

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

This research was conducted to understand and analyze the integrity and variability of co-management concept that came from the level of structure and system that affects the operation in the area. The integrity and variability that emerged from the operation in the area, including guidelines and conditions for the development of appropriate models, concepts, and operating system.

#### **3.1 Key Informants**

For key informants in this study are the stakeholders in the watershed area in the Ob Luang National Park which can be divided into four main groups:

1. Community Leader Group such as village headman , District Chief and Natural Resource Management Committee in village/ watershed level about 6 watersheds.
2. Sub-district Administration Organization (SAO) including Doi Kaew, Mae Pae and Mae Soi.
3. Ob Luang National Park officers, Conserved Area Management Office (16) and relevant organizations in the district, provincial level and Department of National Parks.
4. Non-governmental organizations in the area that used to participate in the project of Joint Management of Protected Areas (JoMPA) such as 1) Sustainable Development Foundation (SDF), 2) Raks Thai Foundation, 3) Dhammanatt Foundation for Conservation and Rural Development, and 4) Inter Mountain Peoples Education and Culture in Thailand Association (IMPECT).

#### **3.2 Sources of Data**

To implement this research, data were obtained from two sources:

1. Primary data was collected by interviewing all stakeholders in the area of

JoMPA project to bring the data to analyze, comments and operations related to joint natural resource management nowadays.

2. Secondary data was collected from documents and academic textbooks, research reports, reports on the implementation results of the project, meeting supporting documents, minutes of meeting, project evaluation reports, and other documents such as orders and regulations, documents searched from on-line sources, including maps, for example, topographic map, aerial photographs, and satellite data that provide information on land use, altitude, and etc.

### **3.3 Data Collection**

As this research was the integrated study that needed to collect comprehensive information and to study in-depth case studies, the collected data are:

1) Quantitative data consisted of data gathering from agencies / organizations which was involved with both directly and indirectly to be used to analyze the situation in general.

2) Qualitative data was data gathering from the population who were selected for case studies during this study period. The following methods of data collection would be used.

2.1) In-depth interview is a research method for obtaining some data which could not be collected from the general interview. It was the in-depth interview with the leaders of community organizations at the watershed level managing the exploitation of resources and dealing with the conflicts of the community. (see Table 3.1)

2.2) Spatial data is geo- referencing data such as topographic maps, aerial photographs, and satellite images which provide details about land utilization and altitudes.

In this study, the use of tool consisted of a series of maps and in-depth interviews. All data would then be organized and distributed by order of importance in each stage and process. The problems and obstacles and conditions in the area were summarized in the comparison analysis.

Table 3.1 Namelist and position of key informants in the in-depth interview

	<b>Name</b>	<b>Current Position</b>	<b>Duration</b>	<b>Former Position</b>	<b>Duration</b>
1.	Mr. Sarunwit Todsieng (55 years old)	The Head of Upstream Management Center 8	2014 – present	1. Director of Coordination Section of Royal Development Projects 2. Head of Ob Luang National Park	2012-2014 2004-2011
2.	Mr. Manop Kiripuwadol, (40 years old)	Coordination and Network Development Section of the Chom Thong District Watershed Network	2004 – present	1. Coordinator of Mae Ta Chang Watershed 2. Coordinator of Department of Environmental Quality Promotion	2002-2004 1998-2002
3.	Mr. Boonton Kalawin	Village Chief of Village No. 14, Ban Sob Tia Tai	1995- present	The President of Natural Resources and Environmental Conservation Club of Mae Tia-Mae Tae Watershed	2010-present
4.	Mr. Sorn Nantasu (47 years old)	Village Chief of Village No. 10, Ban Tung Pun	2007-2515 (2 periods)	Member of Sub-District Administrative Organization	1996-2007 (2 periods)

Table 3.1 (continued)

	<b>Name</b>	<b>Current Position</b>	<b>Duration</b>	<b>Former Position</b>	<b>Duration</b>
5.	Miss. Thanyakarn Yanaso, 43 years old	Village Chief of Village No. 3, Ban Cherng Doi	2012-present Currently, she opens a hand-woven cotton shop	Member of Sob Tia Sub-District Administrative Organization, Tutor	2009-2012 1995
6.	Mr. Sawit Niyomyodkiri, (46 years old)	Mayor of Doi Kaew Sub-District Municipality	2014- present	1. President of Hill Conservation Group 2. Member of Doi Kaew Sub-District Administrative Organization and Mae Tia-Mae Tae Watershed Committee	2012-2014 2008-2011
7.	Mr. Sriboon Srichanta ( 36 years old)	Chairman of Doi Kaew Sub-District Municipality	2014 – present (Assume the position on April 20 <sup>th</sup> , 2014)	1. Member of Doi Kaew Sub-District Municipality for the second period 2. Member of Doi Kaew Sub-District Municipality 3. Committee of Chom Thong District Hill Conservation Group and Former Coordinator of Mae Tia-Mae Tae watershed	2014-present First period from 2011-2014 2003-present

Source: In-depth Interview

For the tool used in this research, the in-depth interview was used for evaluating opinions by understanding and it can be divided into five steps as follows:

Section 1: general information of the interviewees consisted of name and surname, age, current position, main occupation, education, current address, work experience (5-10 years in the past), training and field trip experience (5-10 years).

Section 2: information on opinions about policies and concepts and management practices of joint natural resources included:

2.1.1 Knowledge and understanding of laws and policies related to the management of natural resources in the National Park area.

2.1.2 Forest Act, B.E. 1905 and National Park Act, B.E. 1961.

2.1.3 Determining of watershed classification and management policies of water resources.

2.1.4 Resolution of the cabinet on June 14, 1998.

2.1.5 Sustainable National Park management policies.

2.1.6 Decentralization policy, Sub- district Administrative Organization (SAO) and participation in natural resource management.

2.2 Knowledge and understanding of differences of the thinking base and utilization of the natural resources between the government and the community.

2.2.1 Rights System

2.2.2 Property and Ownership System

2.3 Knowledge and understanding of the concept and the joint management of natural resources.

2.3.1 Potential development through the meeting, exchange, learning and training and field surveying at the village level, watershed level, and park level.

2.3.2 Passing on original and new knowledge at the village level, watershed level, and park level.

Section 3: information on opinions regarding participation of the operation in the area

3.1 Participation in natural resource management in the area level

3.1.1 To have knowledge and understanding of all watershed ecology from the up - stream - mid - stream – and down – stream.

3.1.2 Natural resource management in the use of land, forest, and water which was different in each watershed from the up - stream - mid - stream - down - stream as holistic.

3.1.3 Knowledge and understanding in each area on the rights, system of community rights, area possession and exploitation.

3.1.4 Knowledge and understanding of the system of community society, culture and economics in different context and in diverse watershed such as ethnicity, production system, and thinking system of ideology

3.1.5 To create joint working process by action as the committee in the village level, watershed level, and park level.

3.1.6 To create joint working process by meeting and concluding problem issues, learning exchange, plan to find solutions and corrective action together.

3.1.7 To encourage joint natural resource management through activities of community support, for instance, reconnaissance, construction of fire preventing line, wildfire prevention, construction of check dams, and promotion of profession complementing incomes.

3.1.8 To use traditional knowledge / wisdom in managing natural resources in the community level.

3.1.9 To have knowledge and understanding of new knowledge such as Geographic Information Systems, maps, Global Positioning System, and etc.

3.2 Knowledge and understanding of the use of various instrument.

3.2.1 Topographic maps as a map series and used as a base map by GIS professionals and as a reference map by anyone.

3.2.2 Aerial photographs use for participatory land demarcation.

3.2.3 Satellite images (such as IKONOS) use for mapping.

3.2.4 Maps indicating the boundary of area utilization in the level of village and watershed use for participatory land demarcation.

3.2.6 Global Positioning System (GPS) tool for navigating satellite system and use for checking point for boundary line with map.

3.2.7 Joint natural resources management plan use for

development activities for conservation and sustainable natural resource management at community.

3.2.8 Participatory Action Research (PAR) approach to research in communities that emphasizes participation and action.

Section 4: information on opinions about the results of action and application

4.1 To use the boundary maps of the area utilization at the village and watershed levels for the sustainable management of natural resources;

4.2 To bring database of natural resources at the village and Watershed levels to be used in the sustainable management of natural resources

4.3 To conduct agreements and regulations at the village level and to create the community forum

4.4 To do agreements at the district level or agreements of municipal ordinances

4.5 To use empirical data in the management of natural resources problems and to use in activities of conservation / protection / maintenance

Section 5: information and opinions for problems and obstacles and guidelines of sustainable joint solutions;

5.1 To have opinions on the subject of problems and obstacles to implement joint community support activities in natural resource management in the national park, watershed, village / community, and networking (Asking to identify by sorting problems).

5.2 In the implementation of joint management and participatory problem resolution, identify the process of management and duty of each group in natural resource management.

Section 6: additional suggestions in the operations of joint management of natural resources at Ob Luang National Park, stakeholders activities (identify joint activities, persons with primary responsibility, and supporting budget)

### **3.4 Data Analysis**

For the data analysis, the secondary data collected from the project documents, minute of meeting, and performance reports that summaries and analysis as follows:

1. In the central and regional agencies such as problems and project background, objectives, strategy and implementation, project areas, outputs and indicators and operational outputs of project.

2. In Ob Luang National Park such as situation and background, objectives, concepts, strategic conceptual framework and work plan, operation at area level such as operation mechanism, stage and process, operational activities and the result and project evaluation of JoMPA.

3. The comparison of operation results between Ob Luang National Park and the central and regional agencies with measure of success and failure. Including the analyze factors that affect the outputs successful and unsuccessful with variance occurs in the area.

In addition, the results from in-depth interviews led to the current activities as well as problems and obstacles in the implementation of joint activities and use content analysis and comparative with the operation results of the central and regional agencies in tables of analysis results and summarized descriptive.(see Table 4.4) Moreover, the synthesis in the failure of the project are variability of co-management that based on the impact of the influence of four factors as the understanding in concepts and thinking systems, the bureaucratic system, organizational culture and power relations.