Village Irrigation Systems in Sri Lanka: An Overview

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THERE ARE THREE types of irrigations systems in Sri Lanka: minor or village, medium, and major irrigation systems. This overview focuses only on minor or village irrigation systems, where farmer participation in management is an objective.

The Agrarian Services Act of 1979 defines a village (minor) irrigation system as an irrigation work serving up to 80 hectares (ha) of agricultural land. In Sri Lanka, farmer-managed irrigation systems do not exist because the State has penetrated the village communities during the past hundred years and established its control over village property, particularly over irrigation sources. In recent years, both the State and nongovernmental organizations have intervened in the rehabilitation of village irrigation systems. All programs have emphasized the participation of the water users in rehabilitation, operation, and maintenance activities at the field-channel level.

Village irrigation systems account for about 50 percent of the 450,000 ha under irrigation, cover 35 percent of the land in rice production, and contribute 24 percent of the total rice production in Sri Lanka. According to an inventory conducted in 1986 by the Department of Agrarian Services, the country has 9,796 anicuts (weirs) and 9,294 reservoirs (tanks) in working order. Under these systems, it is possible to cultivate about 235,000 ha.

It is estimated that about 50,000 ha of new land can be irrigated by refurbishing existing village irrigation systems. This means that 50,000 to 75,000 farm households can be provided with adequate irrigation facilities without resettling them. Such a program is cost-effective, as the average cost of village irrigation rehabilitation is estimated at US$350 per ha, which is only about 20 percent of the cost of developing a hectare under a major irrigation system, for example, the Mahaweli Development Project.

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Village irrigation systems play an important role in the Sri Lankan economy and society. However, low yields and minute holdings, which characterize irrigated lands under village irrigation systems, pose policy and welfare questions. Ninety percent of landholdings under village irrigation systems are below 0.4 ha each. There is an urgent need to rehabilitate these systems and introduce land or tenure reforms. Sri Lanka has very little land to open new farmholdings in the future. Therefore, the State has evolved a strategy to intensify and diversify agricultural production on existing cultivated land.

VILLAGE IRRIGATION REHABILITATION PROGRAMS

Although there are several agencies to deal with village irrigation, all of them follow Irrigation Department procedures. The Department of Agrarian Services which is responsible for repairs in village irrigation systems consults with the Irrigation Department when technical expertise is needed. Nongovernmental organizations obtain approval from the Irrigation Department and the Department of Agrarian Services to rehabilitate village systems; their general performance and progress are monitored by these two government departments.

Process of Rehabilitation of Village Irrigation Systems

Village irrigation systems are selected for rehabilitation from a list maintained by irrigation officials at regional and divisional levels. Practically all village rehabilitation projects specify that highest priority be given to those systems that would yield maximum returns with minimum investment. The cost for a project including all civil works and physical contingencies should not exceed US$775 per ha, plus US$1,500 per ha for the incremental area that will be served.

When a system is selected, first a preliminary feasibility investigation is conducted followed by a pre-construction survey by a technical assistant from the Irrigation Department. The farmers are usually not consulted during the preliminary investigation stages. At the ratification meeting held before the commencement of construction work the villagers can discuss the proposals with agency officials.

Recently, the Department of Agrarian Services has formed Agricultural Planning Teams to seek suggestions from the beneficiaries on how physical implementation could best be accomplished. Having the Team work with the beneficiaries early in the rehabilitation exercise has helped the construction agency in designing and planning the rehabilitation program and in coordinating proposed water-management programs with the physical improvements. In conjunction with the Team, a cultivation officer is responsible for implementing the water-management program in his area. He organizes farmer groups and assists the group leaders. The irrigation headman, elected by the farmers, operates the sluice and supervises water delivery. Water rotation schedules are prepared by the local Agricultural Planning Team.

CONCLUSION

The State agencies and nongovernmental organizations involved in rehabilitating village irrigation systems have consistently reiterated the importance and the need for having the beneficiaries manage the systems. However, recent experience shows that officials often fail to consult farmers in the rehabilitation process. Very little research has been conducted to understand the main characteristics of communities, and bureaucratic interventions have sometimes had negative impacts on sustaining effective management systems. It is urgently necessary to reformulate the intervention strategies to allow farmers to develop local capacity in management.