

Role of the Institutional Organizer in Assisting Farmers to Participate in the Rehabilitation of Tank Systems

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INTRODUCTION

A TANK is a small storage reservoir used to impound the runoff from the monsoon rains which occur during a few months of the year and to regulate the supply of water, mainly for agricultural use. Tank irrigation has been widely practiced in South India and has been a dominant component of Tamil Nadu agriculture contributing to a third of the net area irrigated in the State. There are 39,202 tanks irrigating 0.928 million hectares of land in this state. These tanks also recharge groundwater and thus facilitate supplemental irrigation through wells.

Most of the irrigation tanks in South India were built hundreds of years ago by kings, chieftains, and big landlords. Heavy siltation and encroachment, inadequate maintenance, operational inefficiency and lack of regulation, and excessive use of water at the farm level have reduced water-use efficiencies to as low as 25-35 percent

THE ROLE OF THE UNIVERSITY

As part of its research on the Centre for Water Resources of Anna University, it is to a pilot study in rehabilitation of the Padianallur tank near the Red Hills in Chengalpattu District. The study began in July 1981 and is supported by the Ford Foundation. It was initiated with a

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view to investigate the present status of the irrigation system. examine its deficiencies, design measures for improving **the** system, evaluate subsequent results, and prepare guidelines for efficient management.

In this study inadequate attention was paid to understanding farmers' concepts of water rights and water-distribution practices and their perception on **the** modernization program. Had the team included a **person** with appropriate community-work experience who would have given full-time attention **to** these questions, a much stronger basis for helping farmers reach a consensus on new water distribution and management practices could have been established.

A PROPOSED EXPERIMENT WITH THE PARTICIPATORY APPROACH IN TAMIL NADU

In view of lessons learnt from the Padianallur pilot study, **as** well **as** from experiences in the Philippines, the Centre for Water Resources is currently carrying out a research program on **tank** modernization, funded by the Ford Foundation, using institutional organizers to apply a participatory approach. The project is titled "Alternative Approaches to **Tank Rehabilitation** and Management -- **A Proposed Experiment.**" It envisages the selection of four experimental study tanks and four control tanks which are to be rehabilitated under a European Economic Community grant. The level of investment per hectare (ha) of command area will be the **same** in both the experimental and the control tanks. While the rehabilitation program is being carried out in the experimental study tanks using institutional organizers **to** involve farmers. the rehabilitation program of the control tanks applies the usual blueprint approach.

The study contemplates documenting the process of rehabilitation with farmers' participation. It takes a multidisciplinary approach of institution building, agricultural extension, and educating the farmers to organize, in addition **to** the engineering and technical aspects. The Public Works Department and the Agricultural Engineering Department are collaborating to implement **the** program. Consultants from the Association for Sarva Seva Farms, a voluntary organization of repute in community-development programs, along with the Centre for Water Resources **staff**, provide necessary expertise and guidance to field staff in their day-to-day-research work.

FIELD STAFF

The project study team consists of **an** Institutional Organizer, a Process Documenter and a Technical Assistant at each tank site. Elsewhere, study groups consist only of an Institutional Organizer and a Process Documenter. Here a Technical Assistant is also included **to** provide relevant technical information **to** the farmers and give adequate explanation **on** engineering

matters to enable them to understand better the engineering proposals of the implementing agencies. This additional input is considered **necessary** in view of the inadequacy and unreliability of water supply as well as to meet the needs of the local situation.

SELECTION OF TANKS

Rapid sociotechnical surveys were carried out at each of the **20** tanks to be modernized under the European Economic Community grant. The investigation team consisted of an Institutional Organizer, a Process Documenter, and a Technical Assistant, guided by a faculty member of the Centre for Water Resources. After a careful study of the hydrological data collected and other aspects such as the enthusiasm of the farmers, the expected extent of incremental benefit, and the number of farmers that are likely to benefit, the committee selected two study tanks and two control tanks.

The two study tanks represent two different situational characteristics demanding location-specific strategies. The perceptible changes in attitudinal patterns and the behavioral complexes in these two systems are being recorded in the process documentation as part of the study program. In the following sections this paper deals briefly with the institution-building experiences gained by the project team in one of the study **tanks**, namely the Kattiamandal tank in Chengalpattu District.

KATTIAMPANDAL VILLAGE

In India, according to an ancient religious order, society was divided into four main caste groups on a functional basis i.e., priests as Brahmins, warriors as Kshatriyas, traders as Vaishyas, and workers as **Sudras**. **Sudras** include the “untouchable” Harijans who were on the lowest rung of the caste ladder. The Harijans constitute about 18 percent of the population and the presence of these “untouchables” gives all caste-minded Hindus a feeling of superior social status, no matter how poor they may be. Even though these caste prejudices are slowly fading from the village community since independence due to the implementation of many welfare programs, society has yet to release itself from the clutches of caste dominance.

The village population consists of members of two castes: the “upper caste” landowning Mudaliars constitute **34** percent and the Harijan people constitute 66 percent. The **59** Harijan farmers own approximately **25** ha (**62** acres) (17.7 percent) while **253** Mudaliars own approximately **117** ha (**290** acres) (**82.3** percent) of the command area. The Mudaliars depend on Harijans for all farm labor and other agricultural services.

When we first entered this village in September 1988, a rift between Harijans and Mudaliars had been in effect since the previous year. The rift resulting in non communication between the two

castes was due to the “upper caste” Mudaliars having bid the heavy price of US\$7.66 (Rs 600) for the palm leaves on the tankbund, rather than following the traditional practice of giving them to Harijans for a token amount of US\$2.6 (Rs 20) per annum. Mudaliars, with caste bias, do not sit together with Harijans in a meeting to discuss a common issue.

The system has two tanks, namely *Peria eri* (*peria* means big and *eri* means tank) and *Chitheri* (small tank) situated respectively 500 meters (m) west and 200 m northwest of Kattiamandal village. They are interconnected by an inlet regulator. Field work commenced in this village on 1 September 1988. This involved primarily a deliberate and persistent approach to capitalize on *ayacutdhars'* (tank beneficiaries') enthusiasm, initiative, and leadership for internalizing their commitment to the work.

Two types of interview schedules are being used for data collection: one for the detailed socioeconomic survey and the other for certain key information. The detailed schedule is being administered to 70 farmers. The key information schedule aims to record periodically, irrigation data in different farm locations.

WATER DISTRIBUTION PRACTICES

This tank observes a traditional water distribution practice known as *Pangu* (share). In ancient times, priority rights were granted to six influential families of the village, whose lands were given preferential water allocations in times of scarcity. The pangu, consisting of 16 *kaanis* or 8.61 ha (21.28 acres) is the standard unit for water allocation and water charges. Each pangu is allowed 12 hours of irrigation with tank water. Pangu holders are given preference to irrigate their fields by drawing lots. Only pangu-holding farmers are eligible to receive water in times of scarcity, when other farmers receive none. The privileged farmers pay a special tax called *Paichal vari* (irrigation tax) and also bear all the costs of village festivals. An interesting aspect of the pangu system is that pangu holders are entitled to sell their water rights to other farmers. *Neerkatti* or *Kambukatties* (luscars or ditch tenders) were appointed by the villagers to look after the water allocation and water distribution according to the pangu system in times of scarcity.

The traditional pangu system was modified by the farmers in a meeting held on 10 December 1988, adapting it to present conditions and to changes that have taken place in the command area over time. The main changes made in water distribution were:

1. The 6 pangus have been changed to 10.
2. The entire command area of 142.5 ha (352 acres) and the adjoining lands reached by irrigation have been included in the pangu. The size of the 10 pangus has been increased to approximately 163.5 ha (404 acres).
3. All like-minded people or kin of a family owning lands in the command area are grouped under one pangu. The size of each pangu is approximately 16.2 ha (40 acres).
4. Twelve hours of irrigation are permitted to each pangu.
5. Night irrigation is also permitted in the tank command.

A disadvantage of the system is that lands grouped under one pangu **are** not contiguous but distributed over the entire command area. Sharing of water through the pangu system is practiced in times of scarcity and the line loss and consequent water waste is greater. In spite of this, the farmers feel that **this** arrangement limits conflicts. This situation may change for the better after implementation of the rehabilitation program when reliability of water supply **is** improved and farmers are better educated.

INTEGRATION AND BUILDING RAPPORT WITH FARMER BENEFICIARIES

Rapport building is the pace setting and pathfinding process for initiating a project in any area, and much more so in a remote village like Kattiamandal, as yet untouched by modernization. Rapport building with the two dominant caste groups, i.e., Mudaliars and Harijans, including converts to Christianity, though slow, gained momentum after 15 to 20 days. The small and closely knit rural community soon realized that the field functionaries had come to live with them to help the community to help itself by its own efforts.

The project team established good rapport and integration with the farmer beneficiaries through a series of **entry** programs, formal group meetings, and informal discussions with individual and small groups of farmers, which enabled them to dispel the misunderstanding between these two caste groups. **The** entry programs were all carried out by farmers and at the farmers' expense, with field staff serving only to motivate participation.

FARMERS' PARTICIPATION

Frequent meetings were held with the farmers to enlist their active participation and involvement. Task forces were formed with members nominated by the general assembly to deal with the following four major components of the tank-irrigation systems:

1. Augmentation of supply to tank.
2. Improvement to **tank** structures.
3. Command area development.
4. Water distribution and management.

Three members were nominated for each of the first **three** groups in this tank, while for the fourth group, nine members were nominated. Group meetings were held periodically by the field staff, and members were taken to the site in order to appraise the provisions made in the Public Works Department estimates and to understand the farmers' **needs**.

ENTRY PROGRAM ACHIEVEMENTS

The institution-building strategy of fielding a team consisting of an Institutional Organizer, a Process Documenter, and a Technical Assistant, ably supported by the Center for Water Resources staff and consultants culminated in the successful resolution of certain long-pending issues. This is of immeasurable value to irrigation management. Above all, the attitudinal changes in the community have poised it for promoting future growth. The achievements of the entry program are:

1. Resolution of the conflict between the two castes and reestablishment of the **traditional** relationship of amity and cordiality.
2. Motivation of the rural community in general and the **ayacutdhars** in particular to become partners in **tank** rehabilitation and management
3. Identification of local leaders, involving them in decision making and inspiring them to a continued commitment to rank-irrigation improvement.

Some physical achievements due to the institution-building activity were also realized. These included the fixing of a new wooden plug in the existing sluice of Peria en and the cleaning and desilting of the main canal and branch canal over a length of 780 m, by mobilizing the services of 31 farmers, among others. The implementing agency was also convinced to carry out selective on-farm development works including the sinking of a community well, based on farmers' requests, rather than in the conventional way.

Summing up, the nature and course of activities and the response of the farming community tend to show:

1. Increasing awareness and interest in developmental functions.
2. Initiative and leadership to manage problems as they surface.
3. Constructive thinking to identify the dimensions of the different problems and finding solutions by group action.
4. Developing the spirit of **cooperation** and **understanding** to shoulder common **responsibilities**.
5. Responding to the challenges by utilizing the services of the field team and effectively collaborating with the Center for Water Resources and implementing agencies such as the Public Works Department and the Agricultural Engineering Department.

EXPERIENCES AND LESSONS LEARNT TILL NOW

Our experiences in organizing farmers through the action of institutional organizers in the two study tanks during the last six or seven months show the following:

1. Building up a viable water users' organization to take responsibility for managing the small irrigation **tank** systems may be complicated and extremely delicate, especially in the heterogeneous caste society found in many villages in India.
2. Despite this negative factor there still exists a general awareness in the farming community of the need to unite on common issues such as the acquisition of adequate water in their **tanks**.
3. In view of the erratic nature of **monsoon** rains there is greater awareness among farmers about conjunctive use of well-water and **tank** water for successful agricultural operations.
4. The present year (1988/89) is one of subnormal rainfall for the Kattiamandal **tank**, whereas it is a drought year for the Kedar **tank**. The interest of farmers at the Kedar **tank** is, therefore, not very encouraging even though there is general interest among farmers to participate in this program. Hopefully, the next **monsoon** rains may help speedier integration **of** the farmers of Kedar **tank**.
5. This study is bound to invite increased attention among farmers in the future. In a caste-ridden heterogeneous community, integrating farmers into an organizational group will take time.

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