

FARMER-MANAGED OR STATE-MANAGED : The Case of Village Irrigation Systems in Sri Lanka.

U. L. J. PERERA

Abstract

The label of 'farmer-managed' in terms of irrigation systems is typically applied to small-scale village irrigation systems. Such irrigation systems are significant in many tropical countries, and exceed the land area that is irrigated by 'agency-managed' irrigation systems. This paper makes a case that the label 'farmer-managed irrigation systems' is really a misnomer in Sri Lankan context. It is argued that at least starting from the latter half of the nineteenth century, a process of State penetration into the rural areas in general and into the irrigation-cum-agricultural sector in particular, has resulted in village irrigation systems becoming primarily State-managed.

Introduction

Irrigation systems can be placed on a continuum: farmer-managed irrigation systems at one end and the State-managed irrigation systems at the other. However, at present it is difficult to find an irrigation system which ideally fits into one of the polar situations. This is mainly because the State has been an important part of the environment for many farmer-managed systems historically as well as at present, and on the other hand, State-managed major irrigation systems quite often emphasise the need and the importance of farmer participation in system operation and maintenance.

Broadly speaking, a farmer-managed irrigation system has several characteristics. The physical structures or irrigation works have been built by the farmers as a group and they claim exclusive rights over the structures and the irrigation water conveyed through them. Such an irrigation system is largely supported by local resources although, sometimes it receives State support to maintain its physical structures. In such systems, significant tasks that are indispensable for their persistence such as decision-making over water distribution and maintenance of the irrigation works are usually assigned to water users, i.e., farmers of the community.

Farmer-managed irrigation systems are significant in many tropical countries and exceed the land area that is irrigated by State-managed irrigation systems. Such irrigation systems have certain advantages which attract the State's interest: a manageable size, low cost main-

tenance potential, readily accessible technology and homogeneous small communities for eliciting community involvement in their management.

This paper makes a case that the term 'farmer-managed irrigation systems' though applied to village irrigation systems in Sri Lanka is really a misnomer. It is argued that starting from the latter half of the nineteenth century, a process of State penetration into rural areas in general and into the irrigation-cum-agricultural sector in particular, has resulted in village irrigation systems becoming primarily State-managed, with perhaps a token gesture to farmer-management as typified in the *kanna* (seasonal) cultivation meetings and Tank Committees under current programmes such as the Village Irrigation Rehabilitation Programme (VIRP).

Village Irrigation System: A Definition

A satisfactory definition of 'village irrigation system' is not available and as a result, different agencies emphasise different aspects of village irrigation according to their interests and investment priorities. In Sri Lanka, surface irrigation systems are broadly classified as major or minor irrigation systems on the basis of the extent of land irrigated, investment costs and which management agency the irrigation system comes under. Generally, small-scale, village-based irrigation systems — both reservoirs and anicuts (weirs) are known as minor irrigation systems. The Irrigation Ordinance of 1946 defines a 'minor irrigation system' as one constructed by the farmers without Government help, or with the help of masonry works and sluices supplied free of charge by the Government and maintained by the farmers. The Agrarian Services Act of 1979 adds another dimension, i.e., that an irrigation system becomes a minor irrigation system when it irrigates less than 200 acres. For the purpose of VIRP, minor irrigation systems are defined as those that benefit less than 200 acres and where design and construction are the responsibility of the Irrigation Department, whilst operation and maintenance are that of the Department of Agrarian Services which enlists the involvement of the community for the purpose.

Village Irrigation as a State Activity

The Government of Sri Lanka, as its main agricultural policy, stresses the need to achieve self-sufficiency in food. It pays special attention to a strategy based on the intensification of agricultural production on existing cultivated land as the room for expansion of new paddy lands is limited. In this respect, village irrigation systems occupy an important place in agricultural development as they account for the irrigation of more than 40% of the area under permanent

cultivation and 30% of the paddy acreage (Gunadasa, et. al. 1980).

From the 1970s, the investments in village irrigation systems have been quite substantial as seen in the following table:

TABLE 1

INVESTMENTS IN VILLAGE IRRIGATION SYSTEMS SINCE 1950

Period	Amount Invested (Rs. in Millions)
1950 - 54	16.4
1955 - 59	11.0
1960 - 64	6.4
1965 - 69	23.3
1970 - 74	70.4
1975 - 79	196.6
1980 - 82	285.4

Source : *Economic Review* (1986: 5)

As the above table shows, from 1975 onwards, Government's investments in village irrigation activities increased spectacularly as the Government began to pay special attention to the rehabilitation of minor irrigation systems. The Government recognised not only the potential for expanding the paddy acreage under village irrigation, but also the possibility it offers for distributing State funds more widely among the villages. Furthermore, from a welfare perspective there has been an urgent need to improve irrigation facilities through rehabilitation of village irrigation systems, so that the majority of rural households can earn more from their paddy holdings.

With assistance from the World Bank, the Government of Sri Lanka started a project in 1981 called the Village Irrigation Rehabilitation Project (VIRP) to rehabilitate some 1,200 minor reservoirs and anicuts in 14 administrative districts of the island. The Project seeks to achieve several related objectives: to improve the technical parameters of village irrigation systems which would lead to an increase in the irrigated area by 40%; to strengthen appropriate farmer organizations in order to train farmers in effective water management; to establish, monitor, record and evaluate overall system and operational efficiency; to introduce modern farming methods with a view to increasing the cropping intensity; and to raise farm incomes in village irrigation

systems.

The project stressed the importance of going back to 'traditional practices' of water management in order to correct certain weaknesses in the water management programmes introduced during the post-independent era by different Governments (see World Bank, 1981:4). 'Traditional practices' in this context mean communal irrigation practices that were presumed to have existed in the past. The Government attempts to resuscitate such practices mainly in the sphere of water management in recently rehabilitated village irrigation systems. Some components of the programme have been introduced on the assumption that they had contributed to improving the efficiency of village irrigation in the past and the resuscitation of them would improve irrigation efficiency today as well. This assumption derives from two interrelated observations on the village community. The first is that communal, farmer-managed mechanisms of water management did play a vital role in making village irrigation systems efficient in the past. The second is that village communities are still structurally the same; therefore it is possible and desirable to resuscitate such mechanisms for efficient water management in village irrigation systems.

Since many references are being made to past experiments in irrigation water management as a basis for new institutional mechanisms and agricultural practices, it is opportune at this stage to discuss briefly the salient features of British irrigation policy with particular reference to village irrigation systems.

Irrigation Policy in British Sri Lanka

Until the 1850s, the British rulers hardly showed any interest in irrigation development in Sri Lanka. This was mainly due to their involvement with military and political activities until the 1820s and with plantation enterprise in the next three decades that followed (Roberts, 1972: 48).

The British administrators' interest in irrigation development increased in the 1850s for several reasons:

- a) The consolidation of British power soon after the 1848 rebellion allowed them to take a benevolent approach to the Sri Lankan peasantry. This approach was based on the belief that the restoration of irrigation works would make the Government popular.
- b) With the establishment of plantation enterprises in the central hill

country the revenue of the Government increased. This allowed some governors to invest money in the restoration of small irrigation systems.

- c) In the mid-19th century, Henry Maine's writings on village communities were dominant as an ideology among the British civil servants. Officials believed that the initial restoration of village irrigation works by the State would allow the peasants to organize themselves into cohesive communities to manage their affairs with least interference from outside. Thus village irrigation systems, they thought, would remain as farmer-managed systems and be consistent with the British policy of 'indirect rule'.

This last factor played an important role in shaping the Paddy Lands Irrigation Ordinance of 1856. The planners of the Ordinance attempted to hinge the entire Ordinance on local customs and traditional village organization. The key principle enshrined in the Ordinance was that Government activity in irrigation and related development should be carried out in consultation with the peasants. The maintenance and operation of village irrigation works were expected to be carried out by the villagers themselves and irrigation disputes were to be resolved within the village. The restoration of village irrigation systems was guided by the policy that the Government should work along with native support, and that the latter's feelings, habits and interests should be treated seriously in doing such work. In this regard, the villagers' support in money and labour was also to be obtained. Thus the irrigation policy reflected in the 1856 Ordinance had the flavour of a combination of paternalism and self-interest: paternalistic because the Government felt that its duty was to help the peasants through irrigation works; self-interested because the Government believe that in this way the food crisis could be resolved and peace and order be guaranteed in the country side, at minimum cost (Roberts, 1972).

From the 1850s, restoration of village irrigation works comprised of two components: monetary contributions and technical supervision from the Government and voluntary labour from the beneficiaries (village farmers). This system was widely known as the 'Grant-in Aid' system. After 1885, the principle of 'Pay-its-Way' was adopted with the expansion of *laissez-faire* ideology, and as a result, whenever irrigation works were constructed, the beneficiaries were expected to repay the Government's investments in ten annual instalments through what was called a 'water rate'. "The principle of direct financial recoument

therefore, was an integral part of government's irrigation policy" (Roberts, 1972: 54).

With regard to institutional arrangements for irrigation water management, the British rulers attempted to reintroduce what were presumably customary forms of village social organization such as the *Gamsabhawa* (Village Tribunal) and communal labour. However, a careful study of Ordinances and irrigation rules enacted after 1865 clearly shows the State's desire to control the irrigation systems including village ones. For example, Ordinance No. 21 of 1867, introduced by Governor Robinson required that all proposals for the refurbishment of reservoirs and anicuts (including village irrigation systems) were to be reported on by a Board consisting of the Director of Public Works, the Surveyor General and the Government Agent (GA) of the Province concerned. Although this arrangement for the close supervision of irrigation works did not operate well, it indicated the State's desire to control all irrigation works. Ordinance I of 1887, introduced by Governor Gordon, established a more elaborate supervisory structure for irrigation works management. According to this Ordinance, each province had a Board composed of the GA, Senior Surveyor in the province and the Provincial Engineer. It had the authority to review and approve the refurbishment of irrigation works in the province. Moreover, it supervised the rehabilitation of irrigation works done by the Public Works Department.

At the village level, the *Wew Lekam* (Irrigation Secretary) and the Guardian (Irrigation Controller) played an important role in bringing villagers together to operate and maintain village irrigation systems. The Village Irrigation Headman who was selected by the villagers at the request of the *Ratemahathmaya* (native chieftain) held some responsibility for such work and was expected to coordinate irrigation and agricultural activity within the village. Through the *Wew Lekam*, *Ratemahathmaya* and the *Gamsabhawa* the Village Irrigation Headman was brought into contact with the district administration.

Allocation of funds for the refurbishment of irrigation works and the opening of new lands below the refurbished village reservoirs were done by the State in consultation with the Public Works Department by the Government Agent of the Province. On occasion, the Village Headman and the Irrigation Headman were consulted; but they were not expected to voice the general consensus of the village community, but to assist the Government as village-level officials. With regard to conflict resolution, the Village Irrigation Headman did not have much powers

except his traditional authority; he had to report recalcitrant farmers and wrong-doers to the *Wew Lekam* who prosecuted them in the Village Tribunal.

Although the village irrigation systems were refurbished and controlled by the British rulers, their presence was not immediately felt by the villagers in day-to-day activities in relation to irrigation works. This was the case in the Dry Zone villages, especially in the North Central Province where the general British policy of "indirect rule" was in full operation. The continuity of traditional social institutions such as *gamsabawa* and *variga*, and irrigation practices such as *kanna* (cultivation) meetings and *bethma* (water division) contributed to the villagers' feeling that a village irrigation system was a part and parcel of village property and as much as the village property was theirs, they could as well manage village irrigation systems.

Although these institutions and practices were considered as 'traditional management devices', they were introduced by the Government to control village irrigation systems under its indirect rule. Although such officials were villagers themselves, they had every opportunity to become dictatorial if they wished to be so (Leach, 1961; Perera, 1985). The State correctly chose individuals within the village to control its irrigation works. For example, the appointment of one of the biggest landlords in the village as the Irrigation Headman by the Government Agent with the consent of the villagers facilitated the smooth control of village irrigation and agricultural activities. The Irrigation Headman was expected to assist the *Thulana* Headman in various matters and to act as his representative. This linked the former to the formal administrative hierarchy of provincial administration.¹ Together with the Village Headman, the Irrigation Headman possessed administrative experience, education, good connections with outsiders, and power, which assured confidence in the exercise of authority. Thus their authority did not derive from the popular support they had in the village, but from the property and wealth they possessed and the power they received from the State.

1. The GA for the Central Province in 1928, Kindersly described his functions as follows: Revenue Collector, Registrar of Births, Marriages and Deaths, Chairman of the Roads Committee for all minor roads in the Province, Supervisor of a Native Department overseeing Police activities in villages and *supervising minor irrigation works*; responsible for the auction of Crown Lands and the nomination of senior Headman and for many more lesser roles (Blackton, 1978: 33) (*italics mine*). This list of duties of the GA shows clearly that there was not a single community activity that was left for villagers to look after by themselves.

Increased State Intervention and Village Irrigation

From the beginning of the 20th century, especially from the 1930s, rural areas have been characterised by an accelerated process of State penetration. This process was already evident in the implementation of the Waste Lands Ordinance of 1840 and its amendment of 1897 which ensured the security of tenure and protection of Crown land from encroachment. Several cadastral surveys were held in rural areas to demarcate Crown property from individual and communal property. Thus, all types of land in villages were mapped out and their ownership was regularized. When the Government refurbished village tanks, they too became Crown property. "As a result, the State was in a position to re-define the hydraulic community boundaries, sometimes permitting the *aswaddumization* of new lands by outsiders who had access to them at public auctions (Abeyratne, 1986: 5). Thus the introduction of new concepts of property, re-definition of the boundaries of the hydraulic community and the emergence of village land as a marketable commodity radically disturbed the traditional village social structure and its value system. This led in the 1930s and 1940s to the definite decline in communal action and the authority of the traditional leaders such as the *Rate mahathmaya*, Village Headman and Village Irrigation Headman. With the introduction of universal franchise and the growth of the State's function, the British had given up indirect rule by 1940 and began to incorporate remote villages with the centre. Traditional positions such as *Rate Mahathmaya* and *Koralemahathmaya* were done away and the legal administrative functions of the *gamsabhawa* were separated² (Leach, 1961). Village Headman's position was made a salaried post and the appointment was made on merit rather than on a candidate's family standing. In 1939, the *Ratemahathmaya* position was replaced by the Divisional Revenue Officer — a civil servant.

Until the 1940s, village irrigation systems relatively speaking were less dependent upon the State because their mix of *chena* and irrigated rice cultivation gave them a measure of protection from radical changes in State policy. The ability to capture and store water as well as the ability to integrate *chena* cultivation with paddy were the major factors which in those days decided the viability of the paddy economy.

2. This trend was evident as early as the 1910s. By 1920 the headman system had become the target of criticism by the local nationalist leaders as the former by then were known as stooges of the imperial masters and were suspected of many corrupt practices. Post-1920 era witnessed the decline of the close association and trust between the British Civil Servants and Chief Headmen. In 1924, the Village Committee Ordinance reduced the power and authority of headmen and increased the powers of the Village Committees.

However, starting in the early twentieth century, village Sri Lanka witnessed the expansion of State activities which radically changed the village economy. State activities in the spheres of health, communication and land settlement increased population pressure on land which eventually disturbed the integration between *chena* and paddy cultivation by limiting the expansion of *chena* land. Village boundaries also expanded to cover most paddy lands beyond what could be irrigated by the village irrigation system. Such paddy lands became essentially rainfed and therefore not dependent on village irrigation system. At the same time, the State policy of expansion of major irrigation schemes in fact has shrunk the existing *chena* land and in some instances incorporated the village irrigation systems into larger irrigation systems, thereby linking them to the larger environment.

Village Irrigation Systems: State-Controlled or Farmer-Managed?

Despite the changes that have taken place in the village community as a result of a process of expansion of public programmes in rural areas, "the State consistently chose to treat village irrigation systems as relatively autonomous entities where the 'one-tank-one-village' concept was viewed not only as an ecological imperative but also was seen to enjoy a social reality" (Abeyratne, 1986: 9). Thus the water management packages that were introduced by the State (and by some NGOs) in village irrigation systems are premised on the assumption that the 'village communities have remained unchanged and display attributes of continuing strong social cohesiveness that can be tapped for purposes of irrigation management" (Perera, 1986: 2).

The current State-sponsored Village Irrigation Rehabilitation Project (VIRP) operates on several assumptions: (a) farmers do not have adequate skills or capital to refurbish village irrigation systems by themselves; (b) therefore, the State should intervene to refurbish these systems; and (c) since the village irrigation systems are still operated as communal property, the State should allow the village communities to operate and maintain them. The same set of objectives were reiterated by the NGOs who were also involved in the rehabilitation of village irrigation systems. For example, the National Freedom From Hunger Campaign Board (NFFHCB) which has been involved with the restoration of abandoned tanks in the Dry Zone through its "Small Reservoir Village Community Rehabilitation Programme" emphasises two main objectives: (a) to improve living standards of the rural poor by restoring their irrigation works and (b) to revive ancient customs which assured the operation and maintenance of village reservoirs to allow the beneficiaries to manage the systems as their property (Wijethunga, 1980).

Such management packages clearly assume that once the physical structures of the irrigation systems refurbished by the State, the local people will take over at least bulk of the operation and maintenance activities for themselves.

Under the VIRP, as in all other rehabilitation exercises, the technical irrigation agency — in this case the Irrigation Department — is given the responsibility for establishing design criteria and thereafter in applying these to construction. In the design process, the Irrigation Department (ID) did not consult nor involve local farmers. Abeyratne and Perera (1986) found in a comparative study of six village irrigation systems in the Moneragala District that less than 1% of the farmers were consulted or kept informed of the design or of their progress.

The alienation of local farmers from the State-directed irrigation rehabilitation works is evident specifically at the construction stage. Farmers complained that they had little knowledge of the amount awarded to the contractors. Many farmers resented the fact that they were not consulted and were not informed of what was really going to take place in their village till actual physical work was started. They would have liked to have provided labour for construction, especially since during this period they were unable to cultivate one or more seasons and had no other means of subsistence. But not a single farmer in the four study villages was recruited as wage labourers by the contractors (Abeyratne and Perera, 1986). Farmers were often not happy with the construction work and nearly two-third of respondents said that there were problems with the physical works after rehabilitation.

The situation as described above hardly contributed to the community's involvement in rehabilitation or to good relations between the ID and farmers. The persistent and strong presence of the State in rehabilitated irrigation systems have changed the villagers' perception on who owns the system and who should maintain it.

Over two-third of farmers in post-rehabilitated villages said that the State owns the irrigation systems. They were more inclined to believe that the responsibility for maintenance of the irrigation systems was with the State though, in actual fact, they themselves ended up doing maintenance work, because they were compelled to do so (Abeyratne and Perera, 1986). Thus it is doubtful without State presence and the compulsion derived therefrom, that farmers on their own would continue to do maintenance work in the future.

The overall management of village irrigation systems has been placed in a national matrix which incorporates them vertically all the way up to the National Committee for Village Irrigation Rehabilitation and the Project Steering Committee through the District Agricultural Committee. These Committees have responsibilities for the co-ordination of irrigation activities in the district. They also link up with the District Development Councils and ensure consistency with other programmes, for example, those financed under rural development projects. The introduction of the divisional-level Agricultural Planning Team (APT) has been an attempt to improve village level management capabilities in irrigation.

The principal function of the APT is to formulate and thereafter implement a water management programme for each rehabilitated village reservoir/anicut, in consultation with farmers. After the APT has finalized the water management plan and it has been approved by the Deputy Commissioner (Water Management) of the Department of Agrarian Services in Colombo, the Farmer Representative (or *Vel Vidane*) sees that the command area is sub-divided into small groups of 6–10 farmers. These groups in turn each select a Yaya Representative, all of whom are represented in the Tank Committee.

Under the VIRP, the Tank Committee (TC) is the only institutional forum which allows farmers to take part in the decision-making process with regard to operation and maintenance of the irrigation system. The TC consists of the *Vel Vidane* (Chairman), the *Yaya* Representatives elected by farmers and the relevant Government officials. Within the Tank Committee, there is a division of functions, e.g., government officials of the TC are in charge of distributing agricultural inputs and providing extension advice, while the *Yaya* Representatives are expected to distribute irrigation water according to the schedule prepared at the *kanna* meetings, and to resolve irrigation conflicts. Thus the officials deal with extra-village activity while the *Yaya* Representatives deal with matters that strictly concern the community. This demarcation of duties between the Government Officials and the *Yaya* Representatives is further reflected in their accountability. The Government officials are accountable 'upward' to the State, whilst the *Yaya* Representatives are responsible 'downwards' to the farmers of the village paddy *yaya*.

The TC is an informal institution which does not have any administrative or legal powers to resolve conflicts or to punish the wrong-doers. Such powers are exclusively vested with the official

members of the TC like the Cultivation Officer. As a result, in practice, the official members of the TC decided almost all the issues pertaining to irrigation in the village in their capacity as Government officers. In this sense, the TC is not a farmer organization; rather "it provides a convenient meeting place or nexus between the State as it reaches down to provide benefits such as extension advice or production inputs, and the community, through its representatives, as it reaches up to receive them" (Abeyratne, 1986: 133).

The TC thus does not articulate farmers' desire and ability to manage village irrigation systems. The presence of the State through its officials in the TC and the overall supervision of the TC and its activities minimise, if not completely remove, managerial functions from farmers. "Hence the APTs and the Tank Committees can be seen as State-sponsored vehicles for implementing a prescribed water management programme rather than as mechanisms to encourage farmer involvement in irrigation system rehabilitation, management, and operation" (Abeyratne, 1986: 134).

Conclusion

Several processes can be identified from the foregoing discussion with regard to rehabilitation, and O & M of village irrigation systems. First, the presence of the State in such activities at least from the mid-nineteenth century, although its intensity fluctuated at different times. The second is the State's deliberate attempt to distinguish physical works from irrigation management and to hand over the latter to local farmers on the assumption that the village is a cohesive group of farmers who constitute a community. However, the State did not allow farmers to evolve their management mechanisms and quite often in the guise of resuscitating traditional, communal management devices, introduced its own blue-print of farmer organizations for water management and O & M activities. One reason perhaps for this is that the State had realised as early as the 1850s that the transfer of O & M functions to the villagers would save its energy and finances and at the sametime, encourages the peasants to feel that they are the owners or at least, that they are responsible for such works. The latter feeling has eroded as State intervention increased over the years and at present farmers do not believe that they own village irrigation systems or are responsible for their O & M. The VIRP has not only completed the State control of both rehabilitation and water management of village irrigation but also limited the few avenues that were available for farmers to participate in water management. Thus village irrigation systems in Sri Lanka, as in the case of large-scale irrigation systems, are State-controlled; not farmer-managed.

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