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廈門大學

硕士学位论文

通过社区渔业资源管理提高海洋资源管理：
以柬埔寨为例

**Improving Marine Resources Management through Community
Fishery: Case Study in Cambodia**

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摘要

过度开采导致，尤其是在社区角度上的海洋资源方面的损失不仅是柬埔寨所面临的问题，已经升级为全球范围所面对的严峻考验。因此采取社区性管理政策去提高资源环境的可持续发展显得相当有必要。这些政策中基于社区资源的管理是引导柬埔寨当地和海岸带社区生物资源的可持续发展的有效方法。社区渔业资源是基于社区管理的角度引导渔业资源的合理开采，可以看做社区渔业机构组织和政府之间的一种合作模式。

本研究以位于柬埔寨贡布省的两个社区组织为例进行研究分析，采用专题小组讨论和问卷调查的方法对关于社区渔业的问题进行数据采集和分析。结果发现在足够长时间的休渔期以改善提高海洋生物量的维持下，社区渔业机构能够很好地实现对海洋资源的保护。社区渔业组织能获得如此良好效果的关键原因在于参与者之间更好的内在管理、领导与合作。但是，管理过程中中间商的存在是目前迫切存在的问题，因为这些中间商对当地社区市场平衡带来严重威胁。社会发展中的生产总值会因为社区渔业组织不能提供强而有力的手段来稳定产品物价而受到影响。本研究结果表明社区渔业组织的建立对社区各主体资源的生产力有所提高，但未能量化其具体的影响程度，因此展望未来对柬埔寨社会经济变化的驱动力进行进一步的研究来解决

关键词：社区渔业，合作模式，生产总值，中间商

Abstract

Over-exploitation and loss of marine resources, especially at the community level are not just topical issues in Cambodia, but the world at large. This, therefore, necessitates rational management strategies to enhance the sustainability of such environments. Community-based management being one of such strategies has been identified as a suitable approach to sustainable livelihoods of local, coastal communities in Cambodia. In Cambodia, community fishery is referred to as community-based management of fishery resources. It is a kind of Co-management between the Community fishery institution and Government.

In this research, two community institutions from Kampot Province are selected as a case study. Focus group discussion and questionnaire survey are used to conduct the research and revolving issues pertaining to community fisheries are addressed. As a result, it appears that community fishery institutions are able to achieve their goals in conserving marine resources if they are rest assured of the returns that will go a long way at improving their livelihood. Moreover, better internal management; leadership and cooperation among members are identified as key reasons behind the success stories of community fishery institutions. However, the existence of middlemen in the management process is an impending problem since the middlemen serve as a deterrent in the equilibrium market in the local community. The overall outcomes have been drawbacks in community development since the community fishery institutions do not have a fair bargaining power in valorizing their products. The results of this study show that the livelihood of community members has improved with the establishment of a community fishery institution. However, the study does not show to what extent the livelihood of community members has improved. It therefore recommended that there is a need for further studies that portray a real change socioeconomic dynamics in Cambodia.

Keywords: Community Fishery, Co-management, Livelihood, Middlemen

Chapter 1 Introduction

The availability of the variety of marine resources has attracted the establishment of human populations in coastal area. There are more than three billion people live in coastal areas. The growth in the demand for services and goods is also increase to answer the need of population growth (Alpízar, 2006). According to the increase of market demand for food, it has led to resource over exploitation (Nasuchon, 2009). Besides, when people focus on food and money that they need for their daily survival, conservation of natural resources for the future becomes less important (Nasuchon & Charles, 2010). Furthermore, the failure of state and market mechanisms to promote sustainable and equitable natural resource management in the developing world has stimulated a search for community-based alternatives (Li, 2002). Nasuchon and Charles (2010) continued that over-exploitation and loss of coastal resources trigger the need for new approaches to fisheries and coastal management. Calls for a different approach emerged in the late 1980s based on the observation that under certain conditions, users can self-organize to achieve successful governance (Leopold *et al.*, 2013). Community-based natural resource management (CBNRM) advocates have claimed that meeting conservation objectives while improving the rural communities' well-being and livelihoods (Marschke & Nong, 2003). However, Community-based management has different implementation techniques which are based in the various countries (Nasuchon & Charles, 2010).

The countries of the Gulf of Thailand also suffered over-exploitation of marine resources. The marine fish stocks are a heavily exploited resource due to the high density of the coastal population around the Gulf of Thailand (Em, 2007). Cambodia is one country among other countries of Gulf of Thailand. The estimated population of Cambodia in 2011 was 14.7 million with 7.38% of coastal population (Rizvi & Singer, 2011). Moreover, it is estimated that 30-50% of the total population in the coastal areas are involved in fishing (Torell & Salamanca, 2001). With this large amount of population concentrated in the coastal area, marine resources are heavily

affected. As an evident, Marschke and Nong (2002) stated that since 1993 fishery resources have significantly declined. Nasuchon and Charles (2010) continued that fishery over-exploitation and loss of coastal habitats suggest the need for new approaches to fisheries and coastal management. However, Marschke and Nong (2003) suggested that community-based management is relatively new within Cambodia. In the fisheries sector, community fishery is referred to community-based management of fishery resources. As many as 400 Community Fisheries Organizations have been established throughout the country in 2005 (Sten *et al.*, 2006). However, Sten *et al.* (2006) continued that most community fisheries organizations were not implemented properly. During that time, community fishery institutions performed their duties through learning by doing. Marschke and Nong (2003) suggested that community-based management proceeds through trial and error, and with a great deal of interaction among scales of management.

However, after the approval of Sub-Degree on Community Fishery Management in 2007, community fishery institutions have full support from the government and have the guideline to follow which help to manage the institution properly. A sort of co-management between community fishery institutions and government has formed by this Sub-Degree. With this solid legal support, the existing community fishery institutions try to improve their performance and new community fishery institutions emerge with the aim to protect fishery resources and improve their livelihood.

Kampot Province is home to a wide variety of marine biodiversity with the three main marine ecosystems including mangrove, seagrass and coral reef which support the local people within the area. Most of coastal villages along the coastline rely heavily on the marine resources. In return, it put high pressure on these ecosystems. Totally, there are 10 community fishery institutions in Kampot Province. Each community fishery institution has its own area to manage and conserve the marine resources base on the characteristic of the area. A lot of illegal activities have been

stopped by community fishery committees within the boundary of their jurisdiction. Therefore, community fishery institutions play a very significant role in conserving marine resources. Some community fishery institutions are believed to be very successful and some are not. Do fishery communities really conserve marine resources? Or make it worse? Two community fishery institutions are selected for the study. The first one is Koh Kresna Community Fishery which is considered to be a less successful community; and a second one is Tropang Sangke Community Fishery which is the most successful community.

1.1 Statement of Purpose

This research is conducted to find out to what level that community fishery can contribute to protect marine resources. The purpose of the establishment of community fishery is to protect and conserve marine biodiversity and at the same time improve local community livelihood. Sustainability is not really easy to achieve because there are many factors that influence it. Local community is allowed to manage their marine resources and improve the well-being of the community through community fishery. It is a very good opportunity for local communities to contribute to protect marine resources and raise their awareness about them. It also gives local communities chances to participate and work closely with concerned authorities, so that it builds a link between local communities and the authorities. This link is very crucial for the success of coastal management. However, there are still doubts about the capability of local communities to manage their fishery resources.

To clear these doubts, this research is conducted at the local community level to access the capability of them to manage community fishery and the achievement of their goals. The following are the research questions and hypotheses of this research.

Research Questions:

1. Does the condition of marine habitat (Mangrove, seagrass and coral reef) become better after the establishment of the community?

2. Does the livelihood of the local community improve after the establishment of the Community fishery?
3. Is Community fishery able to achieve sustainable use of marine resources within its given boundary?
4. What are the main factors that influence the achievement of the sustainable use of marine resources?
5. Does local community have enough knowledge about the benefit of marine habitat (Mangrove, seagrass and coral reef)?

With these 5 research questions, 2 hypotheses are formulated.

Hypotheses:

1. Community fishery already has enough knowledge about the benefit of marine habitat (Mangrove, seagrass and coral reef).
2. Community fishery is able to achieve sustainable use of marine resource within its given boundary.

1.2 Analytical Methodology

Following by the research interest the community fishery and marine resources conservation, there are 5 research questions needed to be answered. However, to answer all these questions, we need to form a detail analytical framework which can be used as a guideline. This analytical framework shows the whole picture of the research purpose and how we are going to answer the research questions. To support and justify the answer for the research questions and the hypotheses, literature review will serve as a comparison with the result of the research. Since local communities also contribute to the loss of marine resources, these problems need to be solved at their level. Community fishery is the bottom up approach to tackle the problem at the local level and to achieve sustainability. Therefore, this research goes down to the local level to find the answer. There are two approaches are used to get the answer. These two approaches are focus group discussion and questionnaire survey. With these two approaches, enough information is gathered at the local level of the

community fishery itself and without any interfering from the higher level. Then, the 2 hypotheses which are formulated from the 5 research questions are tested based on the information getting from these two approaches. Finally, after the verification of the hypotheses, implication and recommendation is offered for the improvement of community fishery. The following the whole structure of the analytical methodology.

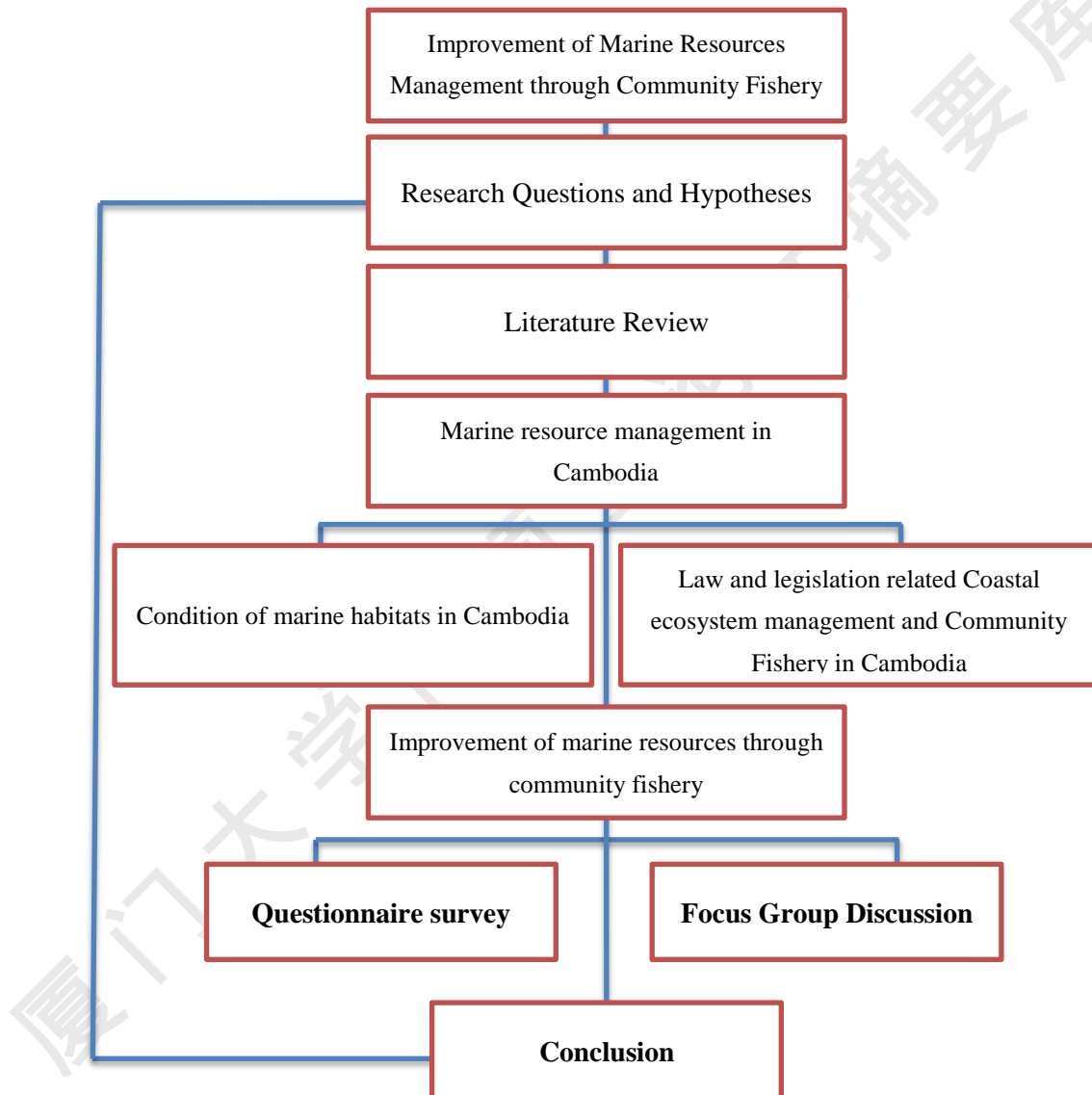


Figure 1-1 Structure of Analytical Methodology

1.3 Research Methodology

In order to answer the research questions and prove the hypothesis a set of research methodology is used to gather information and data. This research will be

conducted by using both primary and secondary data collection.

1.3.1 Secondary Data Collection

Collecting published and unpublished literature including books, journals, reports, scientific articles related to the topic of this research from all sources including library, e-library, journal directories (e.g. Scimedirect.com), and concerned authorities for Cambodian related documents. It is very important to collect all these documents in advance. It provides a first step for an evaluation or analysis to gain some background knowledge and understanding (MacDonald & Headlam, 1986). Secondary data serve as evidence and support to formulate research questions and then formulated hypotheses for this thesis. Moreover, it is used to support the analysis of primary data and compare in the discussion part of this thesis.

1.3.2 Primary Data Collection

Two approaches are used to collect primary data for this thesis. The first approach is focus group discussion. Three tools are used in this approach to collect desired information from the local community. The second approach is questionnaire survey. Further information is collected from this approach to combine with the information getting from the first approach.

1.3.2.1 Focus Group Discussion

Focus group discussion is a very useful way to find out about existing issues and as well as to get desired information. It is based on the desired discussion topic organized by the researcher. Since this approach play vital role in this research, this approach was carefully carried out. There were a variety of groups selected to join the discussion. The participants were community fishery committees, community members (fishermen), and people who buy fishing product. The majority of the participants were fishermen. These three groups are the key players in community fishery. Focus group discussion was divided into three main parts according to three

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