Piyakarn Teartisup 2006: Participatory Processes in Water Quality Database Development for Sub-district Administrative Organization in Mae Taeng Watershed, Chiang Mai Province. Doctor of Philosophy (Forestry), Major Field: Forestry, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Dachanee Emphandhu, Ph.D. 119 pages. ISBN 974-9837-23-1

The main objective of this research was to design a participatory database and a manual for water quality management at Mae Taeng Watershed, Chiang Mai Province. Participatory Action Research (PAR) was the main research methodology. Mail questionnaires were distributed to 177 Sub-district Administration Organizations (SAOs) in northern regions to collect information on data most needed for water quality management at sub-district level. Then, eighty four people from seven SAOs in Mae Taeng watershed were selected by snowball sampling to participate in Appreciation-Influence-Control (AIC) and Social Learning Process (SLP). The database was designed and constructed as an output from the participation process. Finally evaluation of the participatory process was carried out by observation of the participants' behavior and a questionnaire to the participated individual.

The result showed that the five most needed information regarding water quality indicators for the SAOs in urban setting were BOD, DO, pH, fishes, and temperatures while pH, BOD, turbidity, fishes, and DO were indicated by the SAOs in rural setting. Regarding to the result of participatory process, it was found that there was few understanding about water quality management particularly on the cause and effect relationship. The participatory database of water quality management was developed and evaluated by the participants. It was assessed to be most useful to the SAOs work as a learning media and as a guideline for water quality management at sub-district level. Proposed participatory process for database development was then introduced as part of the research output. Specific learning from PAR to both SAO participants and researcher were mainly on water quality and watershed management and participation process within local own capacity.

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