

# Management Brief

The International Irrigation Management Institute

## RESPONSIBILITY IN IRRIGATION SYSTEM MANAGEMENT: SOME POLICY SUGGESTIONS FOR SRI LANKA

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Farmer participation in irrigation system management in Sri Lanka has been accepted as a concept by most professionals and policy makers concerned with improving irrigation system performance.<sup>1</sup> But questions remain about the organizational form farmer participation should take, the degree of responsibility farmers should be asked to shoulder, the relationships to be developed between the farmers and the government, the specific tasks to be assigned to farmers, and the incentives required for both farmers and government agencies to change their respective roles in irrigation management.

There is agreement that a clear policy commitment is required to develop and implement effective participatory methods, and that a specific legal framework will be required to facilitate this process. However, one source of confusion is the tendency to discuss "farmer participation" without reference to the diversity of types and sizes of irrigation systems in Sri Lanka.

This *IIMI Management Brief* suggests a classification scheme for irrigation systems in Sri Lanka, a set of broad policy objectives for each type of system, and possible strategies to achieve the policy objectives.

### TYPES OF SYSTEMS IN SRI LANKA

The Government of Sri Lanka normally distinguishes between major and minor systems.

The latter have commands of less than 80 hectares. Oversight of minor systems -- both village tanks<sup>2</sup> and small anicuts -- rests with the Department of Agrarian Services (DAS) within the Ministry of Agrarian Development and Research. Major systems are managed by the Irrigation Department (ID) and the Mahaweli Economic Agency (MEA).

This classification does not provide a very useful basis for policy-making nor serve very well as a management tool because major systems include too wide a variety of types; for such variety a single set of policy objectives and management structures is not appropriate. Table 1 provides an alternative classification which distinguishes among four system types, and suggests specific policy objectives and strategies for each. These are:

- *Village Tanks (and small anicuts):* Includes tanks and anicuts presently under DAS oversight. In these systems farmers already have primary *de facto* management responsibility with some assistance from a Cultivation Officer.
- *Small Medium Systems:* Relatively small systems presently managed by the ID. Very little research has been done on these systems to date; aside from the personal experience of the ID officers and farmers involved, it is not clear how they actually work. We believe farmers play an active *de facto* role in management and that there is likely to be considerable potential for improving productivity. Systematic appraisal of a few such systems is needed to clarify their problems and the opportunities for improvement.
- *Large Medium Systems:* Presently managed

by the ID with certain responsibilities given to the Irrigation Management Division (IMD). Systems range from about 1,000-4,000 hectares, but this should not be a strict criterion. We prefer to distinguish them from the small medium systems on the basis of manageability, that is, whether complicating technical factors or political/administrative constraints (such as the need for coordination and financial control across hydrological, administrative, or electoral boundaries) inhibit farmers from managing the system even with outside technical advice.

- *Major/Multipurpose Systems:* Presently managed by the ID with IMD participation or by MEA. These are very large systems by Sri Lankan standards, often spanning more than one district or electorate. They often include hydro-electric components as in Gal Oya and/or inter-basin transfers of water as with the Mahaweli systems. We assume that the complexity, scale, and importance to the national economy mean that the government must retain most of the responsibility for management.

### APPROPRIATE POLICIES FOR DIFFERENT TYPES OF SYSTEMS

*Village Tank Systems and Small Medium Systems.* These two systems are seen as separate "types" only because they are now under different administrative agencies, but we recommend putting them under one agency. The government would provide financial and technical assistance as needed and requested by the farmers. We suggest the same policy objectives for both systems: complete turnover of ownership and management responsibility to legally constituted users.

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Table 1<sup>5</sup>. Policy and strategy suggestions for different types of irrigation systems

| TYPE                        | POLICIES  | STRATEGIES  |
|-----------------------------|---|---|
| VILLAGE TANKS               | <b>Objective</b> - Complete turnover of management and ownership to farmers. Government provides technical and financial (credit) assistance.   | Use VIRP, IRDP to develop methodologies for turnover.<br><br>Learn from experience of other countries; experimental learning approach.<br><br>Create necessary policy support, farmer support, and legal framework.   |
| SMALL MEDIUM SYSTEMS        | <b>Objective</b> - Complete turnover to full management, and eventually ownership, by farmer organizations. Government provides technical and financial (credit) assistance.  | Initiate rapid appraisal to ascertain how these systems should be defined, and what the problems and opportunities are.<br><br>Use catalysts, in collaboration with ID and IMD to develop and test methodologies for turnover.<br><br>Create necessary policy support, farmer support, and legal framework. |
| LARGE MEDIUM SYSTEMS        | <b>Objective</b> - Joint farmer/government responsibility for system management, including operations, maintenance and modernization, with full costs borne by farmers. Full farmer responsibility at "D" and "FC" levels with eventual ownership.                        | Use ISMP, MIRP to strengthen IMD and ID capabilities and to develop improved methodologies, including using catalysts.<br><br>Create necessary policy support, farmer support, and legal framework.   |
| MAJOR/MULTI-PURPOSE SYSTEMS | <b>Objective</b> - Government retains primary responsibility for inter-basin transfers and multipurpose systems, in consultation with farmer representatives. Joint farmer/government responsibility for managing identifiable sub-systems, as with large medium systems. | Use Walawe Rehab Project, other resources including IMD/ID on non-Mahaweli systems to develop and test appropriate methodologies.<br><br>Create necessary policy support, farmer support, and legal framework.  |

organizations. "Ownership" means a legally registered farmers' organization would hold title to the system and to rights to the water in the system, as is common in the Philippines and other countries. There are four reasons for proposing this: 1) The administrative and financial burden of managing thousands of small systems is very heavy; 2) due to their heterogeneity and dispersal, it is unlikely that government could do high quality management, even with a greatly expanded budget and manpower; 3) Sri Lankan farmers have been observed to manage such systems better than expected;<sup>3</sup> and 4) handing responsibility for these small systems over to farmers' groups would enable government to concentrate more effectively on the larger systems and make better use of limited resources.

*Large Medium Systems.* The most appropriate long term objective is joint farmer and government management, with farmers having responsibility (including ownership) for branch canals and distributary and field channels through farmers' organizations. We envisage a legal council of representatives from farmers' organizations and government having management responsibility of the system, including financial responsibility. Legally constituted farmers' organizations formed on "D" and branch canals would take responsibility for operation and maintenance at this level, would send representatives to the system council, and would pay fees to the system. In return, they would take delivery of a measured amount of water and distribute it among their members.

Joint management of major systems is a fact in Sri Lanka and elsewhere.<sup>4</sup> Numerous examples exist where farmers do operation and maintenance (O&M) on "D" channels when the government is unable to do so. Joint management is the principle underlying the Integrated Management of Agricultural Settlements (INMAS) program implemented by IMD. Clearer policy goals and a legal framework to enable its effective implementation are needed.

*Major/Multipurpose Systems.* We assume that government will need to retain primary responsibility for management at the main reservoir and inter-basin transfer levels. It would be useful, however, to have a mechanism for regular consultation with representatives of farmer groups at this level, and on the non-Mahaweli systems such as Gal Oya, it may be feasible to form a council similar to that suggested for large medium systems. The Project Committee at Gal Oya plays this role to some extent now but does not fully represent the interests of all the farmers.

Joint farmer-government responsibility for large components, such as main canals and sub-systems under intermediate tanks, would be similar to that suggested for large medium systems. Farmer ownership and responsibility for branch canals and "D" and field channels would be the same as with large medium systems.

#### DIVISION OF RESPONSIBILITIES FOR SPECIFIC TASKS

Table 2 suggests the division of responsibilities for ownership and irrigation management tasks. Farmers (through legally constituted organizations) would own and manage village tanks and small medium systems. Government and farmer organizations would jointly own and manage the other two types. Capital costs would be shared between farmers and government for all system types, but farmers would pay O&M costs. Field and "D" channels would be the farmers' responsibility, except that government would assist with design and rehabilitation. Main canals and the sluices/bunds would be the responsibility of farmers on village tanks and small medium systems, with government assistance for design and rehabilitation. The larger systems would be either jointly managed or government would take primary responsibility for main canals and reservoirs.

#### STRATEGIES FOR ACHIEVING POLICY OBJECTIVES

Strategies for achieving the proposed policy objectives are summarized in Table 1. Three common elements are essential for all the strategies: 1) A clear policy statement and strong

Table 2.5 Suggested division of farmers' and government's responsibilities in irrigation system management by type of system.

| TASKS                          | VILLAGE TANK | SMALL MEDIUM | LARGE MEDIUM | MAJOR/MULTIPURPOSE |
|--------------------------------|--------------|--------------|--------------|--------------------|
| System ownership               | F            | F            | FG           | FG                 |
| Full management responsibility | F            | F            | FG           | FG                 |
| New system construction        | FG           | FG           | G*           | G*                 |
| Bearing costs -                |              |              |              |                    |
| new construction               | FG           | FG           | FG           | FG                 |
| rehab/modernization            | FG           | FG           | FG           | FG                 |
| O & M                          | F            | F            | F            | FG                 |
| Field Channel level -          |              |              |              |                    |
| design & rehabilitation        | FG           | FG           | FG           | FG                 |
| operation                      | F            | F            | F            | F                  |
| maintenance                    | F            | F            | F            | F                  |
| Distributary Channel level -   |              |              |              |                    |
| design & rehabilitation        | FG           | FG           | FG           | FG                 |
| operation                      | F            | F            | F            | F                  |
| maintenance                    | F            | F            | F            | F                  |
| Main Canal level -             |              |              |              |                    |
| design & rehabilitation        | FG           | FG           | G            | G                  |
| operation                      | F            | F            | FG           | G                  |
| maintenance                    | F            | F            | FG           | FG                 |
| Sluice/Bund -                  |              |              |              |                    |
| design & rehabilitation        | FG           | FG           | G            | G                  |
| operation                      | F            | F            | FG           | G                  |
| maintenance                    | F            | F            | G            | G                  |

NOTE: F Farmers' ultimate responsibility;  
 G Government's ultimate responsibility;  
 FG Shared farmer/government responsibility;  
 \* Assumes settlement scheme.

political and administrative support from government and strong support from farmers; 2) a legal framework supporting the policy objectives; and 3) an approach to develop appropriate strategies for implementing the policy, which would include learning from other countries' experiences where relevant.

We suggest using existing or presently-anticipated new projects as vehicles for improving or developing methodologies and strategies to achieve the proposed policy objectives. For example, projects such as the Village Irrigation Rehabilitation Project II (VIRP II) and the Integrated Rural Development Project (IRDP) could be used for village tanks and anicuts, while the Irrigation Systems Management Project (ISMP), the Major Irrigation Rehabilitation Project (MIRP), the

Walawe Rehabilitation Project, and the IMD and ID institutional development project with the Asian Development Bank could be used for the large medium and major systems. Some applied research is needed on small medium systems to identify appropriate strategies and criteria for distinguishing them from large medium systems.

#### NOTES

<sup>1</sup>This is indicated clearly in, for example, the proceedings of the recent workshop on "Participatory Management of Sri Lanka's Irrigation Schemes" (IIMI 1986 and Perera 1986).

<sup>2</sup>"Tanks" are small reservoirs, with an earthen bund, used for collecting run-off water during the monsoon for irrigation and domestic water supply.

<sup>3</sup>Experiences in countries such as the Philippines, Indonesia, Nepal, Senegal, Mexico, Thailand, South Korea, and Taiwan show that farmers are willing to take on ownership responsibilities and can manage such systems effectively and productively.

<sup>4</sup>Notably the Philippines but also practiced in many Latin American, European, and North American systems.

<sup>5</sup>Although the tables were prepared for a meeting in Colombo on 30 April 1987 between IIMI and certain government officials, they were not formally presented at that meeting.

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## ACKNOWLEDGEMENT

The authors are grateful for detailed comments and suggestions from Thomas Wickham, former Director General of IIMI, and Namika Raby, Post-doctoral Fellow at IIMI.

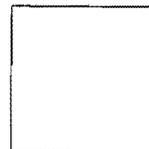
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