

CONCLUSIONS

STARTING FROM ZERO

*Farmers' organize from day one of
a new irrigation scheme under settlement in Sri Lanka*

by Pamela Stanbury

During the last five decades, new irrigated settlement schemes have provided land, water, employment and income to thousands of poor families in Sri Lanka. However, many new schemes have been characterized by severe constraints to irrigation management, notably inequitable distribution of water, lack of attention to maintenance by project management and the beneficiaries and lack of cost recovery on national investments. In turn, income and employment opportunities as well as agricultural production have been far below their maximum potential.

Why should new settlement schemes in particular so often be characterized by inefficiencies in water use? Some constraints may be due to technical factors while others may be due to social and institutional factors. Franks and Harding (1987) have addressed some of the former; over-use of water is common because more time is required for land preparation, a hardpan has not yet developed and repeated plowings are required. Land preparation costs are often high and labor shortages are common, resulting in slowed development of irrigated land.

Increasing realization of the importance of social and institutional factors has been one reason for the emphasis on building local farmer organizations for water management in new schemes, as well as in those older settlement schemes undergoing replanning. The basic concept underlying farmer organizations is settlers, when organized, will be more likely to allocate water and distribute it efficiently than any outside organization. Involving settlers marks an attempt to overcome common criticisms such as Moore's (1985:97) that part of the cause of poor irrigation performance is: "...the lack of strong local farmers' organizations able to challenge the definition of problems and the behavior of the irrigation staff."

The Challenge

A sufficient amount of research has now been undertaken to support the claim that local organizations built around a common interest in acquiring and sharing water, system maintenance and conflict resolution are a critical component of effective irrigation management (see Uphoff 1986). The majority of studies undertaken on the subject have focused on irrigation systems undergoing rehabilitation (see Bagadion and Korten 1985, Coward 1985 and Uphoff 1985). Perhaps because they are fewer in number, less research has been undertaken in new schemes with new settlers. Scudder (1985:147) is one exception, who notes:

Given the lack of social integration which initially characterizes new settlements, agencies should be prepared to facilitate the development of settler participatory organizations. Indeed, such organizations are so important for stimulating development and avoiding dependency that they should be mandated by the legislation establishing settlement authorities.

New irrigated settlement schemes thus pose a rather different set of irrigation management problems from older schemes. In particular, they are often characterized by individual dependency on the agencies and a tendency to overload new organizations with responsibilities. They are often characterized by problems of residential dispersion of organization members or lack of cooperation because of caste or different places of origin. Some of these constraints to developing farmer organizations were identified in a literature review conducted as a preliminary to the field study discussed here (see Stanbury 1988). Merrey, Rao and Martin (1988) have also discussed some of these issues, but they do not draw

specific attention to constraints in new system development.

Kirindi Oya Project

Field research was carried out in the Kirindi Oya Project with the objective of understanding how land settlement activities could affect settlers' irrigation management behavior—their participation in system management and their cooperation in managing a common resource. The development of farmer organizations at the beginning of the Kirindi Oya Project was unprecedented in the history of new scheme development.

The research was conducted during 1988 near the completion of the construction work in Phase I. The transition from a construction to an operations phase was placing new demands on settlers. Facilities and assistance given during construction were being rapidly withdrawn and settlers were being expected to contribute to tertiary level irrigation management.

One residential hamlet located along the Right Bank Main Canal was selected as the unit of study and a sample of households within this hamlet was selected for intensive interviews. A research assistant trained in rural sociology met daily with the settlers and focused on their experiences as they settled into the scheme. Both formal and informal interviews were carried out.

The research was carried out during a period of political and social unrest which made it extremely difficult to conduct some of our field studies. In spite of the drawbacks, settlers made every effort to get settled and were more than willing to talk with us. The project provided an opportunity to observe the early stages of new scheme development.

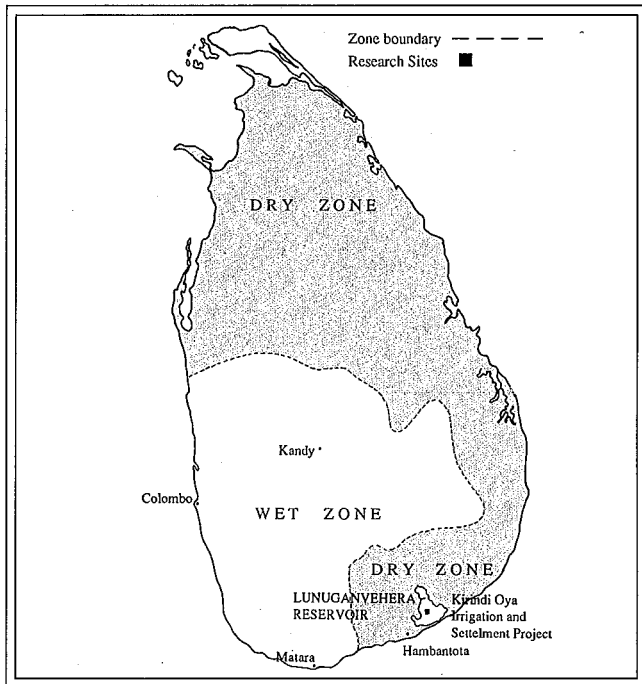


Figure 1: Map of Sri Lanka showing location of KOISP

Features of the Project

The Kirindi Oya Irrigation and Settlement Project is situated in the southern Hambantota District, approximately 260 km from the capital city of Colombo, (see map, figure 1). The project involves the development of water resources of the Kirindi Oya river and adjacent land area. Initial planning for the project began in the 1950s as part of a more comprehensive scheme to develop the water resources of eight major river basins. The financing of the project was not secured until 1976 through a loan from the Asian Development Bank. The first phase of the project was completed at the end of 1988 and involved development of approximately half the new land and canal system and the completion of the main Lunugamavehera reservoir.

Group Plans

When settlers first arrived, they were formed into groups of about 50 by field officers

from the Land Commissioner's Department responsible for implementation of project settlement activities. Each group of 50 settlers was to appoint a leader, known as a *kattinayake*. The *kattinayake* was to be the liaison between settlers and project authorities during the project implementation phase and was responsible for assisting settlers to locate their land, secure their food aid, housing materials and other settling-in activities.

one of the first *new* schemes to be included.

The tasks assigned to the Project Manager from the Irrigation Management Division were to form farmer organizations and develop coordination among various agencies involved in the scheme. He was also to establish a Project Committee through which farmers could discuss problems with the various agency representatives on a monthly basis. The Project Manager was to be assisted by an Institutional Development Officer and a staff of Institutional Organizers who would be posted to each hamlet. The Institutional Organizers were to be the 'catalysts' for farmer organizations, following the Gal Oya model (see Uphoff 1985).

The farmer organizations fostered under the Division were designed to conform to the hydrological units (Fig. 2). Both may be visualized as a tree, with the trunk analogous to the main canal. Branches stemming off the main canal form distributary channels consisting of approximately 60 farmers cultivating one hectare plots each. All farmers on a distributary are members of a distributary organization. Smaller twigs stemming off the branches are the field channels. Each field channel comprises a group of between 5 and 17 farmers who share water as a turnout group.

Initially the Land Commissioner's Department was given responsibility for the formation of water user groups. However, in June 1986, a new Project Manager from the Irrigation Management Division of the Ministry of Lands and Land Development was appointed to assist in building farmer organizations within the project. Although the Division had begun activities in about 36 older settlement schemes in Sri Lanka, Kirindi Oya was

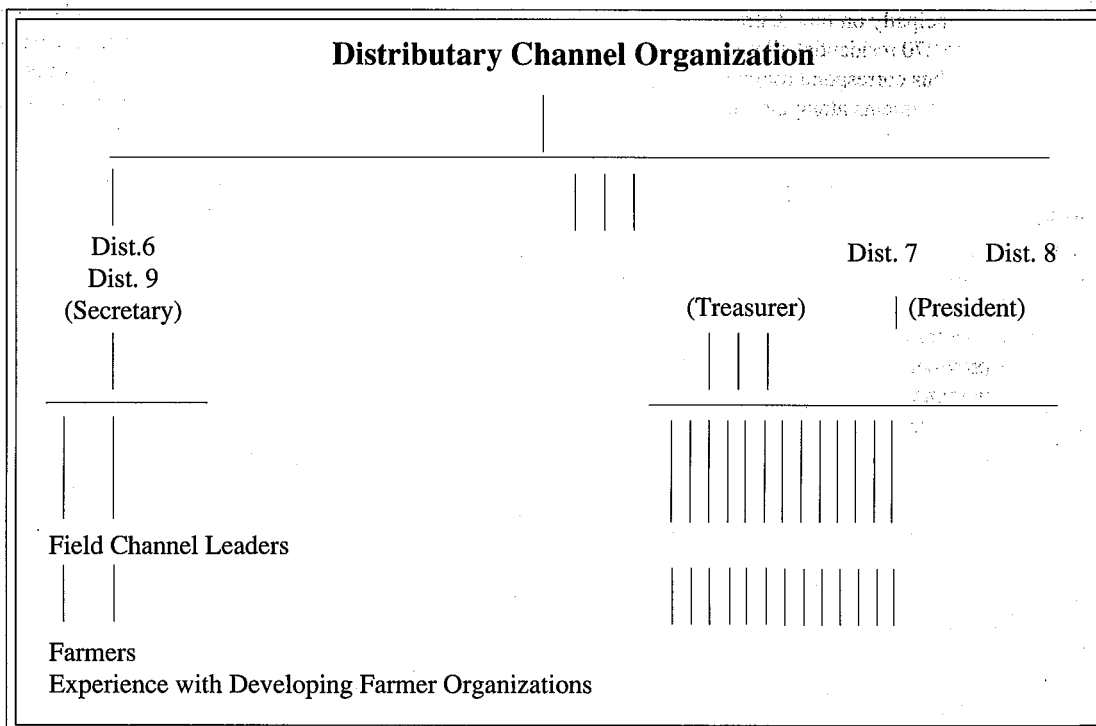


Figure 2: Planned structure of farmers' organizations, Kirindi Oya Irrigation Settlement Project.

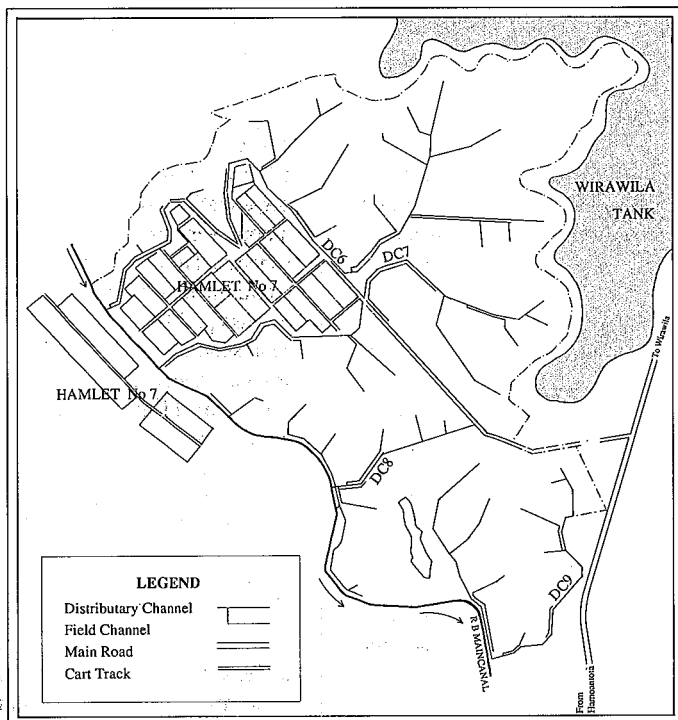


Figure 3: Blocking out plan of Hamlet 7 and distributary channels

Experience with Developing Farmer Organizations

The experience in Hamlet 7, where detailed field research was undertaken, illustrates the variety of issues and challenges involved in developing farmer organizations in a new scheme. Hamlet 7 is located on the Right Bank Main Canal and is the residential area for farmers cultivating principally on four distributary channels. The 270 residential allotments in the hamlet thus correspond roughly to 270 irrigable allotments along the four distributary channels.

Figure 3 shows the clustered pattern of residential allotments. They are not strung out ribbon fashion as is the case in many older Sri Lankan settlement schemes. The homestead allotments are 0.2 ha each and the irrigated allotments are 1 ha each. The hamlet is provided with facilities such as a school, government offices, cooperative store, drinking water and post office.

The first group of settlers began settling in the hamlet in 1985, their number gradually increasing until the settlement was completed at the end of 1988. They received their first irrigation water in 1986 but construction work was still in progress through the end of 1988. The majority of the settlers came from the local area and were former tenant farmers. Some of them were resettlers who had been displaced by construction work in the

project or had land that was submerged by the reservoir. The remaining settlers were from neighboring areas and were selected by the government officers in their electorates.

During project implementation, settlers were highly dependent on the government agencies, particularly the Land Commissioner's Department. The Department provided food aid, shelter, infrastructure, housing loans and planting materials. Initial land preparation (clearing and levelling) was done by the Irrigation Department. As project funds began diminishing and food aid was coming to an end, settlers were suddenly required to become more self-reliant and take a greater part in system development. They were to be responsible for water distribution within turnouts, for canal desilting and for construction and maintenance of drainage areas.

The farmer organizations first fostered by the Land Commissioner's Department were no longer active as the hamlet began making the transition to an operations phase. Their demise was due to the fact that they no longer served their purpose of assisting in the settling-in process. However, the few organizations for irrigation management fostered by the Irrigation Management Division were beginning to take shape. A total of 24 field channel leaders had been elected out of the 30 field channels. Three

distributary channel leaders were also in place (a secretary, treasurer and president).

These new organizations were voluntary organizations which in principle, met every month to discuss—and hopefully solve—various irrigation-related problems. Rather than being separate distributary organizations however, they were still functioning as a single hamlet organization. The secretary of the organization performed such important activities as collecting a list of problems identified by farmers such as levelling, problems with the construction of outlets and drainage and presenting it to the Irrigation Department for action. One other significant activity was to request work contracts for some distributary channel cleaning prior to the 1988-89 cultivation season, although these were not granted due to time constraints.

Although the organizations were asked to practice water rotations, no consistent rotation practices were in effect yet. During the 1987-88 cultivation season, some field channel groups did operate rotations when they felt it was difficult to distribute water among all the allotments within the given water issue. Settlers generally took water as they needed it and did not rotate turns to *save* water. The variation in practices may have been due to the varying lengths of channels or may have been due to other factors such as leadership roles or the composition of turnout members with respect to their place of origin.

Attitudes

While the organizational efforts had focused on the leaders, the settlers themselves generally knew about their activities. In particular, all knew the secretary of the distributary channel organization because he was a charismatic leader who was extremely active and dedicated to improving the welfare of the farmers. Settlers generally viewed the secretary as a conduit for presenting problems, including those not related to irrigation, to the various agencies. The leader became responsible for solving all the farmers' problems and in effect, the organization was tending to become a community development society—a forum for voicing various problems such as domestic water, credit and marketing—rather than means of managing water.

Settlers were still uncertain about the benefits that would accrue to them from participation in irrigation organizations. Because construction work was still going on, the organizations were not able to solve many of their irrigation-related problems. For example, at the time of our study, settlers were told they would receive their first water issue of the season on September 20 and were prepared to begin cultivation at that time. However, when the day came, the Irrigation Department was still in the midst of construction work and could not issue water. Settlers had no means of finding out when water would be issued, and indeed, had not been informed of any change of plans.

In general, the irrigation organizations showed good promise and the efforts of the Irrigation Management Division were commendable. The organizations were beginning to take on activities and beginning to participate in tertiary system management. Yet, some constraints were being faced, some of which could have long-term consequences.

Constraints

The constraints provided some instructive lessons for new scheme development in the future. They are summarized as follows:

* Because there was no mechanism for solving the whole range of community development problems, the organizations designed for water management purposes became in essence, community development societies. The distributary channel leaders were thus expected to solve all the community problems as well as all irrigation-related problems. The leaders themselves expressed frustration at being caught between the settlers and the agency staff because they could not solve all the problems that were raised. The problem of overloading the organization would have been alleviated if a separate organization for community development had been implemented at the beginning of the project.

* During the construction phase, the settlement agency was the provider of food and supplies to *individual* settlers; settlers were not required to act collectively to solve problems. As in many schemes, a high degree of dependency on the agencies was incurred. The Irrigation Management Division

project manager felt his efforts to organize settlers as a group were undermined by the individualistic relationships settlers had with the implementing agencies.

A community development society could have dealt collectively with the agencies, thereby diminishing some of the dependency.

* Lack of clarity about job responsibilities for implementing farmer organizations by the two agencies (the Land Commissioner's Department and the Irrigation Management Division) created some confusion. A clear set of terms of reference and plan for transition from construction to operations phases would enhance the capacity of the agencies to do their jobs.

* In an effort to implement farmer organizations quickly, project management could not pay much attention to the process and timing of inputs to foster those organizations. The program was implemented initially without assistance from Institutional Organizers. The result was that the initial focus was on developing leadership at the higher levels (the hamlet), but less attention was given to explaining the purpose of such organizations to the settlers themselves. It was clear that Institutional Organizers play a vital role in developing farmer organizations and should be put in place at the beginning.

* Settlers felt in many cases the organizations were unable to solve problems because of the priority given to new construction work. As a result, they began to doubt the effectiveness of the organizations. Furthermore, they had not been employed to work on construction or take part in decisions affecting their new land so they complained about the work done by outsiders. Experience has shown however, that involvement of the settlers in activities and decisions about their fields enhances cooperation among them and can make the agencies' jobs easier.

Some other issues identified in neighboring hamlets by our colleagues at IIMI included factionalism and non-participation by settlers. This was largely attributed to the fact that settlers were from different areas of origin, were from different castes, and had different experiences. Our colleagues observed that these factors led to non-attendance at meetings and disputes among settlers. We

observed that the problems were reduced in hamlet 7 because the majority of the settlers were from one area nearby.

Lessons

In the new Kirindi Oya Irrigation and Settlement Project, the efforts made to implement a system of farmer organizations were unusual. They provide important lessons for managers and project implementing agencies in Sri Lanka and elsewhere. The study as a whole also contributes to the growing body of literature on local level irrigation organizations which have focused primarily on old schemes undergoing rehabilitation.

Local level irrigation organizations can play an important and useful role in new scheme development. Some general issues faced in implementing those organizations include the following. First, because settlers often come from different areas, with different experiences and backgrounds, it may be difficult to foster settlers' cooperation and participation in sharing a common water resource. Additionally, since new schemes are so often characterized by an irregular pace of settlement, attendance at irrigation meetings may be poor and cooperation in activities such as maintenance work may be limited.

Second, in new schemes settlers face a wide array of problems and adjustments (not only related to irrigation) which are typically solved through individual settlers' negotiations with implementing agency staff. Settlers frequently become dependent on the agencies to meet their needs, yet this dependency can result in difficulties in fostering local participation once construction work is completed and the agency withdraws. If local level organizations are implemented at the start of a project, they may reduce the dependency syndrome.

Finally, new irrigation organizations run the risk of becoming overloaded with the whole variety of community development problems requiring attention in the early stages of a new project. As a result, it is important to define the types of activities to be undertaken by specific local level organizations at the outset. Multiple community development problems may be better met by a community development organization rather than by an organization designed specifically for irrigation management.

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IIMI Review: Why is that?

Biswas: Nearly all developing countries are now facing a budget crisis. When there is a budget crisis, finance people argue that if you starve O&M funds for one year it will not cause too much damage. When the next year comes and budgetary problems still continue, they argue the system seems to be operating reasonably well, so it probably can last for another year with inadequate funds. So it continues. FAO reports a study of an irrigation system in Burkina Faso. It was found that the cost of rehabilitation of the irrigation system after 10 years of neglect was nearly 10 times the cost, had the system been properly maintained in the past. Such experiences are quite common.

IIMI Review: But most managers are aware of this problem. Doesn't part of the blame lie in cuts imposed on irrigation ministries by central governments?

Biswas: Yes. I think the managers know this problem. But let me ask you one question. Can you tell me one instance where the Minister of Finance or the Minister of Planning had been asked to a national or international irrigation meeting or conference? These are the people we have to convince to improve this situation yet one is hard pressed to think of a single occasion when irrigation experts are seen interacting with them. What I am saying is all of our emphasis, as individuals and as organizations, has been directed at the Ministers or Ministries of Irrigation. I do not know of many people, or international missions, who even try to meet with the Minister of Planning and or Finance. That is a serious oversight.

IIMI Review: Where do you expect to see the most exciting research in irrigation management emerging in future?

Biswas: The most excitement is in the area of impact evaluations of irrigation. But not only in terms of whether there is enough water going

to the tail. If you look at the current evaluation process, we often find two things. First, there are too many 'pseudo-evaluations' which are done to meet the legal requirements of the donors and to protect the reputations of the people involved. They usually show what a great project it is, with some minor problems that need to be resolved. Second, there are those that look at the physical infrastructure to see if the construction deadlines are being met, disbursements are on schedule, and similar issues. We need to begin objective evaluation of the management and impact of the system. The emphasis has to be on developing easy methodologies so developing countries can use them. You can't expect doctoral theses out of these. We need simple evaluation methodologies that can be used by the irrigation agency itself on a regular basis. Evaluation should not be used to place blame on someone or to find a scapegoat. Objective evaluation should provide feedback as to why a system is working or not working so appropriate management decisions can be taken. If we can achieve this it would be the single most important breakthrough we could hope for in irrigation.