

Characteristics of *Muang Fai*, Traditional Water Users' Organization in Northern Thailand

北タイにおける伝統的農民灌漑組織、ムアンファイの構造

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INTRODUCTION

After World War , many large-scale irrigation projects have been developed over the world to increase food production. However most of them, especially in developing countries, have problems in their water management. It is widely recognized that transferring the responsibility of irrigation management from public agency to water users' organization (WUO) is effective and necessary to improve this situation. This participatory irrigation management (PIM) has been undertaken, but not remarkably successful so far.

In Thailand the atmospheric temperature is high enough to cultivate rice throughout the year. On the other hand distinctive rainy and dry seasons limit the rice production. Under this climate, irrigation system available whole year is necessary to sustain the high and stable rice productivity. In central plain, Chao Phraya Delta, the modern large-scale irrigation system was established in 1960s. However, there are many problems in water management and maintenance system because of lack of water users' cooperation. On the other hand, in northern Thailand, traditional water users' organization called *Muang Fai* (MF) has been successfully managing their irrigation system. Thus, there is a question whether this well organized traditional system can be applied to the large-scale irrigation projects.

This study aims to clarify the characteristics of the MF by focusing on organizational system, water management, and the relationship among MFs in a river system.

METHODS

Eighteen irrigation systems in Mea Kuang (MK) River Basin, which is located 18 km northeast of Chaing Mai city, were surveyed. First, the study area was explored to know the physical conditions of irrigation facilities and service area in each MF. Second, interviews were held with MF head, assistant, weir tender and members. The questionnaires covered three categories 1) Administration of group (organizational system, water fee payment, and annual activities) 2) Water management (decision-making, operation, and monitoring, facility maintenance and conflicts resolution) 3) The relationship between other MFs in a river system.

RESULTS

Outline of the Basin – Three MFs have stopped functioning because of the urbanization. The service areas of other fifteen active MFs ranges from 3.5 to 75.2 ha, totaling to 553.8 ha. Its areas do not coincide with the boundaries of village territory.

Organizational System – The organization of MF is composed of the head, assistants, weir tender and member farmers. The number of member ranges from 5 to 64, and the head and assistants are chosen from the members.

Muang Fai Head – MF head, who is democratically elected, is the key person in the organization. The activities of the group depend on the head's leadership. The head is respected by other members and has the authority in organization.

Duties of Member – Water users have a duty to pay water fee according to their farm size. The collected fee is used for the management of the system; rewards to the head and the weir

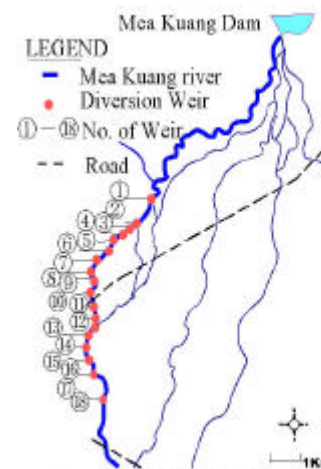


Fig.1 Location of Weirs in Mea Kuang River Basin Survey Area

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tender, and expenditure for the materials and tools used in repairing the facilities. The members are also requested to provide labor for maintaining and repairing weir and ditches. The absence of work imposes a fine.

Rights of Member – All members have equal rights to get irrigation water. Member also can participate in the administration. All members have equal voting rights in MF head's election, and they can give their opinion and discuss the problems and policy in general meeting

Water Distribution – In order to allocate water equally to all users, a rotation irrigation system is applied and the priority is given to the fields at the lower end of ditches. Farmers distribute water themselves according to the laid down rules.

Water Management – Water distribution plan is discussed in general meeting with all members' participation. Main ditches are controlled by the head, and middle and small ditches are done by farmer according to the plan. Water users watch each other's activities. In case of conflict on water management, it would be settled under the strong leadership of the MF head, and penal regulations are applied in violation of the rules.

Relationship between Muang Fais– There are no general meeting and water distribution plan between fifteen MFs. Each MF is independent even in a river system.

Irrigated areas in Dry Season – In dry season, water in MK River is not sufficient to irrigate all service areas. The upper stream, where water can be most easily taken, and the lower stream, where the drainage water from upper area can be reused are irrigated in MK basin. The dry season's irrigated areas are decided by the stable amount of available water, which is dependent on topographical condition.

DISCUSSION

Muang Fai is an autonomous organization established for irrigation purpose, and is successfully managed with fee payment, rules and regulation, penalty system and MF head's authority. Special characteristic of MF in this area is smallness and direct democratic system. This makes organization's administration and management simple and easy, and MF head can have a direct contact with every member.

The incentive for members to organize MF group is to get irrigation water collectively for the stable rice production. Because members can not get water individually from the river. Water users have an equal right to get irrigation water to the paddy field only through equal contribution in maintenance of weir and ditches, water fee collection, and participation in meeting. The water users are involved in all stages in water management. Water users decide water distribution plan through discussion, operate and monitor the system by all members with strong leadership and authority of MF head as well as application of rules and penal regulations.

MF is autonomous and self- managed organization, but there are no cooperation or talks among MFs on water distribution in the source river.

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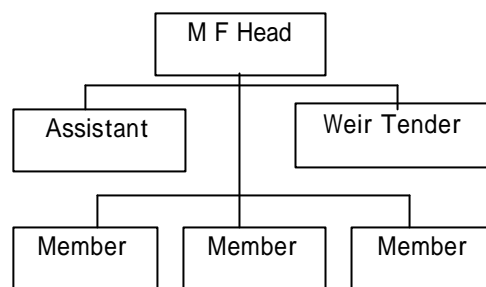


Fig.2 Organization of Small-Scale Muang Fai System

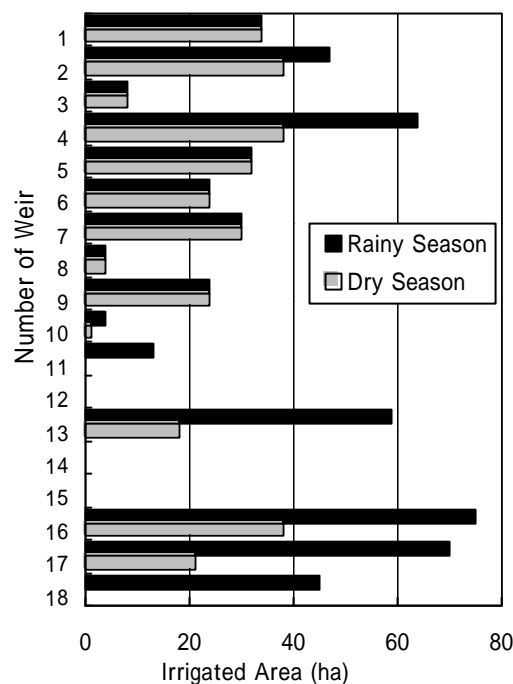


Fig.3 Irrigated Areas in Rainy and Dry Seasons (2001)