

SOCIO-ECONOMIC PROBLEMS IN THE MAJOR IRRIGATION SCHEMES IN SRI LANKA - PART II

Ariya Abeysinghe

Director, Agricultural Planning

Ministry of Mahaweli Development

Part I of this paper emphasised that Sri Lanka's history developed around a "hydraulic civilization" and the tank, village and temple (dagoba) were symbols of this civilization. The major irrigation systems of the past such as Minipe in the Kandy District, Elaheera in the Matale District, Parakrama Samudraya in the Polonnaruwa District, Padaviya in the Vavuniya District, Kantale in the Trincomalee District and Nuwara Wewa and Tissa Wewa in the Anuradhapura District, had been the work of ancient kings who utilised the inborn indigenous hydraulic engineering and irrigation skills to plan and construct these massive reservoirs with precision, which are amazing even to modern scientists in this field.

By about the 13th century the collapse of the Dry Zone civilization was evident; but after centuries of neglect these abandoned irrigation schemes began to receive the attention of British Governors from the mid 19th century. A more intensive revival of these ancient irrigation systems and launching of irrigation based colonization schemes was witnessed in the 1930's and this drive has been sustained and developed since then to the present day.

Currently there is a special concern by the Government and the country over the performance of Major Irrigation systems, mainly because of the heavy investment and emphasis in recent years on this sector; increasing paddy production and possibilities of food grain self sufficiency; the emphasis on subsidiary food crops; greater interest in crop diversification; and revival of live stock development programmes.

But each of the Major Irrigation schemes have also had their share of problems; and policy makers have realised that unless the acute technical, managerial and socio-economic problems in these irrigation systems are resolved or contained within limits these schemes will not be able to contribute to national growth.

Organization

All the major irrigation schemes could be brought together into what may be called the Command Area Development Authority which would mean the Department of Irrigation could concentrate only on research and policy, including de-

signing and all development functions could be handed over to the Authority which could integrate programmes from construction, maintenance of irrigation schemes, farmer organization, production planning, processing of agricultural production, and domestic and export marketing including entrepreneurial development among second generation farmers. This may be one way of easing unemployment and underemployment in Major Schemes. However, this can only be done after evaluation of the quality and quantity of manpower and projected manpower demand and supply for various sectors. This also means the need to establish trade schools in the major schemes to facilitate such training of skilled manpower. Special investment incentives over and above the existing fiscal and other incentives will have to be provided to attract private investments into Major Schemes.

Credit

Any development in the Major Irrigation Schemes in production, processing or marketing is affected by credit availability. During the course of the last several decades, many credit schemes have been introduced, specially for paddy cultivation. These credit schemes have encountered failure within relatively short periods of time because of loan defaults. When the amounts in arrears become appreciable, the unfortunate intervention due to political considerations has led to the waiver of the arrears and launching of new credit schemes. Many teams that have studied the problem have realised it was political pressure that spoiled the farmers and encouraged them into being defaulters. In 1971 the ILO Employment Mission

made some particularly devastating comments when they said:

"Ceylon has several times repeated an unfortunate rural credit sequence. Funds are lent on a generous scale to cover production costs, without supervision. They often do not yield the output to cover repayment because they finance inappropriate techniques or even consumer needs, weddings and payment to village money lenders. Some borrowers are promised re-scheduling as a political gesture and so they delay repayments. Local co-operative credit societies then default on their own debts (under the current scheme through the People's Bank) and become defunct, so that not only defaulting farmers but also their innocent neighbours are unable to borrow. Credit dries up, fertilizer and pesticide off-take falters and the innocents decide that they too might as well default next time. The government winds up the scheme then starts a new one, and the cycle begins again."⁽⁹⁾

Credit is not only limited to production. There is a lack of marketing credit, hence a limited number control prices. Even in the Mahaweli Zone some of these defaulters exist carrying their incapacity to pay earlier loans and thereby are not entitled to new cultivation loans.⁽¹⁰⁾

During the last two crop seasons, credit issues were lower than during the previous seasons. There also appears to be slippage in the recovery rates. In one area under a Major Irrigation Scheme the proportion of farmers actually taking credit decreased from about 40% during Maha 1983/84 to about 22% in Maha 1984/85. Some ascribe this to the

(9) Dudley Seers - Matching Employment Opportunities and Expectations - ILO Report, 1971.

(10) I.K. Weerawardena: Management Systems Development 1978; D. Jayatissa Bandara-goda - Issues on Socio-Economic Developments in Mahaweli Areas 1985.

existing guarantee systems, requiring two co-signatures for each loan, which in case of a default could result in three persons becoming ineligible for a loan. And with increasing default rates it will inevitably become more difficult to find two persons who were willing to a guarantee a loan. Hence, there is a need to review the existing agricultural credit systems. One option may be to introduce a group credit system whereby the loans are made available to individual farmers through farmer groups and guaranteed by the group. In such cases the group should consist of all farmers located in one or more yaya (Field) channels or on a small distributory channel. These small farmer groups could be well organized into a formal farmer institution through which they could be used for rotation schedules for water deliveries, maintenance of field channels, input distribution, farmer education, dissemination of market intelligence, collection of farmer output, etc.

The approach to credit in the Major irrigation schemes, including the Mahaweli, has to be different from that of traditional banking systems. It has to be development oriented and offer development credit in the form of inputs and not in cash and take back credit in kind from outputs.

This means a farmer family could take credit in the form of seeds, fertilizer, agro-chemicals etc, and pay back in kind from the crop output which means that, say, paddy grown in any major scheme should either be bought to stores established in the command area or to paddy mills established in the area from which the credit could be deducted and paid through a Unit Manager or Block Manager as in the Mahaweli or through farmer organizations in large irrigation schemes. Hence, there is a

case for a Mahaweli Development Bank which could offer development loans to farmers and entrepreneurs whilst any Commercial Bank operating in the Zone could provide bridging finance and operational short term credit.

MARKETING

The problem of agricultural commodity marketing in the Major Irrigation schemes, including the Mahaweli Zone, arises from unplanned agricultural production without prior market assessment. Production does not begin from consumer demand analysis in Major and Minor schemes. To operators in the Major irrigation schemes marketing is the last function in the agricultural operation but this is a fallacy. Hence, when farmers grow crops they find difficult to dispose of, marketing becomes a problem. Any production planning in Major irrigation schemes should begin from market demand analysis and better co-ordination with decisions to import is needed. A contradiction in policy should not be permitted. The Food Security Scheme should take into consideration projected supplies because food imports can be ill timed and could effect producers. Another link that is vitally needed for development in Major irrigation schemes is establishment of Agro Industries.. agricultural commodity based industries, agricultural waste based industries, agro-services industries. Even this requires a link with production. This requires the establishment of Farm Business Management and Farm Business Analysis by farmers themselves through proper farm production record keeping. In new schemes like the Mahaweli this is possible because farmers can easily be trained and are responsive. If proper farm production records are kept by farmers over two to three seasons then with proper market information dissemination produc-

tion could be planned. There is a need to strengthen agricultural extension to farmers backed by marketing extension by properly trained extension personnel in Major schemes. What is required in all major schemes is a systems approach to production planning which is usually an inter disciplinary approach and not ad hoc decision making. A Block Manager is a good management concept which should be extended to all major schemes, but his conceptual and operational approach should be an integrated and systematic perspective. This can only be done by a decision making based on popular acceptance of agricultural planning. So planning of any kind should begin with the market. Such planning should aim at several factors. First, the need to enhance productivity and farmer net income from existing eg. rice production is uneconomical if no techniques for reduction of cost of production and attempted. If the price of paddy is merely increased without higher productivity in paddy cultivation; by a cost of production reduction through mechanization of farm power, weeding, seeding, harvesting etc, then the objective of giving farmers a higher net income will not be achieved. This would also lead to excess labour that will go out of farm work and should be found alternative employment. Another aspect to this is to diversify the crops and have alternative crops for farmers in case of unexpected pests or virus diseases. For instance the whole H area Yala peasant economy is based on chillies. What are the other alternative crops available? Has the agricultural researcher thought of this challenge? The varieties recommended and accepted by farmers are fairly old and has research come out with new varieties other than those that were produced by pioneer researchers? Why not encourage private agricultural research in Mahaweli to complement the exist-

ting State sector agricultural research? Should we not achieve this through a production system approach rather than farming system or crop system approach to agriculture? These are some issues that need to be given serious thought by all authorities concerned.

Marketing Infrastructure

In all major schemes including Mahaweli a major constraint to agro-development is the lack of marketing infrastructure. There is a need to create open competition between intermediaries by increasing the number of intermediaries or middlemen. He is the risk taker. He buys in bulk. He grades, stores, transports and finds markets. He needs marketing finance, transports facilities, storage, credit etc. To make his task efficient the rural farm-roads need up grading. It is wasteful for the state to intervene in marketing but facilitate private sector to make marketing work. The floor price scheme as it works today has a negative effect. What is required is a free play of market forces and allow marketing operations to be effective by creating the climate for them to operate freely. The state should only indicate insurance prices and be willing even to pay landed prices for imports to local agricultural commodities so that it will be attractive to growers to grow a crop and traders would not resort to imports. This would mean the consumers should not expect to get things cheap and exploit the poor farmer. They should pay to farmers what they would have paid for that commodity if this commodity was imported. This should be the crux of the free enterprise economy.

Another area which the private sector could play its role in investing in marketing infrastructure - cold rooms, storages packaging and pro-

cessing centres - and for this the proposed Mahaweli Development Bank or a venture capital company could offer medium and long term development credit to finance them.

Marketing information is another vital infrastructure and this is a public sector function which the government must provide through a properly established Investment and Marketing Agency where a small market research unit should disseminate marketing and commodity price information to the farming community daily, weekly, monthly, seasonally through all media using the existing the management hierarchy. A good knowledge of markets is vital to farmers before they decide to dispose their output so that they could get a reasonable producer margin. This is where agricultural extension service should also be the channel through which marketing extension could also be disseminated. The dependence on these state sector officials alone is not fair and successful.

Farmer organizations are lacking in the Major irrigation schemes. Therefore, in major schemes farmers have not been formally brought together. An attempt is now being made to establish farmer organizations for selected schemes for Water Management.

"The existing settlement schemes are preordained systems which are, for the most part inflexible because the water management perspective was not focussed on adequately during the early stages of design and construction. In Gal Oya, for instance field channels sometimes run for several miles in length thus creating severe problems of water distribution and water availability to the tail-enders.

Some of them have been designed purely to provide continuous flow of water and not for supplementary irrigation as required in the application of water management practices. Perhaps the reason why the problem of the tail-enders looms large in most of these schemes manifesting themselves in social and political problems is largely because these practical aspects in the operation of the systems were not taken care of at the design stage".⁽¹¹⁾

Farmer organization for water management is useful but what is required is a Multi-purpose farmer organization for each scheme which should look at each scheme as a project and apply a project management approach when deciding water issues, water management, demand analysis, production planning, input procurement of output, disposal of output, pricing, processing, and even plan grass root political organization including protect security. These organizations could be the seats of leadership development and could be utilized for the development of political power of a kind acceptable with guided central leadership.

These organizations could issue shares to each farm family and broad base ownership of a public company in each command area of major schemes and in certain Mahaweli systems where agro industries are established. They could own storage, paddy mills, agro-input outlets, marketing organizations etc, and be a decisive force and a seat of power for any leadership that needs to democratize and broadbase political leadership. These farmer organizations could be training grounds for future leaders with a grassroots base. Hence,

(11) Water Management in Major Irrigation Schemes by J. Alwis In Land Settlement Experiences in Sri Lanka Ed: by Kapila P. Wimaladharmasiri 1982.

the organizational approach should be by dedicated men with a sense of commitment. This would mean any income derived from the command area of the system should be channelled for the maintenance of irrigation structures, channels and systems without parasitically being dependent on the central government. (Vide A. Abeyasinghe : Political Economy of peasantry in the Irrigation Schemes: Fertile centres for a growing power base: 1985. (unpublished)

ENCROACHMENTS

The physical design of the large schemes constructed in 1930s, 1940s and 1960s reflects a conception similar to that embodied in smaller schemes in the early decades. The main emphasis was on impounding the maximum feasible quantity of water by placing a bund across a natural water course and spreading this water over a large area in order to get minimum cost per settler. This led to the construction of a relatively sparse irrigation infrastructure where channels were controlling devices and structures were unknown. They were designed just to distribute water and not to manage water. The overloading of the irrigation system has been the common feature in all major schemes in the country.

This overloading was the result of:

- (a) The alienation of land in excess of the number originally envisaged as designed in the irrigation system due to political and employment pressure.
- (b) The problem of encroachers who cultivated land and obtained water without official sanction.
- (c) The bringing in of additional settlers to extend schemes at

different stages of development in the scheme without an adequate consideration of the capacity of the irrigation system to provide for these extensions.

The encroachers are a necessary evil in all major irrigation schemes in Sri Lanka and it is they who are the most adaptable risk taking aggressive farmers. The encroacher, thus, is good raw material for entrepreneurial development and could be trained to divert his business like risk taking approach to be good intermediaries in schemes. A study of the most successful encroachers in all colonization schemes would offer a good case study of a successful business development strategy (See: Ariya Abeyasinghe: Encroachers in Settlements and their Utilization for Entrepreneurial Development, 1985 (unpublished)

HIDDEN TENANCY

Hidden Tenancy is a common feature in most Major irrigation schemes. The incidence of sale, mortgaging, leasing and similar land transactions appear to be less common in the Mahaweli Project than in other major irrigation schemes. In H area and in System C there are few cases of incidence of leasing/mortgaging the allotments by allottees to work as hired labour in the schemes.⁽²⁾ However, the real situation regarding these matters cannot be found out without a detailed study as these transactions are generally concealed from the officials. New tenurial problems including share cropping would arise in major schemes in the future for which new and suitable agrarian and tenurial laws will have to be formulated. A system of regularising or minimising hidden

tenancy could be operated by the maintenance of Land Registers annually giving the owners name, crop pattern, type of cultivation resorted to, dependents and thereby for each yaya such registers be exhibited and inspected by the proposed multipurpose farmer organizations. If a land is abandoned by an allottee a new alienation could be recommended to a landless dependent of a yaya farmer family rather than bring outsiders into the yaya. In order to deal with tenancy problems, new tenancy laws, more suitable for major schemes, need to be formulated and dealt with by Land Tribunals to be established by such proposed Multipurpose farmer organizations.

Another problem that can arise is from the differentiation in Merchant Capital in Major Schemes where with the intensive use of irrigation water and the package of inputs which in turn requires high working capital could lead to unequal income brackets and differential peasant classes.

Conclusion

A review of the socio-economic problems in major irrigation schemes reveals the existence of growing problems which need the close attention of policy makers. The Mahaweli Project has much to learn from the mistakes in the major schemes, because more intricate and complex socio-economic problems could evolve from the economic and social structures that emerge from the new settlement schemes. The major schemes are a fertile ground for the development of future leadership that can create a brave new world through land, water and man.

(12) S.S.A.L. Siriwardane : Emerging Income Inequalities and Forms of Hidden Tenancy in the Mahaweli H Area, Colombo. People's Bank Research Department Jan. 1981 p 32.