conjunction with the above guidelines and also coordinated at a national level. It is very important to update the status and evaluate the management and governance effectiveness of all MPAs within the national network and then provide timely adjustment, consultation or support to ineffective sites. This system can illustrate an overall view of the whole network and thereby help the government or responsible bodies to monitor and orient activities and related policies for the management and governance of MPAs over the whole country. Moreover, it helps connect activities and objectives at different localities to long-term strategies and action plans related to natural resource management and conservation of the nation. This system should be developed with the contribution of multiple stakeholders through an interdisciplinary collaborative approach. It should be referred to other existing systems in the region or globally for further applications at a larger scale in the future.

3. **Establish a meta-database of the MPA network in Vietnam.** This study has identified that the national MPA network was planned and recently approved by the Government. Some MPAs were established, but there is not appropriate infrastructure for the MPA managers, practitioners, scientists, policy makers and local communities to share information and experience. They are not able to update information, understand issues of or threats to the MPAs. The MPA authorities, thus, cannot mobilize all the existing resources from the stakeholders for the MPA management and governance. Development of a meta-database that the MPA-related stakeholders can access, update and share MPA-related information is essential. Additionally, it can contribute and share information with other MPAs of the regional or global MPA network. Interested audiences worldwide could get information and lessons learnt from the national MPA network in Vietnam through this database.

This meta-database should include all relevant information about individual MPAs and its management outputs, outcomes, and the MPA network information, development

strategies and policies. The database should be developed and coordinated by a national agency responsible for collecting required information. It consists of datasets developed based on the information provided by data custodians through data forms. A consistent and long-term mechanism to encourage individual MPAs to provide data and update news to the database in certain periods of time is a requirement.

Conversely, this mechanism should also bring incentives or benefits to data suppliers. These can be financial support through formal channels, introducing in-need MPAs to potential donors, providing technical advice or warnings drawn from the database. These help MPA managers, practitioners, policy-makers and communities have timely and adequate decisions for MPA governance and management, or be well-prepared to confront with an environmental degradation tendency. These incentives may help data suppliers sustainably engage with the database.

8.5 Research limitations and directions for future research

This research has revealed the factors that impeded the governance and management of MPAs in Vietnam. It has also indicated solutions that could help improve the effective governance management of the MPAs and national MPA network. However, it has three limitations. First, data collected from interviews with state actors at provincial level were most from Nha Trang Bay MPA because some of invited actors at the other sites (e.g. Con Dao, Halong) were not available at the study time. This limitation also occurred with some actors at national level. In addition, the research issues related to institutions and governance are perceived as susceptible to research participants. So some participants were not open and others were embarrassed to provide information or discuss the research issues. Therefore, it may be insufficient to generalize the research findings for all the MPAs in Vietnam.

Second, this study used a qualitative approach to seek and construct the ‘real’ story about institutions, governance and management of MPAs in Vietnam. It elucidated the process of the story. It would be more significant if quantitative data related to the management of MPAs studied are supplemented to better demonstrate the outputs and outcomes of establishment and management of the study MPAs and national MPA network. These are affected by multilevel institutional and governance issues, coupled with specific socio-political context.

Third, this study has analyzed and considered the institutions, governance and management of MPAs within the scale, rationale and scope of Vietnam. In the meantime, the vertical interplays

and influences from regional or international scales (e.g. policies and contextual conditions) on the social interactions and governance at lower levels have been studied and recalled by scientists, especially in this globalization age. These influences have been excluded in this study. This can be a useful notion for future research.

In addition, this study draws attention to the value of a multi-dimensional approach to integration of social theories for understanding the interactions of institutions and governance and their effects on effective governance and management of MPAs. In other words, the human sub-system has been concentrated on, rather than the natural sub-system, within the linked human and natural systems of this study. This approach has helped answer research questions about how social interactions, institutional development, change and operation have affected the effective governance and management of MPAs. If this research aims to understand the sustainable and effective governance and management of human and natural systems, future studies should consider benchmarked baseline data, according to identified natural and social indicators, at different milestones for a comparison. This is not only to illustrate the influential process (e.g. the influential processes of social interactions on the decision making in this study), but also provide quantitative evidence of outputs, outcomes based on numeric benchmarks and indicators. In this case, the overarching interactive governance framework developed in this study (**chapter 7**) would be converted into a more-practical model with input and output data. This model would not only illustrate cause-effect relationships of social and natural interactions and their outcomes (as the framework developed in this study), but also provide a final product equivalent to the particular input data. The model would be a decision-support tool for MPA-related managers, practitioners and policy makers. Ultimately, an interdisciplinary approach of social and natural dimensions would be practically applied to the study of sustainable and effective linked human-natural systems.

This research also indicates that a community self-governance model with relevant pre-conditions, including (i) legitimacy; (ii) capacity building for local communities, (iii) finance relating to management cost and benefit sharing mechanism; and (iv) regular support of and supervision by government, can be beneficial for practical application towards marine protected areas or natural resource management, in general. These results were drawn from discussions between policy makers, managers, practitioners, communities and researchers based on participants' experience and current situations of local communities and government at each study site. Further study is required to confirm these predetermined requirements. Comparative research with referential models (successful sites) can be useful to demonstrate the effectiveness of community self-governance initiatives. To do this, a conceptual framework of measurable criteria reviewed and drawn from successful sites should be developed initially.

The framework would be used as a foundation for comparative research among study sites. The outcomes of such research would be a practical manual for implementing community self-governance, in addition to other existing diverse governance approaches, for common-pool resource governance and management. Meanwhile, some questions related to this model need to be taken into account for these further studies. For example, natural characteristics (e.g. spatial scale - what size of MPAs is suitable for being self-governed by communities, target conserved species – e.g. static vs. migratory species, single vs. multiple species, for management and conservation), characteristics and attributes of local communities (e.g. management capacity and experience, homogeneity, basic environmental values, available customary regulations) and social-political context (e.g. decentralization or devolution in legal rights to natural resource management, democracy in voice and influence of local communities in decision making for natural resource governance and management).

It would also be of interest to conduct a comparative study about the hierarchical characteristics of a MPA organisational system for governance and management and their relative success. When comparing national MPA systems of Australia and Vietnam, both are currently designed with hierarchical structures, but their outputs and outcomes are totally different. The researcher assumed that the differences in social-economic, institutional and other contextual conditions or a combination of all of them (e.g. immature institutional system, or social capital and capacity of actors and resource users) are driving forces for these different consequences. In other words, contextual conditions could be reasonable causes for different results of these systems. Nevertheless, when reviewed, the Great Barrier Reef Marine Park (GBRMP) in Australia and the Wetland Landscape – Ecomuseum Kristianstads Vattenrike (EKV) in southern Sweden are both from developed countries, which are assumed to be more or less similar in socio-economic and other determined contextual conditions. While GBRMP is managed by a government authority, EKV is designed as a bridging organisation, but both of them are evaluated as successful management sites. Therefore, the author is very keen to further address questions, such as: does the organisational structure really affect the results of management and governance of natural resources on the ground? If so, how and why are different consequences manifested? Would a hierarchical organisational system of MPAs managed by the government of Vietnam also be successful? A government authority or bridging organisation - which one is better and what contextual conditions are compatible or required for each of these organisational designs? Are there any other causes in addition to contextual conditions? Such questions may provide significant directions for future research.

8.6 Conclusions

To conclude, the interactions and mutual influences between institutions and governance as well as their effects on effective governance and management of MPAs is complex and also dependent on socio-political context. This study has synthesized and used a diverse array of social theories to interpret the research findings. The ultimate goal of this research is to develop a better understanding of the nature of interactions and mutual influences of multilevel institutions and governance and perceived contextual factors. This could subsequently lead to more effective governance and management of marine protected areas has been achieved.

Institutional features of the current administration and management of MPA authorities make them unique and isolated from the bureaucratic system of the Vietnamese Government. These include overlaps in responsibilities among agencies, sector-oriented strategies, working approach, and inconsistency in organisational structure across levels. In addition, while the MPA authorities are characterised by both conservation and development duties and have weak influences on institutional development and enforcement, the in-line management agencies (Provincial People's Committees) favour development rather than conservation and provide vague legal support to the MPA authorities. The MPA authorities also receive better support and recognition from local communities thanks to the improvement of environment, awareness and their image via environmental education activities, and economic benefits through alternative income generation activities. All of these jointly drive the MPA authorities even further away from other administrative agencies. These create barriers between the MPA authorities and other related agencies, and in turn increase the possibility of failure for management and governance of MPAs in Vietnam.

This study indicates that while a national MPA system has been expanded into new sites, at the same time existing MPAs are still encountering institutional and governance problems for improving their effective governance and management. This may engender more serious mismatch problems between organisational and ecological scales for management and result in more ineffective 'paper MPAs' appearing. Overall, improvement of the existing institutions and their performance towards adaptive collaborative governance and management systems for MPAs is essential. It may be necessary to firstly reform the multilevel institutions and organisational structure of MPA network to make them more flexible, and then develop new partnerships between MPA authorities and other related organisations and stakeholders. A collaborative governance approach has potential for application with this network. These relevant interventions should be seen as iterative experiments for learning to enhance the

adaptive capacity of social systems. They would also help ensure social systems compatible with the ever-changing natural systems. Additionally, the recommendations made above should be considered for improving these processes.

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Appendix 1: Questionnaires for interviewing local participants

1. Household general information

1.1. How many people are there in your household?

How many are actually living in your house?

1.2. How many males and females are there in each age bracket?

Years 0 - 15 16 – 54 Over 55

Males

Females

1.3. Where are you originally from (were born here or migrated from somewhere else)?

1.4. How long have you been living here?

1.5. What are present principal occupations of a household head and a partner?

2. Awareness of the local people about, and their participation in, the MPA?

2.1. Have you heard about the MPA in, or nearby, your area?

2.2. Do you know the objectives of the MPA? Who is responsible for this MPA? What activities is the MPA MB doing?

2.3. Did you participate in any of the MPA activities?

___ YES ___ NO

2.4. If yes, which ones?

- AIG Activities
- Study tours
- Planning meetings
- Clean-up activities
- Others, specify

2.5. If no, why did not you participate?

2.6. Do you know any threats and/or resource use conflicts that are occurring at this MPA and what are the reasons for these threats/problems?

For example:

- Coral reef degradation
- Overfishing
- Destructive methods of fishing
- Unabated tourism activities
- Unregulated infrastructure development
- Pollution from indiscriminate waste disposal
- Pollution from unsustainable aquaculture practices
- Pollution from agricultural run-offs
- Others.

2.7. Do you think there is enough participation from the residents in making and implementing management activities for the MPA?

YES NO

- If not, what do you suggest to increase people's participation in planning and implementation of the MPA?

2.8. Do you think there is enough participation from the other stakeholders, e.g. tourists, resort owners, dive-shop operators, restaurant owners, researchers etc. in making and implementing activities for the MPA?

YES NO

- If not, what do you suggest to improve the participation of other stakeholders in planning and implementation of the MPA?

- 2.9. What other activities should the MPA do to improve the environment of the area and the socio-economic conditions of the residents?

- 2.10. Do you think what kind of responsibility or management activities the local communities can share with the MPA MB? Is the responsibility sharing important and why?

- 2.11. Do you think local people have enough awareness and capacity to take/share these management responsibilities with the MPA MB? Why and why not? How can we improve the awareness and capacity of local communities to successfully share these responsibilities?

3. Common rules, norms and sanctions

- 3.1. Do you know the zoning map of the MPA (Core, buffer, transition zones)? YES NO

- 3.2. If yes, how can you know? Can you describe or draw a zoning map?

- 3.3. Are you satisfied with this zoning? YES NO.

- 3.4. Why and what are/(not) you satisfied with the zoning? How about your neighbours (as you heard)?

- 3.5. Do you hear about management rules, regulations of MPA?
 YES NO

- 3.6. How can you know (by which means/whom)? Are you happy with the rules, regulations?

- 3.7. Are there any available village norms or taboos related to the marine resource protection/exploration? The reasons/causes
 YES NO

4. Ownership – Benefit sharing mechanism:

- 4.1. Is there benefit sharing mechanism from conservation activities in these communities? YES NO

- 4.2. Who do get involved, in sharing, or be shared by, the benefits of the results of MPA management, conservation and protection?

4.3. What kinds of benefits (including tangibles and intangibles) can the local people/communities receive from the MPA management, conservation and protection?

4.4. If yes, how can the people share the benefits? And are they happy with them?

5. Reciprocity and exchanges:

5.1. Do local people/communities have special fishing rights in some specific areas which the outsiders don't have?

5.2. If yes, can they exchange the rights each other? Or is there any reciprocity forms?

5.3. Do local people/communities have special benefits (including tangibles and intangibles) or authority compared with outsiders?

5.4. What can encourage the local people to get involved in the conservation activities organized by the MPA authority?

6. Leadership – Partnership:

6.1. Who normally lead or organize the conservation or MPA management activities?

6.2. Do you think an existing management approach which has been applied in this MPA is suitable? If not, how can it be improved or changed?

7. Relations - trust:

7.1. Do you think the MPA is being managed well and the reasons for your answer?
___ YES ___ NO

7.2. How about the enforcement team? Do they work well?
___ YES ___ NO

7.3. How about the relationships between local people and enforcement team? The reasons for these relationships?

7.4. Have you or your neighbours been captured by them? If yes, what was the reason for being captured? Where was it happened? Day or night time?

7.5. Will you inform the enforcement team of the MPA if you know or hear any illegal activities conducting in the MPA?

7.6. How can you inform them? Through:

Village MPA committee _____ Telephone _____

Radio _____ Others, specify: _____

7.7. Do you think the current management structure, i.e. the MPA authority, can continue to improve the MPA and the socio-economic conditions of the residents?

___ YES ___ NO

- If yes, on a scale of 1 to 5, please rate the effectiveness of the current MPA authority in enforcing rules and regulations for the MPA management, using the following scale: 5 = excellent, 4 = very good, 3 = good, 2 = bad, 1 = very bad.

- If no, what do you suggest should be done to improve the management structure?

8. Connectedness in networks and groups:

8.1. How about the relationship among local people?

8.2. Are there different groups in the village (such as, religions, ethnics, education)?
___ YES ___ NO

What are the reasons for this social-class prejudice?

8.3. Are there any barriers to the communication among different groups to achieve a consensus for common issues at the village?

8.4. Do all local people agree with the MPA establishment? Why and why not?

9. Traditions and culture:

9.1. Are there any traditions or cultures which may positively or negatively affect the conservation tasks or MPA management?

9.2. How important are these traditions and cultures to the local people?

- 9.3. How have these traditions and cultures been conserved? Any difficulties for these tasks and solutions/suggestions?

Others:

- Special anthropological characteristics of the villages and their local communities (e.g. establishment history of the villages, origins of the villagers...)
- Social norms and taboos of the communities
- Ancient stories that have influenced behaviour, belief and perception of local communities over time?
-

Appendix 2: Questionnaires for interviewing MPA managers and key staff

1. Common shared goals/objectives:

- 1.1. What is the goal and objectives of the MPA?
- 1.2. Do the staffs understand clearly the goals and objectives of the MPA?
___ YES ___ NO
- 1.3. Does the Marine protected area authority/management board (MPA MB) have any strategies or activities to help staff understand the goal and objective of the MPA? What are these?
- 1.4. Are there any overlaps or conflicts between responsibilities of the MPA and other agencies'? How can the MPA MB share goals and objectives with other related agencies (and how often)?

2. Coordination among the government agencies:

- 2.1. Is there communication system/means for sharing and updating information between the related/acting agencies?
___ YES ___ NO
- 2.2. Is there any coordination mechanism/network among related agencies?
___ YES ___ NO

- 2.3. Are there any Memorandum of Understanding (or other agreements) related to interagency collaboration/coordination, signed by the actors/acting agencies? If so how is the implementation of these agreements?
- 2.4. How often the acting agencies meet each other? Are there any agreed routine meeting between acting agencies for sharing information? If so, how do the agencies participate in these meetings? Any difficulties?
- 2.5. Who takes leading role to coordinate the activities of the mechanism/network? Is this role accepted by other participants?
- 2.6. Is there any mechanism/policy for maintaining the network of the agencies?
 YES NO
- 2.7. Any difficulties in coordinating the network? If yes, what are these?
- 2.8. What can be potential solutions to solve these problems/difficulties?

3. Collaboration – Participation (Internal and External):

- 3.1. How often the MPA MB meet local communities/their representatives to share information?
- 3.2. Are the local communities involved in the planning and management activities of the MPA? What and how?
- 3.3. Who takes leading roles in the participatory activities between MPA and local communities?
- 3.4. Are there any difficulties in working with local communities?
 YES NO
- 3.5. What kind of responsibility or management activities can the local communities share with the MPA MB?
- 3.6. Do you think local communities have enough awareness and capacity to share these management responsibilities with the MPA MB? Why and why not?
- 3.7. What are advantages and disadvantage when the MPA MB shares the responsibilities with local communities?
- 3.8. How can we reduce the disadvantages and promote the advantages?

4. Guidance to implementing agencies:

- 4.1. Is there any guidance for implementing agencies to fulfil the shared management tasks? YES NO
- 4.2. Who developed the guidance? How was it formed? Any difficulty?
- 4.3. Do the implementing agencies understand explicitly the procedure and mechanism for implementing the participatory enforcement/management activities? Why or Why not? And any difficulty?

5. Ownership – incentive sharing mechanism:

- 5.1. Who get involved, in sharing, or to be shared, benefits from the results of the participatory activities or actions?
- 5.2. Is there any existing incentive sharing mechanism for participating agencies/staff?
 YES NO?
- 5.3. What are incentives for participating agencies? And where are these from?
- 5.4. How do the acting staff/participants satisfy with these incentives for conducting the participatory management tasks?
- 5.5. Any problems and the potential solutions to solve these problems?

6. Socio-economic and political context:

- 6.1. Are there any socio-economic and political issues/opportunities for the management of the MPA? Please specify?
- 6.2. Any socio-economic and political events or specific conditions which may be opportunities or threats to the MPA management? Please specify?

7. Staff and their long-term commitment:

- 7.1. How many staff are working for this MPA?
- 7.2. How many permanent and temporary, part-time staff?
- 7.3. Are there enough staff, in term of quantity, for operating MPA management activities?
- 7.4. How about the capacity of the staff?
- 7.5. Are there needs of capacity building for staff?

- 7.6. How long have staff been working for the MPA (in average)?
- 7.7. How about the satisfaction and intention of the staff while working with the MPA?
- 7.8. How about the commitment of staff to the development and management of the MPA?
- 7.9. How do they collaborate with each other to implement the management tasks?
- 7.10. Any coordination problem between the staffs to implement the management activities? Please clarify?
- 7.11. Is there any incentive sharing mechanism, from the MPA management activities, between MPA MB and its staff? Please explain?
- 7.12. Do you think they are satisfactory with the current positions and incomes? Why and why not?
- 7.13. Any suggestions for improving the long-term commitment of the staff with the MPA?

Others:

- SWOT analysis relating to the management level of a MPA authority
- Advantages and disadvantages of a MPA authority when it is designed as one of the three management types (administrative management agency, government enterprise and government business enterprise)
- Some points may or may not be discussed or clarify based on the background and positions of the interviewees

Appendix 3: Questionnaires for interviewing MPA-related participants (government agencies)

1. Common shared goals/objectives:

- 1.1. Do you know the MPA? How can you know?
- 1.2. Do you understand the goals/objectives of the MPA? Why/why not?
- 1.3. What are the responsibilities of the MPA authority/Management Board (MPA MB)?
- 1.4. How can the MPA MB share goals, objectives of the MPA with other related agencies, and how often? Advantages and disadvantages?

2. Coordination among the government agencies:

- 2.1. Is there any coordination mechanism/network among related agencies and MPA MB? Please explain further if it is available?
- 2.2. Who takes a leading role to coordinate the activities of the mechanism/network? Is it accepted by other participating agencies?
- 2.3. Is there communication system/means for sharing and updating information between the related/acting agencies? How and what are normally shared?
- 2.4. Is there any mechanism/policy for maintaining the network of the agencies? What and how? Any difficulty and the reason?
- 2.5. Any difficulties in coordinating the network?
- 2.6. What can be potential solutions to solve these problems/difficulties?

3. Collaboration – Participation (Internal and External):

- 3.1. Are there any Memorandum of Understanding (or other agreement) signed between the actors/acting agencies? If so, what is it? What is the problem when forming this agreement? How long does it take for being formed?
- 3.2. How often the acting agencies meet each other? Are there any agreed routine meeting between acting agencies? Is it enough? And any difficulties emerged for organizing the meetings? And suggestions?

4. Guidance to implementing agencies:

- 4.1. Is there any guidance for implementing agencies to fulfil the shared management tasks? What and how is it? Any difficulty in disseminating this guidance? Who developed it? How was it formed? Any difficulty?

- 4.2. Do the implementing agencies understand explicitly the procedure and mechanism for implementing the participatory enforcement/management activities? How? Any difficulty? And suggestions from the implementing agencies?

5. Ownership – incentive sharing mechanism:

- 5.1. Is there any incentive sharing mechanism for participating agencies/staff?
- 5.2. What are incentives for participating agencies? And where are they from?
- 5.3. Do the acting staff/participants satisfy with these incentives for conducting the management tasks? Why and why not? Levels of satisfaction?
- 5.4. Any problems and the potential solution to solve these problems?

6. Socio-economic and political context:

- 6.1. Are there any socio-economic and political issues/opportunities which may be disadvantages or advantages for the management of the MPA? Please specify?
- 6.2. Any socio-economic and political events or specific conditions which may be opportunities or threats to the MPA management? Please specify?

Others:

- What do you think about the tourism development within the MPA? Does it affect the MPA conservation activities?
- How do the people make decisions for tourism development and other activities within the MPA?
- Was the MPA MB involved in this decision making process? If so, at which step in this procedure? How strong is it?
- How about benefit sharing mechanism between tourism operators and MPA authority, local communities?
- Do you have any solutions or suggestions for this mechanism?
- How potential are these suggestions?
- How about the communication between MPA and local people, especially in the recent period?
- How about the type of MPA MB, should be government business enterprise or government administrative agency? What is advantage and disadvantage of management type of MPA authority in management of the MPA in your perspective/opinion?
- How important are interpersonal relationships to the collaboration between agencies?
- What is the role of provincial steering committee in management of the MPA? Why was it collapsed?
- How is the current situation of collaboration between related agencies in the management of MPA? Any suggestions relating to this issue?

Appendix 4: List of MPA-related legal documents used for analysing formal institutions.

No	Agency approved	Type, name and date of legal documents	Content of legal documents
1	National Assembly	Directive No. 36-CT/TW, dated on 25th June 1998, approved by the Political Bureau of the Communist Party of Vietnam	Entitled "On strengthening environment protection during the period of national industrialization and modernization"
2		Resolution No. 02/2002/QH11 of the XI th National Assembly of the Socialist Republic of Vietnam at its first session, dated on August 5th, 2002.	Prescribing the list of the government ministries and ministerial-level agencies
3		Resolution No. 43/2003/NĐ-CP, dated on May 2 nd , 2003	Prescribing the Functions, Responsibilities, Mandates and Organizational structure of Ministry of Fisheries.
4		Resolution No. 01/2007/QH12 of the XII th National Assembly of the Socialist Republic of Vietnam at its first session, dated on July 30th, 2007.	Approving the Organizational structure of the Government and number of Vice-Prime Ministers. The merger of Ministry of Fisheries into Ministry of Agriculture and Rural Development was made, based on suggestion of the Prime Minister, due to arising of similarities and overlaps between Fisheries and Agriculture and Rural development sectors
5		Resolution No. 16/2007/NQ-CP, dated on February 27 th , 2007.	Promulgating the Action Programme of the Government to implement Resolution of the fourth plenum of the X th National Communist Party Congress on some major guidelines and policies for rapid and sustainable economic development when Vietnam becomes a member of the World Trade Organization (in Section 10b)
6		Environmental Protection law – approved by IX th National Assembly of the Socialist Republic of Vietnam on Dec. 27 th 1993	
7		Water Resource Law, approved in 1998 and came into effect in Jan. 1999	
8		Forest Development and Protection Law, issued in 1991	

9		Land Law - 1993 and Amended Land law - 2003	
10		Fisheries Law, approved at the National Assembly Session on Oct 26 th 2003 and went into effect on Jul. 1 st 2004	
11		Ordinance on Aquatic Resource Protection (1989)	
12		Tourism Ordinance No. 11/1999/PL-UBTVQH10	Tourism Development and Management
13	Prime Minister	Decree No. 195/HĐBT, dated on Jun. 2 nd , 1990	Implementing Ordinance on Aquatic Resource Protection
14		Decree No. 22-CP, dated on May 22 nd , 1993	Prescribing Functions, Responsibility, Mandates and Organizational structure of Ministry of Science, Technology and Environment.
15		Decision No. 845/TTg, dated on December 22 nd , 1995.	Approving National Action Plan on Biodiversity for Vietnam.
16		Decree No. 53/CP, dated on August 7 th 1995	Prescribing Functions, Responsibility, Mandates and Organizational structure of National Administration Agency of Tourism
17		Decision No. 08/2001/QĐ-TTg, dated on January 11 th , 2001	Approving the protection regulation for Special-use Forests, Protection Forests and Production Forests
18		Decision 82/2002/QĐ-TTg, dated on Jun. 26 th , 2002	Approving the setting up, organization and operation of Vietnam Environment Protection Fund
19		Decree No. 91/2002/NĐ-CP, dated on November 11 th , 2002	Prescribing the Functions, Responsibilities, Mandates and Organizational structure of the Ministry of Natural Resources and Environment.
20		Decree No. 79/2003/NĐ-CP, signed by Prime Minister on July 7 th , 2003	Promulgating the regulation on the exercise of democracy in communes
21		Decision No. 192/2003/QĐ-TTg, signed by Prime Minister on Sep. 17 th , 2003	Approving the Management Strategy for a Protected Area System in Vietnam to 2010
22		Decree No. 86/2003/NĐ-CP, dated on July 18 th , 2003	Promulgating the regulation on Functions, Responsibility, Mandates and Organizational structure of Ministry of Agriculture and Rural Development
23		Decree No. 109/2003/NĐ-CP, dated on September 23 rd , 2003	Conservation and Sustainable development of Wetlands

24	Decision No. 256/2003/ QĐ-TTg, dated on December 2 nd , 2003	Approving the National Strategy on Environmental Protection till 2010 and Orientations towards 2020
25	Decree No. 27/2005/NĐ-CP, dated on March 8 th , 2005	Regulating details and Guiding implementation of some articles of Fisheries Law.
26	Decision No. 79/2007/QĐ-TTg on May 31 st , 2007	Approving the National Action Plan on Biodiversity up to 2010 and Orientations towards 2020 for implementation of the Convention on Biological Diversity and the Cartagena Protocol on Biosafety
27	Decision No 63/2008/QĐ-TTg, dated on May 19 th , 2008	Prescribing Functions, Responsibility, Mandates and Organizational structure of National Administrative Agency of Tourism.
28	Decree No. 01/2008/NĐ-CP of the Government	Prescribing Functions, Responsibility, Mandates and Organizational structure of Ministry of Agriculture and Rural Development after a merger of Ministry of Fisheries into this Ministry.
29	Degree No. 57/2008/NĐ-CP	Approving a management regulation for nationally and internationally significant MPAs in Vietnam
30	Decision No. 116/2008/QĐ-TTg of Prime Minister dated on August 27 th 2008	Prescribing the Functions, Responsibility, Mandates and Organizational structure of National Administration Agency under Ministry of Natural Resources and Environment.
31	Decision No. 132/2008/QĐ-TTg dated on September 30 th , 2008	Prescribing the Functions, Responsibilities, Mandates and Organizational structure of the Environment Protection Agency directly under Ministry of Natural Resources and Environment.
32	The programme No. 131	Protection and Development of Fisheries Resources toward year 2010 was approved by the Government in 2004.
33	The Comprehensive Poverty Reduction and Growth Strategy, November 2003	
34	National biodiversity action plan (1995)	
35	The strategic orientation for sustainable development in Vietnam (Vietnam Agenda 21)	
36	Resolution No. 1520/TS-BVNL, dated on May 30 th , 2001	

37		National Strategy for Socio-economic Development in the period 2001 – 2010	
38	MARD	Decision No. 22/2008/QĐ-BNN	Prescribing Functions, Responsibility, Mandates and Organizational structure of Forest Protection Department
39		Decision No. 23/08/QĐ-BNN decided by Ministry of Agriculture and Rural Development on January 28 th , 2008	Prescribing Functions, Responsibility, Mandates and Organizational structure of Department of Capture Fisheries and Fisheries Resources Protection.
40	MoNRE	Decision No. 14/2004/QĐ-BTNMT, dated on June 16 th 2004	Prescribing Functions, Responsibility, Mandates and Organizational structure of Department of Environmental Impact Assessment and Appraisal
41		Decision No. 13/2004/QĐ-BTNMT, dated on June 16 th , 2004	Prescribing Functions, Responsibility and Mandates of Environmental Department
42		Decision No. 04/2004/QĐ-BTNMT, dated on April 5 th 2004	Approving the Acton Plan on the conservation and sustainable development of submerged areas in the 2004-2010 period
43		Circular No. 18/2004/TT-BTNMT, dated on August 23 rd , 2004	Guiding the implementation of the Government's Decree No. 109/2003/ND-CP dated on September 23 rd , 2003 on Conservation and Sustainable development of Wetlands.
44		Decision No. 08/2003/QĐ-BTS, dated on August 5 th , 2003	Approving the Functions, Responsibilities, Mandates and Organizational structure of the Department of Capture Fisheries and Fisheries Resources Protection (DECAFIREP)
45		Circular No. 04/2000/TT-BTS, dated on 03/11/2000	Guiding the implementation of a number of articles of a Decision No. 103/1999/QĐ-TTg, signed by the Prime Ministers, on a number of policies to encourage aquatic offspring development.
46		Circular No. 05/2000/TT-BTS, dated on 03/11/2000	Guiding the implementation of the Government Resolution No. 09/2000/NQ-CP on a number of policies for economic restructuring and consumption of agricultural products.
47	Ministry of Finance	Circular No. 93/2003/TT-BTC, dated on 06/10/2003	Guiding the implementation of the financial management for the Vietnamese Environment Protection Fund

Appendix 5: Advantages and disadvantages of a MPA authority when it is designed as one of the three management types (administrative management agency, government enterprise and government business enterprise).

Aspects	Administrative management agency		Government enterprise		Government business enterprise	
	Advantage	Disadvantage	Advantage	Disadvantage	Advantage	Disadvantage
Mandate	Responsible with the PPC for management, planning and development of the assigned sector Consult the PPC in approving legal documents that come into effect over the provincial boundary, so have strong interventions in institutional development and change for the management of the MPA Consult the PPC in managing the responsible technical sector Have all legal rights, staff and facilities to act/enforce illegal activities relied upon in-effect legislative documents		Can be responsible for managing the MPA as assigned by the higher level	Have no legal right in enforcement and fining illegal activities Have limited influence in consultation for developing and approving legal documents	Can be responsible for managing the MPA as assigned by the higher level	Have no legal rights in enforcement and acting illegal activities Have no influence in consultation of legal documents
Coordination	Easy to coordinate the belonged forces for management and enforcement			Have no legal rights to coordinate other agencies for MPA management and enforcement		Have no legal rights to coordinate other agencies in the MPA management and enforcement
Collaboration	Easy to sign and implement inter-			Be able to sign MoU or		Be able to sign MoU or agreements

	agency collaboration regulations or MoU with other administrative management agencies for management and enforcement of a MPA as prescribed and approved by PPC for administrative management agencies			agreements with other agencies to collaborate for management and enforcement of the MPA, but need to have flexible and wise approaches because there is no legal document to regulate the collaboration between administrative management agencies and other non-admin agencies		with other agencies to collaborate in management and enforcement of the MPA, but need to have flexible and wise approach because there is no legal document to regulate the collaboration between admin management agencies and other non-admin agencies
Finance	All the activities and facilities are funded by government Stable finance from government	Are not allowed to get direct financial support from international, national organisations or enterprise for operating activities of the agency Government finance is always limited	All the activities and facilities funded by government and are limited Stable finance	Limited finance, mainly based on the supply by government	Can generate incomes from permitted services Finance spent for management activities can be from government and other sources, including international, national organisations or enterprise	Unstable finance and depend much on the generated income and other external support
Staffing	Based on approvals of the government Staff are stable, so having long-term commitment with the MPA		Based on approvals of the government Staff are stable, so have long term		Based on approvals of the government and employment demands of the enterprise	Not stable, weak commitment with the MPA

			commitment			
Salary and income for staff	Follow the standard salary policies of government Stable incomes		Follow the standard salary policies of the government Stable income		Follow the standard salary policies of the government and income earned from the services, but not higher than three times compared with basic level fixed by government.	Unstable income