0.3 ha. Rehabilitated schemes have standardized sizes of 0.3 ha, 0.5 or 0.7 ha.

The layout and shape of plots and fields in the traditional schemes are irregular. Individual plots are usually not contiguous because fields are not consolidated as in rehabilitated schemes.

Irrigation Organizations

Smallholder schemes have what are known as traditional irrigation organizations. These are found in all schemes under various names like Uongozi wa Mfereji (Canal Leadership), Kamati ya Mfereji (Canal Committee) or Wazee wa Mfongo (Canal Elders). Some of these organizations were registered as cooperative societies.

Since the 1980s, the rehabilitation of traditional schemes and the construction of water harvesting schemes have taken a new direction with regard to farmers' organizations.

New organizations of water users are being established. These include Water Users' Associations (WUAs) or Water Users' Cooperatives (WUCs). This is a result of imitating the successful experiments with such types of organizations in Asian countries.

Credit Schemes

There are no credit arrangements in irrigation schemes. Farmers depend on local moneylenders as sources of credit. This is the case in almost all the schemes.

The government has started to propagate the idea of establishing credit schemes in order to assist smallholder farmers in their irrigation needs. This is part of the introduction of the cost-recovery/cost-sharing mechanisms for all costs whether they are loans or grants from development agencies and banks. Farmers are being educated on the fact that irrigation development is a long-term economic investment and that it has a lasting value.

An irrigation management system is being introduced to ensure that irrigation schemes are managed by the farmers themselves. Farmers are mostly involved in water management and to a lesser extent in scheme management. The approach is towards unifying these roles so that efficiency of schemes is achieved. Through such efficiency achievements, the profitability of irrigated agriculture could be acknowledged by the farmers.

Conclusion

On the basis of the above discussion, it is obvious that there is a great need to transform the smallholder irrigation farmers into technologically viable communities. This could be done through: promotion of animal traction, assemblage of tractors and stationing them in schemes through tractor hire services, promotion of WUAs/WUCs, establishment of rural agricultural banks, institutionalization of equity in land allocation practices whether by gender or individual basis and the construction of intermediate technology for food storage and processing facilities.

The Political Dimension of Seasonal Allocations: Developing a Seasonal Allocation Strategy in a Water-Short System in Sri Lanka

The Kirindi Oya System in southeastern Sri Lanka commands an area of 23,000 acres and is fed from the Kirindi Oya River. The core of the system is the Ellegala Irrigation System, a very old irrigated area centered on five formerly independent tanks fed by a diversion from the Kirindi Oya.

Water availability was badly overestimated during the planning of the Kirindi Oya System. The initial appraisal estimated the average annual inflow to Lunuganvehera Reservoir, upstream of the old Ellegala Irrigation System in the Kirindi Oya Irrigation and Settlement Project, to be 318,000
In fact, the annual inflow has been significantly less and the variability has been high. In addition, the planners figured that the farmers would be willing to plant less water-loving crops than rice in much of the command. In fact, the farmers strongly prefer rice and have resisted other crops, further aggravating the water shortage. Conflicts among the farmers over water were inevitable. From 1986, when water was first issued for cultivation from the Lunuganvehera Reservoir, through 1991, seasonal allocations were handled largely by government officers. Seasonal allocations for Ellegala and the New Areas were discussed with farmers separately, but farmers had no voice in allocating water between Ellegala and the New Areas.

Developing an Improved Seasonal Allocation Process: 1990–1993

In 1990, IIMI, which had been studying the Kirindi Oya System since 1986, prepared a report, catalyzing several government decisions. One key decision was to end construction early. A second was to improve seasonal allocation processes to use water more efficiently, to give New Area farmers more opportunities to cultivate, and to encourage crop diversification. There were two key aspects to the efforts:

Redefining the Decision-Making Authority. Until 1991, seasonal allocation decisions were made by the government officers with only token involvement of the farmers. However, Sri Lanka has adopted a "participatory management policy" under which farmers are encouraged to form hydrologically based organizations which select farmer representatives. These farmer representatives sit with officers from the relevant agencies on a Project Management Committee (PMC) which is responsible for seasonal allocations. When participatory management was introduced to Kirindi Oya in 1986, separate PMCs were created for Ellegala and the New Areas. Because these PMCs lacked the ability to decide allocations between the two parts of the system, they had little influence on seasonal allocations. In 1991, the two PMCs were combined into one which is now officially recognized as the legitimate decision-making body for seasonal allocations.

Devising Principles for Assigning Seasonal Water Rights. In Sri Lanka, all surface water legally belongs to the government; there are no legally recognized individual or group water rights. Seasonal allocation decisions are subject to review and change by the government. The final authority is the Minister in charge of irrigation. Allocations are normally based on certain widely accepted principles:

* Water is distributed to all farmers in authorized areas in proportion to landholdings subject to a level defined for particular crops. Thus rice areas receive more water than non-rice crop areas.
* Equity is to be sought among authorized farmers.
* A standing crop has priority over a crop not yet planted.

In addition, two local principles were recognized at Kirindi Oya:

* Ellegala farmers were recognized to have a priority claim to Kirindi Oya water on the grounds that they were using it first.
* Whenever water was available for the New Areas, system managers assigned it to different subareas in a crude rotation system intended to assure long-term equity.

In 1991, a high-level government committee was charged with devising a fairer allocation policy. Their recommendation, issued in January 1992, suggested that parts of the system, including parts of Ellegala, be followed each season in rotation. In June 1992, these recommendations were discussed with and rejected by farmer representatives. These farmer representatives responded with a set of counterproposals aimed at making it possible to cultivate the whole of Kirindi Oya every season, mostly by planting non-rice crops and by improving water-use efficiency.

Following this discussion, a local-level Technical Committee of officers from various agencies and IIMI was created to turn the two sets of recommendations into a workable plan. The Technical Committee first carried out a new analysis of inflow to the Lunuganvehera Reservoir and took note of other findings to establish a better technical basis of planning. On the basis of these analyses, the Technical Committee proposed a compromise under which the New Areas would receive water for non-rice crops in 40 percent of the area...
and water for rice in 60 percent of the area during maha (wet season from October through February). The non-rice crop would be rotated among different portions of the New Areas. During yala (dry season from April through August) the area with non-rice crops in the preceding maha would receive water for a second non-rice crop while the remainder would not receive water. Ellegala would receive water for 95 percent cultivation of rice during maha; during yala, Ellegala would receive enough water for 85 percent rice and 15 percent non-rice crops.

Disaster in Yala 1992

Yala cultivation decisions are normally not made until mid-March and cultivation normally begins around mid-April. The Ellegala farmers were suspicious of the various efforts to modify the seasonal allocation system; they felt that it was meant to curtail their priority access to water. Therefore, at the January 1992 PMC meeting, Ellegala farmer representatives consistently requested authorization of the whole of Ellegala for yala rice cultivation.

Yala rains normally begin by late March. In 1992, rains did not begin in March; it was so dry that by the end of March, people all over Sri Lanka were beginning to speak of drought. A PMC meeting was held on 20 March to make the seasonal allocations but the decision was postponed because the reservoir was low and rains had not started. Rains started in mid-April. Another PMC meeting was held on 24 April. Under pressure from the officers, the PMC decided to wait until more rains had fallen. This decision led to a demonstration by a large group of Ellegala farmers demanding immediate issues for the whole of Ellegala. As a result, a special PMC meeting was held on 1 May where, against the advice of the officers, the Ellegala farmer representatives demanded and got authorization for rice cultivation for all of Ellegala. The officers, fearful of failure of the rains met with farmers in several areas to explain the risks. Although some farmers said later that they were persuaded that the risks were too high, their own representatives pushed them to cultivate to maintain their priority rights to the water.

As the season progressed, it became apparent that the worst predictions for the season would come true. Rains were lighter than usual and failed totally in mid-June. Water issues from Lunuganvehera were stopped on 23 July to protect domestic water supplies despite protests from Ellegala farmer representatives and from farmers through political channels. The result was total crop failure in most of Ellegala: about three-fourths of the yala 1992 crop was lost.

Conflict and Loss in Maha 1992/93

The Technical Committee presented its first set of recommendations for seasonal allocations to the Project Management Committee in July 1992. With slight modifications, these recommendations were accepted for maha 1992/93. The decision called for allocation of water for rice in only one-third of the New Areas. From August through October, opposition to the planned seasonal allocation grew, particularly in the Left Bank Tracts 1 and 2 and Right Bank Tract 1 of the New Areas which, under the seasonal plan, were to grow non-rice crops. In opposition to the plan, an "independent" farmers' organization was formed in these tracts with the support of a local government officer.

Final decisions were delayed when rains came later than expected and the water level in the reservoir rose slowly. Heavy rains finally arrived in mid-November. On 19 November, the PMC allocated water for rice to Ellegala and to Right Bank Tracts 2 and 5. All of the other New Area tracts were to receive water for non-rice crops only.

Dissatisfaction with the decision led a local politician to appeal personally to the Minister in charge of irrigation, asking him to authorize water for rice for Right Bank Tract 1 and Left Bank Tracts 1 and 2. On the Minister's orders, a special PMC meeting was convened on 22 November but because of opposition from others, the PMC did not change the allocation. With assistance from a Member of Parliament, a delegation of farmers from the "independent" farmer organization met the Minister in Colombo during the first week of December. The Minister agreed to authorize water for rice to Right Bank Tract 1 and Left Bank Tracts 1 and 2 on 20 December subject to the condition that all plowing be completed by that date using rainfall only.

Very little plowing had been carried out by 20 December. Government employees tried to deliver water only to the few fields where plowing had been completed, but they were harassed and
threatened by angry farmers. Water delivery to Ellegala was blocked by farmers to get more for the Left Bank tracts and farmers took over operation of gates and regulators to take water. The situation was chaotic and the government had lost control of the system. To resolve the situation, some farmer representatives and a senior irrigation officer met the Minister again on 25 December when he authorized water issues for rice for all parts of the three tracts from 27 December.

One consequence was the loss of at least 650 acres of non-rice crops that had been planted in the tracts according to the PMC decision; most of these crops were simply under-plowed. Many of the farmers are claiming compensation from the government. However, ultimately all of the rice crops in Kirindi Oya in maha continued into May, and it required the use of inflow from yala rainfall, normally reserved for the Ellegala farmers. In turn, this meant that only a small portion of Ellegala could be authorized water for rice during yala 1993.

Lessons Learnt from the Events

The dramatic events of yala 1992 and maha 1992/93 made the basic conflicts and the disagreements among groups of farmers and between farmers and officers stand out clearly. Despite the losses, the events of the two seasons taught important lessons to the farmers, officers and politicians:

* Farmers learned more about the operation of the system; the Ellegala farmers, in particular, learned not to distrust the government officers as much as they did in yala 1992.
* From the maha events, all of the farmers learned that the New Area farmers will have the support of the government if they demand rights to water. The Ellegala farmers threatened to go to court to establish their rights legally.
* The political interventions in maha 1992-93 generated a great deal of criticism by some farmers and by many officers. Some of the political authorities are now supporting the establishment of a seasonal allocation strategy accepted by all of the farmers.

During these seasons, each group of farmers tested the limits of its political power—exercised through the officers and politicians—against the other. Compromises became possible when each group learned the limits of its power to push its own interests.

Conclusion

Because Kirindi Oya System is a water-short system, the conflicting interests of the various groups of persons are more visible there than in systems with more water. This fact makes it possible to see clearly various key aspects of the process of developing an effective seasonal allocation strategy.

1. First, although a seasonal allocation policy and strategy must have a sound technical and organization basis, its development is not only a technical process, but also a political process during which various interested groups, including farmers, system managers, other government officers and politicians have to come to acceptable compromises.

2. Second, when a conscious attempt is made to develop a more effective seasonal allocation strategy, it is necessary to plan for ways to draw groups with conflicting interests into the political process harmlessly.

3. Third, when government agencies undertake the development of a seasonal allocation policy, it is necessary to put effort into getting agreement among the responsible officers from the various agencies and the politicians.

The basic concern is to develop strong technical and organizational bases for seasonal allocations than to play out the political processes in a non-destructive way. In systems more water-rich than the Kirindi Oya System, there is likely to be more leeway for nondestructive conflicts, but the principles involved apply to all cases of improving seasonal allocation processes.

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