

# **PARTICIPATORY PROCESSES IN WATER QUALITY DATABASE DEVELOPMENT FOR SUB-DISTRICT ADMINISTRATIVE ORGANIZATION IN MAE TAENG WATERSHED, CHIANG MAI PROVINCE**

## **INTRODUCTION**

The ultimate goal for watershed management is to attain water yield that can supply enough water quantity, good water quality, and proper water flow timing throughout the year. Such water yield can be obtained through proper management of land uses and resources within a watershed (Tangtham, 1995).

The 1997 Thai constitution has paid more attention to natural resources and environmental management at local level than any former constitutions. The said constitution focuses mainly on the participation of the community in utilizing natural resources as well as controlling and mitigating pollution. This is expected to form the foundation of sustainable development for the nation. Thai people are provided more opportunities to play active roles in managing natural resources and environment in several forms in their neighborhood. Thus, watershed management must include the participation process involving all concerned parties in solving watershed problems and formulating common development guidelines. By involving in the participation process, people from different groups such as local communities, NGOs, and academic people can share information and their concerned issues and learn together to solve problems and reach mutual agreement or acceptable goal. Participation as a learning process then can help building up community strength and lead to legitimate and acceptable plan for local communities.

Established in 1995 according to the Act of Sub-District Council and Sub-district Administrative Organization of 1994, Sub-district Administrative Organization (SAO) is relatively a new form of local administrative agency. The establishment of the new local administrative agency is an effort of the government to decentralize its power to the local areas, or grass root level. Covering most of local or rural villages nationwide, the SAO is administration independent under the 1994 legislation which gives them more right and responsibility in formulate and implement work plans and activities in their local areas. This is expected that the development activities by SAO decisions at local level will satisfy real needs of local people living in the sub-districts and villages.

For SAO to reach effective watershed management and its natural resources, many factors involve. Good and updated information or data for making decision or management is one among the others. Information is a basis for understanding the situations and enable local administrator to make a right move on natural resource management.

At present there are quite a few data related to natural resource management in form of various documents. However, these data have not been systematically collected and updated for the benefits of natural resource management in particular. Some are very difficult to understand and irrelevant for use at local level. They are also kept in different forms and different places. Moreover, existing data may not be able to solve local issues or concerns very well since local needs have not yet incorporated into data design process. This has caused some problems or limitations for the SAO to utilize the existing data. In this view, participatory data management for SAO is needed so that effective natural resources management and decision making in local areas will be accomplished.

Therefore, the researcher was interested in developing a water quality database system for the SAOs in which the SAO and relevant stakeholders actively participated in the development process. The concept of learning by doing and learning together in participation process ensured understanding of management issues, not only within their sub-district boundary but went beyond it to cover the whole watershed.

The researcher selected Mae Taeng watershed in Chiang Mai Province as a study site because this watershed had a unique setting of the upstream-downstream relationship with several SAOs jurisdiction along the Mae Taeng River. The design of the sub-water quality database system recognized the needs of each SAO at both local and watershed interrelationship. Multi media system was incorporated into the system to encourage easy access and use by the SAO in Mae Taeng watershed.

### **Objectives**

1. To determine data types and their contents needed by the SAO for managing water quality within their local areas,
2. To introduce participatory processes for developing a water quality database,
3. To design a participatory database and a manual for water quality study in Mae Taeng watershed.

### **Research Outputs**

1. Types of data and contents needed by SAOs for water quality management,
2. Appropriate participatory process for developing water quality database for Mae Taeng watershed and other similar watersheds,
3. Database and a manual for water quality study in Mae Taeng watershed.