GOVERNMENT POLICY ON PARTICIPATORY IRRIGATION MANAGEMENT

by
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Indigenous Irrigation Institutions

Perhaps the most enduring of institutions coming down from ancient Sri Lanka are those related to the use of irrigation water. Obviously, these have evolved on account of the heavy dependence on water for rice cultivation and the need to carefully manage a scarce resource on a communal basis. A range of disciplines and practices related to water utilization that developed over the years, have been established as customary **laws** *(sirith)*. These relate to maintenance of irrigation works and the control and use of water to ensure an equitable sharing in times of water stress *(bethma)*. These customs were observed generally by the beneficiaries while the council of village elders *(Gam Sabawa)* adjudicated over breaches. The British rulers revived and gave official recognition to these customs through Ordinance No. 9 of 1956 (Irrigation Ordinance).

The Irrigation Ordinance requires the proprietors at a meeting (referred to as a Cultivation Meeting or Kanna meeting) to determine the cultivation calendar and details of the seasonal operations at the heginning of each season. This institution has proved to be an effective method of enforcing'the cultivation calendar and practices and of maintaining a dialogue between the bureaucracy and the farmers. It has worked well with village irrigation works and is still complied with today (Gunasekera 1981).

There were many features in the village irrigation schemes that nurtured and sustained the principle of participatory management at varying levels. Among them:

1. Heavy dependence of the community on tie irrigation system for agriculture as well as domestic needs, inducing community participation in planning and restoration.

2. Relatively homogeneous nature of the village community

3. Ability to control and manage the system due to its small size and the farmers' intimate knowledge of the entire system.

4. The Kanna meeting, which provided for farmer participation in the planning of the cultivation season and the enforcement of these decisions.

5. Bethma, to assure equity in times of water stress.

6. The village social organisation and later the "Vel Vidane" system which ensured proper administration and equitable distribution of water.

7. Proper maintenance ensured by contribution of labour or payments in kind.

The problem then is to combine the traditional irrigation institutions with the modern technology of irrigation management.

Minor Versus Major Systems

Although the current distinction between minor and major works is on the basis of acreage benefitted, vis. 200 Acres, the earlier division was based more on management criteria.

All irrigation works were divided into major and minor works by Ordinance No. 32 of 1946. Minor works were those constructed by proprietors without government aid or with the aid of masonry works and sluices supplied free of charge by the government, which were maintained by the proprietors. The maintenance of all major irrigation works then became the total responsibility of the government (the Irrigation Department), and proprietors became liable to pay rates. While the cultivators in these major schemes still bad to undertake a measure of maintenance work in regard to tteir own distributory and field channels, they were at the mercy of state officials for the proper maintenance not only of the headworks but also of structures (gates, sluices, etc.) and main

channels. In this regard they had little control **or** say. Indeed the proprietors were even unaware of maintenance programmes formulated by the Irrigation Department (ID). Seasonal paddy cultivation had to be done regardless if the maintenance work had been undertaken **or** had been carried out satisfactorily by the ID. This unsatisfactory position did not change with the definition of a major work by Ordinance **No.** 1 of 1951 as "an irrigation work constructed and maintained by or under the authority of the Director of Irrigation with monies provided by Parliament." Inadequacy of funds and their misuse resulted in poor maintenance. While such is the position regarding major works, the maintenance of all other schemes (minor works) remained the total responsibility of the proprietors themselves. The Agrarian Services Act defined an irrigation work commanding less than 200 acres as a minor scheme.

For purposes of management, there are many other criteria that could be applied **to** irrigation works which currently range from small village tanks to massive systems, operating in regional context. (See Table 1 for a possible classification of irrigation systems.)

Presently, major irrigation systems are governed by the Irrigation Ordinance. Their design and construction, operation and maintenance are undertaken by the ID, and the management of selected projects entrusted to the Irrigation Management Division. Roth these organisations are within the Ministry of Lands and Land Development. Minor irrigation systems are administered under the Agrarian Services Act, through the Agrarian Services Department. A few abandoned minor tanks are renovated by and managed under the guidance of the Freedom From Hunger Campaign Board. These latter two organisations are under the Ministry of Agricultural Development and Research. The massive, multi-purpose Mahaweli Project is under the Mahaweli Authority, created by a separate statute, and that Authority functions under a separate Ministry of Mahaweli Development. This separation **of** responsibilities, has **an** important bearing on the policies for managing the various categories of irrigation systems.

Public investment in irrigation *and* ***its influence on government policy.*** By far the heaviest investment of public funds in Sri Lanka during the past 50 years has been in irrigation and land development. Ibis trend is likely to continue for a few more decades with the Mahaweli Development Project and other irrigation' projects outside Mahaweli. Investment in irrigation started with about Rs. **3** million annually in 1940 and increased to an average of Rs. 50 million by 1950. This trend continued with slight fluctuation until the latter part of 1960s when a major increase occurred with the commencement of the Mahaweli project. Tahle 2 shows the trends in investments in irrigation.

TABLE I: Classification **of Irrigation Works**

Type	Size	Features
Minor	Village irrigation works up to 200 **Acres.**	· irrigated by **a** single canal and served **from** field with **no** FCC. · managed by DAS and mainained by farmers. · predoninantly praveni **or** private **land.** · designed lor I season--Maha--**cultivation.** · crop invariably rice-for subsis:ence.
Medium	200-500/1000	· has a distribution system with I'.C.C. · managed and maintained by ID. · a mix of private and LDO Land. · designed for **a** Maha end **part** Yala cultivation crop, mainly rice.
Major	500/1000 Acres.to about ***25.000*** **Acres**	· **a** complete distribution system with Branch Distributory and Field Channels. · predoninantly LDO plus **a** limited **extent** of **pri-vate land.** · fairly uniform holdings designed for **a** Maha and **a** substantial Yala. · Rice **plus** other non-farm activities important
Major	(River basin **schemes)**	· similar **to** above but most management decisions and allocations decided from **a** central point.

TABLE 2: Investment in Irrigation 1950 - 1982 (in million rupees)

Year	Village works	Major works	River Basin Development	Total
1950-1954	16.4	171.9	84.7	273.0
1955-1959	11.0	133.8	35.3	180.1
1960-1964	6.4	153.6	15.3	175.3
1965-1969	23.3	245.3	20.4	289.0
1970-1974	70.4	175.0	280.7	526.1
1975-1979	190.6	361.0	1654.2	2212.8
1980-1982	285.4	1200.3	7100.0	8585.7
Total	609.5	2441.9	9190.6	12242.0

Sources: Administration Reports of the Director of Irrigation and Progress Reports of the Ministry of Irrigation Power and Highways.

In the 1960s irrigation and land development received about 12% of the total capital investment and 36% of the budget allocated to the agriculture sector. This trend continued in the 1970s. In the latter part of the 1970s and early 1980s irrigation absorbed 24% of the resources allocated. During the period 1983-87 the share of irrigation in the total resources allocated to the agriculture sector is expected to rise to 66% (Public Investment 1983-87, Ministry of Finance and Planning, Sri Lanka).

Table 3 indicates the extent under irrigation during the last three decades. Although accurate information about the extent irrigated each year in the different sub-sectors is not readily available, there is a clear indication that the investment has been fairly well distributed between major and minor works and between new works and rehabilitation combining economic development objectives with social objectives (Abeywickrema 1983).

Some of the "Existing lands" provided with irrigation under the Mahaweli project were either rainfed or under minor schemes previously. These extents are now shown as "existing land" under major schemes. The total increase under major works is therefore more than the extent shown in column 2 above. There will be a proportionate reduction in the total acreage under minor schemes.

It is clear that the management system that evolved during the post-independence era has been influenced in large measure by these investment decisions and three important aspects of Government Policy:

1. The State is the owner of most of the land rendered irrigable and Government policy been tried to retain at least a remote control over the land via the Land Development Ordinance:

2. Most of this land has been distributed in fairly uniform holdings to small farmers, primarily for rice cultivation;

3. Heavy investment in initial development and subsequently in operation and maintenance has made it necessary for government to intervene regularly in irrigation and land policy.

TABLE 3: Extents Provided with Irrigation Facilities
(Includes lands irrigated under Gal Oya, Walawe and *Mahaweli)*

	Major & Medium works		Minor works		Total	
Year	**New Extents**	**Existing Lands**	**New Extents**	**Existing Lands**	**New Extents**	**Existing Lands**
1954-64	96,000		77,000		173,000	
1965-68	71,000	15,049	8,611	18,096	79,692	33,145
1970-74	62.763	15,356	12,571	48,095	75,334	63,451
1975-79	37,809	142,920'	31,690	174,603	69,499	317,523'
1980-82	32,684	12,988	26,902	57,394	59,586	70,382
Total Increase	300.337	186,313	163.774	298,188	457.111	484,501

Participatory Management

Over a period of five to six decades, one could observe that, while the best features of the customary law and rules relating to participation were retained in the planning, restoration, maintenance, and management of minor irrigation works, there were major departures in policy, consciously or otherwise, when it came to the planning and management of major irrigation works. Here it may he possible to classify some of the medium work:; with the former, as they did retain the traditional character, depending on the extent to which the local community was associated with the system. There were many factors which led to this departure. First, the village systems were planned and developed for the local community, invariably in consultation with them at village level and at the level of the District Agricultural Committee (DAC); second, the larger systems, particularly those related to settlements, were planned from the centre for a set of people who due to logistical reasons could not participate in the planning or development. Therefore, participatory principles of management could not develop at the outset.

The structure of the system itself, viz. the size of the scheme, the procedure for the selection of beneficiary settlers and their background, the physical

planning and the settlement patterns, and the objectives of government, combined to make any kind of participatory management in the major projects extremely difficult.

While the farmers were not associated with the planning and were unacquainted with the operation of the system, their participation in maintenance and management was minimal. Many factors contributed to this situation.

Physical factors included: 1) the design of the system, allowing individual outlets on a massive and complex distribution system; 2) the large number of small farmers involved; and **3)** the remoteness of the main system and the reservoir from the beneficiaries.

Institutional factors included: 1) social welfare policy of government which accepted responsibility for operation and maintenance; 2) the heterogeneous nature of the farmers, which made community participation extremely difficult; **3)** the inadequacy of the ***kanna*** meeting mechanism to meet the needs of a large system; and **4)** the insensitivity of the settlement-irrigation bureaucracy to the need **for** participatory management.

Many other factors led to this situation and eventually influenced government policy.

Although government invested large sums of money in major irrigation, land policy was directed towards the social welfare objective and the major schemes ended up with a large number of small, even subsistence level, farmers.

The economic return on this heavy investment was low. The quality of agriculture itself was not a great improvement on the traditional rice-based peasant farming. The economic objectives of reaching self-sufficiency in rice **production** through the irrigation schemes induced the government to follow policies that sustained the physical and social system without a major dislocation.

Since the economic return was low, the State was compelled to provide direct and indirect assistance, a major component of which was meeting the cost **of** operation and maintenance, This policy got so extended that when farmers failed to contribute their share in maintenance, the State stepped in to undertake a restoration or major rehabilitation of the system. The State also committed substantial amounts of money each year to maintain these systems, especially to the larger schemes which were becoming much mnre expensive than the village systems. **This** policy of State intervention in maintenance and rehabilitation continues today.

In the area **of** operation and maintenance and water management, there are three technical reasons which make participatory management in major

schemes difficult and different from the village systems; 1) the maintenance of the headworks can be handled only by trained professionals; 2) management of the main system, at least down to D-Channels and in many cases down to the field channels/turnout, requires the services of many paid officers: and 3) management below the field channel level by farmers is possible only if the main system functions at optimum level. For these and other reasons, it is safe to assume that there was no evidence of a conscious and positive effort to promote participatory management even in the area of operation and maintenance. The only visible effort is the institution of the kanna meeting at which the proprietors (tenants included later) were given an opportunity to participate in decision-making. It must be emphasized that even the kanna meeting did not go beyond the operations of a cultivation season especially in the major schemes.

The upshot of the above situation was that the State from time to time considered it necessary, for economic as well as political reasons, to intervene with an injection of capital for maintenance and rehabilitation, even in village works, where conditions were more conducive to participatory management.

Institutional Efforts At Participatory 'Management

Successive governments have from time to t me, established institutions to promote the management of these systems, although not confined to irrigation management. The Cultivation Committees formed under the Paddy Lands Act of 1958, and the recognition of the tenant farmer in the irrigation system, was an attempt to induce the participation of the farmers in the management of the total agricultural system. Similarly, Multipurpose Co-operative Societies (MPCS) were expected to play a major role in assisting in the agricultural activities. Although well conceived, the cultivation committees eventually failed to satisfy the aspirations of either the planners or of the farmers due to excessive politicization and an inability to identify the leadership. The Agricultural Productivity Committees that succeeded the cultivation committees with a nominated membership were a total failure, in so far as participatory management was concerned.

These developments bring us to the logical question: what in fact, is the government's long term policy perspective on participatory management ?

It was pointed out earlier, that all the ingredients of participatory management are found in village systems. If so, was it part of conscious government policy ? Did this policy extend to the medium and major systems ? Is it possible to extend the same principles and policies ?

Aspects to be examined in this regard are:

1. Whether participatory management is ;it all feasihle (a) in medium scale works and (b) in major irrigation systems.

2. Whether such participation would extend to (a) planning and designing, (h) water management/operation and maintenance, and (c) rehabilitation,

The Kimhulvana experience clearly brings out that with a sustained effort and an enlightened leadership, it is feasible to develop a participatory management programme in a medium scale irrigation system. Replicahility of this development will he demonstrated over time. With regard to major irrigation systems it has not yet been demonstrated beyond doubt that a participatory management programme encompassing the entire system is feasible.

Regarding areas and activities to which such participation could extend to, the following are fairly clear.

Planning and design. In the planning and designing of large irrigation schemes, particularly as they involve land settlement, participation of the farmers at the initial stage is extremely difficult. Given the composition of the farmers who would become beneficiaries under these schemes, it would be naive to expect such persons to have the perception and ability to comprehend the design and operational features of a large irrigation system. It 'is doubtful whether the operation of the system at the field level/turn out level is fully appreciated by the farmers individually at the outset of a major scheme. It is well known that all headworks, the main system as well as the downstream development of all major systems, were planned by trained professionals.

Unless there are major changes in Government policy on such areas as the size of irrigation scheme, size of holding, the selection criteria of settlers, and the responsibilities for their financing and management, it is unlikely in the foreseeable future that any active participation of farmers, in the planning and designing of major irrigation works, could be expected.

With regard to medium scale works, some degree of participation at the planning and design stage can be promoted where the beneficiaries are drawn from the local community; at least in isolated instances this process dues take place. Government policy itself encourages this process through the system of selection of irrigation works for restoration and rehabilitation via the District Agricultural Committee. To what extent the local community actively participates in the planning is an open question. It is due more to the lack of established procedures and interest on the part of the professionals, rather than the lack of a government policy that this process of participation falls by the wayside.

Water management. In the area of water management, as stated earlier, the medium scale works lend fairly easily to participatory management. The kanna meeting institution itself is effective, even if moderately. in involving the farmers in the process of water management decisions. In the major irrigation systems, on the other hand, it is not easy to achieve the same degree of participation from a large number of farmers, spread over a very large system.

In the first place the technical problems of ensuring equity in water distribution will continue to dominate most of the major systems. The inability of a large group of small farmers to identify themselves with a large system over which the commnnity has no control, is a major institutional problem. However, several attempts have been made to obtain the participation of farmers at least at the tertiary and secondary levels of the distribution systems. These are evident in the experiments carried out at Minipe, Galoya, and under the INMAS programme. While a fair measure of success has been achieved in the seasonal operations and the inter-seasonal maintenance, the sustainability ***of*** these experiments and the feasibility of extending them to cover the entire system has to he watched over a long time frame. While it is sufficiently clear that farmer participation in management at the field channel/turn out level is feasible and analogous to conditions operating in a village system, the feasibility of moving this responsibility up to the D-channel level is one which merits consideration and experimentation. With the available knowledge, it would appear that D-channel level would he a suitable scale for active fariner participation in irrigation management.

Rehabilitation. Since rehabilitation of a large number of irrigation systems restored during the past 50 years is a major Government programme at the present moment, the feasibility of promoting farrier participation **in** this activity would be an appropriate area for study. Recent experience shows that in some major systems farmers have not been associated at all in the rehabilitation process. (e.g. TIMP, MIRP), while in Gal Oyaa conscious effort was made to involve the farmers in the rehabilitation process. It would appear that in large settlement irrigation schemes, where farmers have been associated with irrigated agriculture for several decades, the rehabilitation stage would he an ideal opportunity to involve the farmers actively in the planning, and redesigning of the systems and in all matters relating to irrigation management. The development of institutions to enable representative pariicipation should be a high priority in this area.

Cost recovery and farmer participation. One other area closely related to government policy is the recovery of operation and maintenance costs from farmers. This is a highly sensitive area politically, and fraught with serious irnplementational problems.

The policy adopted by government to recover a minimum of 50% of the operation and maintenance costs and increase it progressively to cover full costs is a bold and progressive move. It is important at this stage to examine the best policy to promote active farmer participation in operation and maintenance on a continuing basis.

Experience at Giritale has clearly, shown that farmers appreciate good operation and maintenance and are willing to participate both financially and manually. Apart from promoting farmer participation in operation and maintenance and in the decision-making process, this has the salutary effect of farmers gaining a deeper understanding of how their irrigation system operates. These steps, therefore help to prepare the farmers, especially the second generation, to accept greater responsibility for the management of the total system.

Government Policy in Participation and Management.

Having examined the feasibility of participatory management in the different systems and at different stages the question that has to he examined is whether there is a conscious policy on the part of Governnient towards participatory management. Since large irrigation schemes, linked to land settlement and based on heavy social welfare objectives, dominated the irrigation development scene for decades, and since this basic policy remains, it is doubtful whether the Government can have a rigid, long-ranging policy on promoting participatory management at the different stages.

Government's main interest is to construct irrigation schemes, to settle farmers, and to maintain them in such a way that the economic and equity considerations are met. Government policy also is still heavily weighted towards farmer dependence on Government to manage the systems. There are some reasons for this. First, for technical reasons, the safety of the entire system has to be a concern of the Government. Second, for reasons of equity, the distribution system has to be operated and maintained by an agency of government. The main interest of the Government in this operation will be to reduce or contain the cost of maintenance and to minimize grievances of the farmers.

Experience has shown that, in the context of a large number of small farmers, Government agencies have faired poorly in achieving either of the above objectives. Governments therefore realize that involving farmers in irrigation management would he the best available alternative. How this is to be achieved has not been made clear to policy makers.

In the absence of well developed institutions at the field level and failure of previous institutions sponsored by Government (Cultivation Committee, APCC etc.), the field has remained open and lacking in direction of an explicit policy.

Both planners and policy makers have shown concern about setting up stereo typed institutions, for fear of these institutions developing into centers of power and excessive politicization.

In a sense, this situation offers an opportunity to professionals, particularly to the social scientists, to experiment with different forms of participation in irrigation management and in rehabilitation. Any Government would be interested in participatory management if it could be demonstrated that such measures would help reduce government commitmerits for maintenance and rehabilitation, and more importantly if it would reduce grievances within the farming community, leave alone the government's desire to see a prosperous community.