

INDIVIDUAL PROJECT TITLE : A CASE STUDY OF WEIRS'S MANAGEMENT  
IN HUEY KOOM LEK CHANGWAT KHON KAEN.

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#### ABSTRACT

A case study of weir management in "Huey Koom Lek" canal , Chang Wat Khon Kean, was a study of the small scale irrigation system management by a local organization. Objectives of the study were ; to investigate utilization and maintenance of a weir and irrigation system ; to describe a water user group (WUG.) ; and to identify the factors related to weir management by WUG. The study was based on the system approach for natural resource management, community based resource management , and small scale irrigation management by community organization . The study areas were Ta-ma-lai and Soke-kham-pom weirs, Ban Kok-Yai, Tambon Ban-Fang , Amphur Ban-Fang , Changwat Khon kean . This study was conducted during April-November 1996 with the use of interview schedule , semi-structure interview guide, and direct observation. Results of the study were as follows :

Ta-ma-lai WUG was mobilized by government officials. The group was formed in 1979 , a year after the weir construction. The aim of the group was for management of the weir utilization and maintenance. Currently, there are 32 members, 3 of which are

administration committee , namely chairman , vice chairman , and secretary . The administration committee is under execution of 9 persons of WUG committee . In 1983 Ta-ma-lai WUG was awarded the second prize in the contest of small scale irrigation management in the Northeastern region . After 1987 , the group faced a series of problems, for example, shallow weir caused by accumulated soil , and personal conflict among executive committee members ; all of which weakened the strength and work efficiency of the group .

Soke-kham-pom WUG was also mobilized by the government officials . The group was formed in 1983 after the completion of Soke-kham-pom weir . The aim of the group establishment was similar to that of Ta-ma-lai WUG . During the period of the study , there were 28 members , 5 of which were group committee, namely chairman , vice chairman , and 3 general committees .

Both WUGs in Ban Kok-yai played a vital role in the management of weir utilization . Water reserved in the weir was used by WUG members and neighboring villagers for cultivation of rice in wet season , native sweet corn in dry season , for fishery , and for livestock raising . Another function of WUG was weir and irrigation system maintenance for long term utilization such as weir and system cleaning , water gate repair etc. Both WUGs made use of group norms as a tool of management .

The factors related to weir management of WUG were ecological factors , ideological factors , and socio-economic factors .

The ecological factors were : quantity of rain fall which was related to the quantity of water in the weir and the group discipline ; soil texture which was related to physical structure of the canal and the weir maintenance regulation .

The ideological factors included the belief in " Chao-poo-yod-huey " spirit resulted in annual tradition called " Tam-boon-yod-huey " . By this tradition , villagers go annually to perform merit making at the watershed forest . Another factor was the belief in the spirit of the weir ( Choa-tee ) , resulted in a tradition called " Soot-fai " ( blessing of the weir ) . This tradition , then , is reflected in the villagers' fishing regulation .

The socio-economic factors were a number of factors affected WUG's leader , for instance , personal conflict among the group committees , WUG family member's health affected participation in group activity of WUG's leader , group structure and its strength . Direct informing was used as a communication method among WUG members and it proved to be a tool in irrigation management . The weir utilization and maintenance caused the reorganization of the village , and was related to the setting of group norms . In addition , kinship ties were related to the occupation of irrigated land around the wier and connected to the group structure of WUG .

Recommendation for the development agencies concerned in dealing with WUG are :

- 1) Group structure of WUG should be suitable to the social structure of the community ;
- 2) established water user group should be acceptable to the community in terms of its status and role ;
- 3) group regulations should be harmonized with beliefs , cultural and traditional practices of people in the community ;
- 4) well-organized physical structure of weir and its irrigation system will result in easier management of WUG ;
- 5) people in the community should contribute their participation in weir management before , during and after the weir construction ;
- 6) construction of the weir should be based on the needs and problems of the people in the community ;
- 7) weir management indigenous technology should be utilized in the community whenever it proves to be as good as the outsiders' in achieving the set objectives .