

PEOPLIZATION OF IRRIGATION SCHEMES IN SRI LANKA: SOME HERETICAL OBSERVATIONS

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Non Privatization: The Past alternative

J. L. Simon in his *The Ultimate Resource* (1981) spoke about "the age of substitution" where material resources have ceased to be relevant constraints, except in the very short run. It is an era of rapid change as systems of control and regulation are continually being undermined by technical change. Given the adaptability and flexibility of newer and smaller private sector production and service units in any economy, the regulators are finding it increasingly difficult to maintain their control. Communications, lying at the core of dynamic modern economy, are a primary example. State firms are having access to information and knowledge which has traditionally been the source of state power. Computers give access to global information sources and regulation by officials become increasingly costly and difficult to enforce.

A nation which denies its citizens access to new Technology will pay a price, both by losing a generation of entrepreneurs and by ensuring a future of dependence on foreign innovation. If the desire for economic success exceeds the desire for continued control, we will see increasing pressure for privatization and reduced official intervention. The state must find some means to finance its cash outflows with cash inflows. If one state entity creates a negative cash flow, some

other party of the state system must generate the offsetting surplus. If there are sufficiently large numbers of cash consuming state enterprises, there will be an inevitable drain on the rest of government. One popular solution-printing money — is now seen to be merely a step in the direction of inflation, unemployment, and economic decline. Vigorous economic growth offers a possible escape from the cash constrain. But in many cases, growth is stunted by the very existence of the state monopolies demanding cash subsidies in the first place.

The nature of rights to the ownership of resources determines how those resources will be used. When ownership of property is clearly defined and resides with specific individuals those individuals will benefit from using that property in its most productive manner otherwise they will personally have to bear the cost in the form of reduced returns. Therefore when the ownership rights are ill-defined, the chain linking opportunities, rewards and responsibilities is broken. There is a cost of enforcing ownership rights. Before the time and effort to maintain and protect any asset individuals must be sure that the rewards will accrue to them or to some group of their choice. This simple fact has been recognized for several generations in the behaviour of peasantry whose productivity would dramatically rise as soon as they were given clear title to the land they worked — "land

to the tiller." The tenant does not undertake capital improvements or work to improve the wealth of the landlord. So should be with other natural resources.

In a world where intellectual capital is the driving force for the future, our thinking should extend beyond material assets. Analysis based on this reasoning has provided the most significant contribution made by economics in recent decades. Its application represent a direct assault on the concept of the paternal and benevolent state as the engine of prosperity. (Sanchez N, Waters, A. R. — *The Economics of Property Rights* (1974)) History has revealed that non-private enterprises tend to be capital intensive, hoarders of equipment and spares, and has a poor record of asset maintenance. In non-state enterprises, assets are more highly valued. The owner can use the asset, perhaps improve it, and ultimately capture the rewards of his efforts through capitalizing it. Since, the private owner will also have to bear the direct cost of replacing an asset, it will act as an incentive to proper care and maintenance.

Irrigation, traditionally in Sri Lanka and at present, has been state-owned or sponsored. But according to all available Sinhala Water Laws (A. Abeysinghe — 1981) most irrigation structures were community owned and managed through Wew Shabas Farmer Organizations compared to State owned and managed schemes in the modern period. The reason for non privatization of irrigation schemes are :

(a) Redistribution of Wealth

In simple words, if one wants to enhance someone's wealth the obvious thing to do is to give him money. This statement will look heretical to those in authority. It attacks the principle justifying the existence of even the most benevolent elite, the principle that the poor and the unfortunate do not know what is best for them and need to be controlled and guided but never trusted. [Amacher R. C., Tollison, R. D. and Willett T. D. — *The Economic Approach to Public Policy* (1976)]. Thus, the transfer of wealth from one group to another is often the excuse for non-privatization.

(b) Natural Monopolies

A natural monopoly exists where the long run average cost curve declines steadily over the relevant range of returns. Most natural monopolies subsists on subsidies from the taxpayers to keep them operating. The natural monopoly concept is little more than a theoretical curiosity. It reigns in the realms of ex-post facto justification of state monopolies.

(c) National Strategic Reasons

Water is a vital natural resource. The shortage could impose limits on population growth and economic expansion by curtailing food production. Roughly 73% of the fresh water used by humankind goes to agriculture. Lester Brown, President of the World Watch Institute in Washington points out that the amount of irrigated land being farmed has actually declined by 7% over the past decade. (Time-international Nov. 5, 1990 No. 45). So water is regarded as a precious national resource. The various stateholders in non-private natural monopolies like irrigation is the nation and farmers.

(d) Shortage of Entrepreneurial and Managerial Talent

Countries like Sri Lanka in the early stages of modern economic development lacks the basic entrepreneurial or management talent in the private sector to operate complex facilities like irrigation systems. Even at present no private sector firm has offered to undertake the management and development of any irrigation system. Therefore, the State departments had to be created to undertake the design, construction, investigations, and maintenance of the irrigation structures. Therefore, from the past the solution to this perceived problem was to use the state as the nation's entrepreneur. Enterprises in irrigation, therefore, were pioneered, established and maintained by the state. However, if adequate entrepreneurial environment is created the whole argument about the scarcity of entrepreneurial talent becomes invalid. The anthropological argument that some societies generate less entrepreneurial talent than others is not a reason for policies minimizing the use of latent talent.

(e) Public Goods

There is an incentive to produce goods and services for the public, only if you are able to reap the reward of your efforts. If there are no rewards it is better to do something else. Public goods are those goods for which a private producer cannot charge because the cost of collecting would be impossibly high. Irrigation schemes and lighthouses are good examples. Thus, the argument is that public goods, like irrigation systems once established are available to all. Hence, there is no incentive for the private sector to produce them. The rational answer is for the society to determine what goods and services are both truly public in nature and truly vital to general welfare, and then find the least-cost means of providing services.

[Littlechild, S. C. — The Failure of the Mixed Economy, (1978)]

The Evidence of Recent Decades

Ever since the British government began a policy of selling off state owned enterprises, there has been much talk in Europe about moving commercial enterprises out of the non-private sector. In Turkey, the government plans to privatize 200 state owned companies. In Germany, it is suggested that the state reduce its stake in some enterprises. There is little movement to reverse the onward march of non private sector in Italy or Scandinavia. A large and growing non-private sector is a luxury which only a rich country can afford. It has been clearly demonstrated that the non-private sector is not the path to successful economic development. There is no evidence yet that even the rich Northern nations are rich enough to sustain their already large non-private commercial enterprises over a long period.

Latin America still favours state controlled firms with few exceptions. In the Mexican case the recent efforts of privatization will cover 263 state enterprises. In Canada there are few instances of moves to reduce the non private sector. Only in the U. S. A. is there a discernible and growing trend towards the use of the private sector by local and state governments.

Should irrigation systems be privatized or peoplized is a question that is being discussed. The general dislike for this idea of people's managed irrigation system or privatization was described by an expatriate expert who compared the opposition to a giraffe who appeared in an African jungle who was instantly killed with arrows thrown at this creature from all directions. The very idea of privatization or peoplization of irrigation systems is heretical thinking and meets with much opposition from policy makers.

An Alternative to Privatization

Farmer managed irrigation schemes is mooted as an alternative strategy and a method to encourage farmer participation is decision making. Few cases from eight countries will be discussed and parallels will be drawn for Sri Lanka for serious consideration.

The Pochampad Irrigation Project In Andhra Pradesh, India

This project is one of India's largest command area projects, with 1,590,000 acres located, in Andhra Pradesh, where rice irrigation was previously dependent on 2200 tanks and 44,000 wells. The project will create a system of chanks, each sub divided into several irrigation zones. A new organizational structure to involve farmers in management decisions was introduced along with warabandi rotations, a new practice in the area. The irrigation zone is a geographical entity which led to the notion of a irrigation group comprising of farmers located in a zone. From it the farmer leader emerged who would represent the interests of the farmers in the zone and also assist individual members. The idea of the pipe (or chank) president followed logically from the fact that a pipe had several group leaders and a representative was required for the pipe as a whole. (K. K. Singhe — Farmer associations in the Pochampad irrigation project. A case study 1985). The pipe committees were seen as a means of implementing and operating warabandi schedules similar to what happened in the Nong Wai project is in the North East Thailand. The experiment began in 1978/79 with two chanks, one with an area of 96 acres and 138 farmers and 11 irrigation zones. In 1979/

80 pipe committees were established in 20,000 acres, this was increased to 40,000 acres in 1980/81. Implementation teams led by the Deputy Executive Engineer or his agricultural equivalent and assisted by 3-4 other officials had the responsibility of meeting with farmers and inducing them to form zonal groups and select a pipe president.

The functions of pipe committees were

- (a) ensure adherence to the rotation schedule.
- (b) repair field channels.
- (c) refer problems to government officers.
- (d) share knowledge on agricultural matters and water use.

The effect of the committees was the acceleration of farm development work and water distribution. K. K. Singhe in 1984 wrote:

"In the course of 5 years, some 3000 pipe committees have been formed which have met with varying degrees of success. They were not well organised to take up responsibilities that members as individuals were quite willing to perform. For example, a maintenance fund could not be collected. Group interest in repairs could not find expression. Hasty operation of the idea of establishing committees account for these difficulties. The implementation teams had little time to work with pipe committees, even for one full irrigation season and there was no institutional or personnel to give them back support".

On Farm water Management Project In Punjab, Pakistan

There are 54,000 water courses in the Punjab province. They irrigate 22.7 million acres. About 4000 acres have been improved under the On Farm Water management project launched in 1976. The On Farm Water Management (OFWM) Directorate administers it. Other water courses have been less intensively improved under locally administered projects. The primary mission of the project has been to reduce the amount of irrigation water lost in conveyance. An evaluation done on the project revealed a reduction from 40% to about 25% after improvement. Farmer involvement was basic to the Project [Mirza A. H. and

Merrey D. J. - Organizational problems and their consequences on improved water courses in Punjab 1979] both as a means of reducing labour costs for construction and to encourage proper maintenance over the long term.

Under this project farmers are required to submit a written application guaranteeing their commitment of labour. Initially all material costs were covered by the Project. By 1985 farmers were required to pay 20% of the costs but applications were far in excess of the Projects capacity to respond to them. A typical yaya or a chak covered by one watercourse covers 240-480 acres and 20-80 farmers. Crops include wheat, sugarcane, rice and maize. The farmers are asked to form a committee under the supervision of an agricultural officer and two field assistants. The functions of these committees are:

- (a) Coordinate the work of the farmers and OFWM personnel;
- (b) Organize the labour;
- (c) Raise the money for paying the masons;
- (d) Negotiate with both OFWM and farmers in order to make decisions about location of turn outs, buffalo, baths, labour shares, tree removals etc.

Each agricultural officer covers 60 chaks.

The long term viability of committees is problematic. Neither cleaning or illegal water use has been markedly affected. The committees ceased to exist as an entity after improvement is completed. The same people continue to operate informally but not as a committee but as a local informal social network.

The "Petitperimetre" of Ambohibary, Madagascar

Madagascar's small irrigation systems, with an average size of 2960 acres, after many years of neglect are undergoing a rehabilitation. The ambohibary system, in the central highlands near Antsirabe, is a prototype for the style of participatory management that were introduced to all 116 systems in this size range, Ambohibary is fed by a diversion weir leading into a short canal. It was built in 1930s. After the independence in 1960, the system took its present form the division of what had been a large estate into a 7400 acre system divided among 7000 landowners.

At present, the system is divided into three sectors each of which is subdivided into 10-15 maille, each maille having a leader who collectively forms a subcommittee at the sector level. Sub Committees administer water rotations needed during the dry season, and mobilize labour for project activities. Annually, when the canals need to be cleaned before water issues begin, farmers are obliged to donate their labour or hire a replacement. Sanctions take the form of inability to market paddy to the government without proof of this labour contribution. Major authority for the system rests with the Project Manager, who is a government official, assisted by seven Government paid labourers. Here the system works smoothly, resources mobilized well and water distribution satisfactorily due to the authority of the State and adequate supply of water. Currently plans are afoot to shift authority to farmers subcommittees with the Project Manager becoming an advisor to the farmers. (His salary would be paid by the farmers).

Nonewal-pioneer Agricultural Project In Thailand

The project was constructed in 1970's. It is located in NE Thailand. It irrigates 27,000 acres. A water rotation plan was introduced as a part of the tertiary development. The plan depended on the Water User Groups. These groups were to oversee the rotations and attended to tertiary maintenance. 248 chaks of various sizes were formed into 169 groups. It covered 150-200 acres and 20-60 farmers each. The WUG formation was the responsibility of group organizers provided by the cooperative promotion department. These organizers explain the duties and functions to the farmers and assisted them elect a chak leader.

The WUG has the responsibility

- (a) to distribute water among the farmer members within the chak
- (b) to maintain discipline according to rules framed.
- (c) to maintain and repair irrigation and drainage ditches, farm roads, and all structures located within the chak.

[Kathpalia G. N. - ODI Irrigation Management Network No. 10, 1984]

Subgroups of 8-12 farmers were formed within units of about 24 acres — within which all farmers could draw water simultaneously.

Kemubu Scheme In Malaysia

The Kemubu Agricultural Development Authority covers five irrigation systems. The command area has a total of 79,000 acres and is fed by the Kelantan River in N. E. Malaysia. This is a case of a negative water user association. There is no organizational structure at the farm level by which farmers can coordinate irrigation management activities. The boundaries between units are vague and changes frequently, because field to field irrigation is common.

[Kalshoven, G. - Paddy Farmers, irrigation and agricultural services in Malaysia : 1984].

A study revealed that the farmers were not aware of the existence of irrigation units. They did not see that they were dependent on the same water source as field neighbours and others both upstream and downstream. This did not make them see themselves as a collective group undertaking common tasks, problems and interests. Construction of field ditches by groups of 3 to 5 farmers represent unusual instances of collective action. Farmers facing water problems have three options.

- (a) meet the upstream farmers and ask for their cooperation.
- (b) take unilateral action at night by blocking or opening a channel.
- (c) appeal to irrigation personnel who have little authority to enforce distribution patterns.

The Farmer Organizations were government supported associations of farmer members represented by an assembly and a board of directors.

High Performance Sederhana Irrigation System In Indonesia (HPSIS)

The HPSIS was launched in 1974 as a joint project of the Indonesian government and the USAID to develop the small scale sector (1235 acs). Originally they were meant to be viable water user asso-

ciations. A sub-project HPSIS was initiated in 1982 to address the problems of farmer participation in 14 sites. In 1984 this was increased to 21 sites.

The objects of HPSIS were

(a) direct and increased participation of farmers in all stages of project implementation.

(b) give increased responsibility for and management of completed projects.

Output of HPSIS were to be

- (i) better survey and design work, sensitive to local needs and conditions;
- (ii) better construction.
- (iii) better water management (better water use and equitable distribution).
- (iv) better maintenance of systems.

The HPSIS experience revealed that "farmer participation in early phases of system development pays off in better run systems" but the extent of farmer participation in water management decisions is uncertain (Robinson, D. - 1985). (quoted).



The Buhilalo Irrigation Project In The Phillipines

The National Irrigation Administration has for nearly a decade promoted greater farmer management of irrigation systems under its jurisdiction especially after 1974., when the Phillipines government decreed that O. M. costs should be financed

by irrigation fee collections from farmers in national systems and construction or rehabilitation costs should be recovered from farmers in communal systems. [Bagadion, B - Participatory experiences in irrigation water management Rome FAO, 1985].

In 1976, the NIA began to experiment with communal irrigation systems in order to reverse the trend of growing dependence on, and subsidy from the agency. Community organizers was introduced to act as catalysts to help farmers to form an association to manage design, construction and operational tasks. The success of this prompted the NIA to extend this model to large scale systems managed by NIA, in order to promote farmer management of certain portions of large schemes, with the main system remaining in the hands of the NIA.

The Buhilalo Project is located in Southern Luzon island. There were 8100 acres in the system. In 1980, the first attempt was made to transfer the experience of organising farmers on a communal system to the level of large scale national systems. The NIA posted 15 community organisers.

- Their functions were
- (1) help farmers develop their irrigations organizations.
 - (2) assist farmers to work with NIAs-technical personnel in planning canal layout in the service area.
 - (3) assist farmers in construction of canals.

[Ilo J. F. I. and Chong-Javier M. E. : The Buhilalo experience: Naga City: Research and Service Centre, 1983].

By 1980 farmer associations were formed and negotiations with NIA had made clear the new management arrangements whereby each farmer association would be responsible for water distribution within its zone defined by a lateral canal and 617 acres. There were 4 conditions:

- (a) NIA would take charge of delivering water to the different Upper Lalo Zones;
- (b) Maintenance of the main and lateral canals and of terminal facilities found within the zone would be the responsibility of irrigators associations;

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holdings become minuscule. Both lands as well as its product become fractionated through complex family-level accommodative tenure forms such as what Wanigaratne (1984) identified at Uggal-Kaltota. The end result is once again a subsistence-maintenance system which shares poverty.

Conclusions

Overall, it must be stated that tenure forms and their constraining influence on the formation of a market in land is also a reflection of problems in the overall economy. When economic growth is almost totally sought through agricultural development, as it is in Sri Lanka even at present, a preoccupation with land is well nigh inevitable.

Equally inevitable would be the development of additional tenure complexities, as owners of land and their users (e.g. tenants) will try to maximize their returns from land at a minimal cash cost to themselves. Under rotational tenure land will be exploited with little reinvestment to maintain land quality. Under swidden agriculture, land will be qualitatively more highly exploited with no attempt to maintain land quality, as their agriculture becomes increasingly market oriented and specialised.

In settlement projects where existing laws prohibit legal fragmentation of rights, de facto fragmentation of land rights through customary processes often result in a fragmentation of the product rather than of the land itself. Consequently, while pressures towards intensification is high, returns to individual users are too meager for them to move into an intensive and diversified production. The substantial increase in cash and non-cash costs which accompany such a move is too prohibitive for recipients of such holding/product transactions.

Thus, the preoccupation with land, a product of the failings of the total economy in most case inevitably leads to an underutilisation of the full potential of the land base.

[Experts from staff working paper submitted to IMPSA, September 1990]