

How far Up-country Vegetable Farmers can survive under present participatory irrigation management practices

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Introduction

In Sri Lanka Participatory Irrigation Management (PIM) practices dates back to ancient king's time. Owing to setbacks during the colonial rule the modern participatory management practices have been introduced since 1980s emphasizing the needs of joint decision making between line agencies and farmers, proper water management, maintenance of the systems with the involvement of farmers, and environmental management.

In fact, one of the objectives of this institutional reform initiated by the financing agencies like the World Bank and Asian Development Bank is to relieve the maintenance cost of the government with the involvement of farmers for maintenance activities. Accordingly, farmers of minor irrigation schemes are fully responsible for the operation and maintenance of their irrigation scheme while in the medium and major schemes, farmers and agency personnel have been made jointly responsible for the management of the systems.

Project Management Committee (PMC) is the institutional arrangement where line agencies and farmer representatives convene to discuss and make decisions on scheme related matters. A Project Manager is appointed for each scheme who has to coordinate all activities of the scheme with farmers and other line agencies. Project Management Committees (PMC) is convened monthly to discuss matter related to the scheme and joint decisions are made. PMC consists of selected farmer representatives and scheme level officers of line agencies and it is responsible for the scheme level management. The line agencies should represent irrigation, agriculture, marketing, credit and other administrative functionalities.

This article is based on the vegetable farmers in Badulla and part of Nuwaraeliya district, known as upcountry vegetable farmers, and their issues related to PIM. These farmers produce vegetable and other field crops for commercial purposes while some of them are used to cultivate paddy during Maha season for their own consumption.

Apparently, participatory Irrigation Management has not been able to serve the intended purposes due to less involvement and participation by the farmers in this area. As a result, less contribution to maintenance activities, inefficient and excessive water usage where tail end farmers suffer with water scarcity, non-adherence to cultivation schedules, damaging irrigation structures, encroachment of reservations are the prominent problems. Hence, the regular PMC has been a place of solving conflicts where other important matters receive less attention.

Many attempts to improve prevailing situation have taken the form of farmer training and education but without a considerable improvement. Hence, it is needed to analyze the situation beyond technical scope by considering socio-cultural, political, technical, legal and marketing aspects to find reasons and to propose viable solutions to this declining trend of PIM.

At present, many issues beyond scheme level have immersed with regard to transportation and marketing of vegetables due to unfair practices of middlemen and up country vegetable farmers are without exception. Present PIM is unable to address these issues due to its limited scope. A mechanism that extends beyond present PIM approach has to be introduced to find solutions to above issues.

Modern PIM and Communal Issues

During the ancient king's time there had been systematic practices of irrigation management as witnessed from Kondawatuwana inscription found in Gal-Oya valley. Even at that time the scope of the irrigation management had been the same ensuring the rights of cultivators', while defining obligations to water use and adherence to cultivation schedule. Although rules and regulations were such the important aspect of the ancient system is the involvement of voluntary communal participation in all agricultural and social activities. There had been a strong culture where farmers practiced methods to share benefits of limited water and land resources. This traditional participation has been known by some popular terms.

The term *kayiya* denotes voluntary participation of a group for a social activity. A mutual sharing of labor has been known as *attama*. During the times of water shortage farmers practiced *bethma* where only a land area close to the tank was cultivated on a sharing basis. Under the *tattumaru* system farmers shared their land on rotational basis so that everyone gets an equal chance to cultivate.

Above are some of the voluntary practices of our ancient civilization which manifest the social values like equity, harmony and proper water management. These practices can rarely be seen today among upcountry vegetable farmers.

Year round cultivations are done in these irrigation schemes with a cropping intensity of almost 3. With highly competitive market conditions where product price is changing daily farmers are keener on marketing their production at a higher price than involving in participatory activities. Hence, most of the farmers employ family labor for their field work. For these farmers opportunity cost of participation may be higher than engaging in their farming activities. As a result, even farmer representatives hesitate to dedicate their time for meetings and other workshops organized by the line agencies as minding their own business amid the competition rather than participation to such activities has been the norm.

Unlike in other areas of the country, officials of line agencies and farmers as well are facing specific problems due to geography of the area. The schemes considered are spreading to large areas connecting many villages with poor access facilities. Some of the areas cannot be reached by vehicles. Even though with the modern communication facilities farmers could be informed it is time consuming and costly for them to convene to a common place. The line agencies are trying to make PIM successful despite the fact that no specific provisions are included to overcome geographical difficulties of this area.

Under the present participatory management system the leading role has been assumed by the state bureaucracy. In fact, this has led to weaken the communal leadership where the traditional knowledge and practices of farmers were overruled by professional consultancy. Modern PIM has got an authoritative facet where line agencies take the leadership role and farmers became the followers. As far as officials representing line agencies are concerned the position power seem go dominate over expert power. If they are not good at soft skills and unable to find solutions to field level problems it is difficult to gain the recognition from the community. These types of problems too, create an obvious gap between the officials and the farmers which affect the proper functioning of PIM in this area as most of the farmers are following rural traditions.

When irrigation management takes a transactional form farmers become dependents of the government via line agencies. The traditional voluntary participation has been replaced by conditions based "give and get" system. Unless certain benefits are offered it has been difficult to obtain the voluntary participation. Social responsibilities of the farmers are dwindling and they tend to accomplish their individual objectives. The communal leaderships have been transformed to legal posts of farmer organizations. Farmers assume these posts on the basis of representation rather than leadership. As a result, farmers have become weaker expecting the government to solve all their problems. Many matters that could be solved at farmer organizational level are considered to be the responsibilities of line agencies and the state.

Under the present political system each and every communal organization has got political roots to a certain level and farmers organizations are without exception. Farmer Organizations have created a good opportunity for village level politicians to fulfill their political aspirations. Many local politicians have been elected as representatives of farmer organizations. Thereby they are able to secure their votes at village level as majority of voters in the area are farmers. The story does not end here. These representatives with political affiliations seek the help of higher level politicians to solve farmer problems neglecting the role of line agencies. Eventually, what is implemented is political decisions that aim to please the majority.

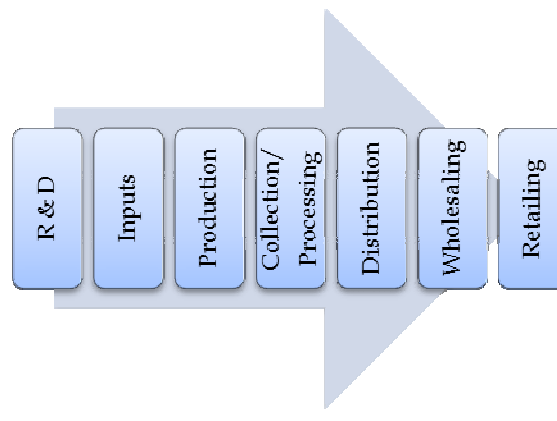
All above scenarios has created a farmer mindset rich in “dependency syndrome”. Now the growing trend is that farmers are neglecting even the maintenance activities for which they are responsible under the present PIM system.

Due to the availability of proper conditions and comparatively high profitability of vegetable cultivations many other private and state lands, not included under the Blocking Out Plans (BOP) of these schemes, are being cultivated by nearby people. These people are excluded from farmer organizations and do not participate in the PIM process. The worst thing is that they engage in various malpractices like reservation encroachment, water theft and damaging irrigation infrastructure. Executing law related to matters like reservation encroachment, water theft and pollution, and damages to infrastructure line agencies face difficulties due to role ambiguity.

In addition, implications with water rights have resulted in conflicts with other users including government organizations. These are other factors that discourage farmer involvement with PIM as they are unable to find solutions from line agencies to such legal matters. The existing legislation has not been able to ensure the safety of irrigation structures, people and environment.

Marketing Issues Faced by the Farmers

Figure 1: Primary Activities of Agricultural Value Chain



The Value Chain concept introduced by Michael E. Porter is a useful framework for analyzing business processes. A value chain is a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service to the market. The primary activities of local agriculture sector is demonstrated according to this model and shown in Figure 01. Accordingly, the institutional involvement for agricultural production process along the value chain can be discussed

Under present system of PIM institutional involvement is strong only within the initial phases of the value chain of production process (see Table 1). The research and development phase, agricultural inputs phase which involves supply of land, seeds, water, fertilizer etc. and production phase are the only areas with considerable institutional support. Under current PIM process value chain activities such as collection, procession, wholesaling and retailing are activities where minimum or no institutional support is available. These activities are upon the shoulders of farmers of which they are less aware and have limited information.

Table 1: Nature of Institutional Involvement

Value Chain Item	Institutional Involvement
1. R & D	High
2. Inputs	High
3. Production	Medium
4. Collection/Processing	Low
5. Distribution	Low
6. Wholesaling	Low
7. Retailing	Low

Although, the PMC can solve scheme level issues it is not cable of addressing issues related to marketing agricultural products. At present, heavy price fluctuations are occurring in markets mainly due to ad hoc supplies. Time to time import restrictions and import taxes by the government on selected food items like Potato and Big Onions have a practice. The reason behind this scenario is that there is no regulation in the vegetable and other field crop production. The type of crop to be cultivated is the farmers' choice. It is questionable whether this system is appropriate as far as frequently reported wastages of certain food items due to over production are considered. It should be noted that these wasted production contains not only production costs but a considerable portion of national income allocated for the maintenance of irrigation infrastructure and subsidies in fertilizer etc.

We define agriculture productivity as the quantity produced per unit land area with efficient water management. Officials representing line agencies present such statistics in district level agricultural committees (DAC) and these figures are carrying over to the national production statistics as well. Then what about the quantity wasted due to damage during transportation and oversupply. If someone includes those wastages and re-calculate the productivity how will the productivity figures look like?

It can be observed that there is a considerable fluctuation of agricultural product prices throughout the year due to varying supplies and demand. Without knowing what to cultivate farmers become stranded in present market structure. Many farmers are used to cultivate a crop of which the price was high during the previous season. They have to follow such absurd strategies as no mechanism is available to give them proper instructions.

Marketing of products has been an irritating problem faced by the farmers in the area. When the farmers are uncertain about the outcome of selling their products in the present market system it is probable that they would pay less attention to the initial activities of agricultural production value chain that highly involve with PIM. They are keen on succeeding the market war which has put upon their shoulders almost without any line agency support.

Under the present context PIM has little value unless it does not interfere with the whole value chain process. With regard activities of input and production phases farmers have got indigenous knowledge. Today, the line agencies has taken control of those activities while putting the responsibility of marketing the products on the shoulders of the farmer for which they are little cable due to inadequate knowledge and market information. They have little bargaining power on price and often become victims of middle-men. Further, they are not aware of post-harvest product handling. On the contrary, the government imposes rules like usage of plastic baskets during product transportation to minimize damage. When these types of conditions are put forward without any institutional support these regulations can be perceived by farmers as anti-agricultural policies.

The Way Forward

The lack of participation of up-country vegetable farmers in PIM process has many roots that go beyond technical sphere as discussed above. Although previous efforts to improve the situation have addressed only technical matters many social, political, legal and marketing implications seems to play a dominant role. The current practices have not been able to address farmer problems comprehensively but involve only with the field level technical problems. Accordingly, above discussed issues can be summarized as below.

1. Area specific factors like geographical difficulties have not been paid due attention by the authorities resulting PIM practices not farmer friendly.
2. Lack of comprehensive legislation that ensures the safety and proper functioning of irrigation systems.
3. No mechanism that goes beyond scheme level to regulate present market system.

Accordingly following general recommendations are presented to improve the situation though further studies by the line agencies are needed to find solutions to many other problems that come under their disciplines.

When above development are considered it is oblivious that a mechanism is needed to intervene with functions beyond production stage of agricultural value chain as the PMC is not able to solve issues beyond scheme level. When the end result is uncertain the whole process is not attractive to the farmers. Hence, PIM that focus only on the initial parts of the value chain is becoming unsuccessful. What is needed is an integrated approach that addresses problems beyond technical scope.

According to the present administrative system, the District Agriculture Committee (DAC) is the only place that convenes higher authorities of each line agency. The main function of DAC is just reviewing the progress of each institution affiliated to agriculture. What is discussed here is nothing other than agricultural statistics as already pointed out. The DAC has to be transformed into a decision making body, a district level mechanism to address issues relating to all agricultural value chain activities with the farmer organizational representation.

With the help of modern ICT it is not a difficult task to have a national agricultural data base. Having known the national requirements of each crop each DAC can be informed about the district level requirements. These requirements can be broken down to Divisional Secretary level and finally to irrigation scheme level where each farming community is clearly instructed what to produce during the season. The best criteria for such distribution will be the comparative advantage. For instance, the area most suitable for potato should be allowed to grow potato. This is an important decision to be made together with farmers. This would be an effective way for increasing agriculture productivity as well. When such a system is developed it could be realized that all the farmers do not need subsidies like fertilizer. The type of support needed would be improved seeds for some while credit to buy farm machinery for another. In fact, an insurance scheme that compensate for unexpected price decrease can encourage farmers to adhere to the proposed crop regulation system.

With such a mechanism in place the greatest advantage possible is the prevention of wastage due to over production and irregular supply. When a certain area is allowed to produce single crop all the value chain activities will be cost effective and easy to manage. Cultivation planning with proper water management, timely provision of seeds and other inputs, proper transportation of the production are the advantages. Further, heavy fluctuations of prices can be prevented due to uniform supply.

Before formulating PIM objectives many other issues in the spheres of social, political and technical that are inherent to the locality are to be considered. As discussed lack of participation to PIM activities of farmers who are able to gain a cropping intensity value of 3 from their cultivations can be justified in productivity terms. If the government can appreciate their achievements the participatory

burden on them can be relieved as their contribution to the economy is higher. On the other hand farmer representatives of this area should be paid a fee for attending PIM activities to compensate for the opportunity cost of participation. Rather than hard and fast rules formulation of area specific methods and procedures are important to increase the efficiency of PIM process.

Many problems that need legal solutions remain unattended due to institutional problems. One possibility to overcome this situation is by vesting the PMC with necessary legal authority to take action on these issues. Incidentally, this would prevent such rule violations in the first place when the PMC has a higher authority. Further, more recognition for the PIM process will be brought in encouraging farmers' participation.

In order to have a good liaison between line agencies and farmers transactional nature of PIM should be changed to a truly participatory management. Representatives of line agencies should be trained on soft skills. There should be a coordinated effort between line agencies and farmers at field level. Nothing has to be taken for granted unless real outcomes are observed at field level by both parties together. Thereby the gap between officials and farmers could be eliminated and farmers will be more responsive. If every PMC can be transformed to a place of learning participatory management will be a success story again.