

**PUBLIC-PRIVATE PARTNERSHIP IN IRRIGATION
MANAGEMENT: EXPERIENCES OF THE RIDI BENDI ELA
FARMER COMPANY MODEL**

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Foreword

Public- private partnership is one of the methods of improving public services and infrastructure by combining the best of the public and private sectors. Improving quality of services, efficiencies, and boosting economic growth through private participation in social and physical infrastructure development have been widely discussed and experimented in many fields. A sustainable public private partnership model has been seen as an important part of the framework for economic growth and infrastructure development in Sri Lanka.

The Government of Sri Lanka (GOSL) has invested large sums of money for pilot experiments in various fields on public and private sector cooperation. The Ridi-bendi ela farmer company model is one such experiment. The approach of interventions, strategies used and lessons learnt are important in the field of sustainable irrigation system management. Sri Lanka has a rich cultural heritage in irrigation management. However, the shift of irrigated agriculture from farmer managed irrigation system to large-scale agency managed irrigated settlement schemes has changed the contexts of traditional management. Therefore, the GOSL has experimented various models in the management of water resources and system maintenance of settlement schemes under its policy of participatory irrigation management. The Ridi bendi ela farmer company model is quite a different experiment compared to past efforts. In this scheme primary canal system management was also turned over to a non governmental organization with secondary and tertiary canal systems.

Although this report is based on a short term study conducted by using qualitative tools, the report sheds light on the importance of transforming subsistence farmers into agro entrepreneurs and subsistence agriculture into agribusiness. The findings and recommendations of this study are useful to the academic community, planners and policy makers.

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Director

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Executive Summary

People centered development has gained considerable importance in the last few decades. This concept was translated into irrigation system management after a series of pilot experiments as participatory irrigation management (PIM) policy in late 1980s. Performance evaluation studies carried out have indicated that, Farmer Organizations (FOs) have been key stakeholders of PIM. But they have not been able to ensure overall economic and social wellbeing of smallholder farming communities through profitable economic ventures.

National Development Council operated under the then government in late 2000s' proposed the creation of an institutional arrangement with public – private partnership to form a Farmer Company (FC) merging isolated small scale producers. This process commenced in 1997 as a pilot project at Ridi Bendi Ela (RBE) major irrigation scheme. The project was based on the concept of commercialization of farming operations to overcome most of the problems faced by small-scale farmers. The existing FOs were strengthened and System Level Farmer Organization (SLFO) was also established to co-ordinate the efforts between FO's, FC and Irrigation Department (ID).

The GOSL invested large amount of money to experiment this model. The company has raised Rs.860,000 by 2007 issuing shares among 2,285 shareholders and it has started various business activities for the benefit of farmer communities in general and for the shareholders in particular. The major responsibility of the company was managing the irrigation water of entire RBE scheme including O&M for a period of three years from 2000 to 2003 under a tripartite agreement signed between ID-SLFO and the FC. The government allocated O&M fund to SLFO and FC acted as the service arm to perform entrusted tasks. Later, the agreement was extended only for one year until 2004. This is the first time in the history, O&M of main canal system of a major irrigation scheme managed by ID was turned over to a non governmental organization and considered as a distinctive model experimented in irrigation system management. Again O&M responsibility of the main system was handed over to ID after four years of experience with the change of political leadership.

Therefore assessing the performance of FC especially in sustainable O&M and improving agricultural productivity is a useful exercise in the policy arena of PIM to look at the possibility of bridging the current gaps in the resource allocation in irrigation system management.

The study is based on the data and information collected from secondary sources, key informants interviews and focus group discussions conducted during June to August 2009.

RBE farmer company is an investor owned company established under the Companies Act as a peoples' company. Land owners, tenant farmers, people who are engaged in buying or processing agricultural or animal products and people granting loans or inputs for agriculture were able to become the members of the company by purchasing not less than ten shares. But a single shareholder could not purchase more than 10% of the total company shares of two million.

The FC is managed by a Board of Directors elected every three years at the Annual General Meeting of the shareholders and consisted of an externally recruited General Manager. The management had a supporting staff of nine paid employees.

The company had started more than 25 new business enterprises to increase the commercial viability of smallholder agriculture, but most of them had failed within a short period of time. The main reason for the failure was lack of proper business plan and selection of non-viable enterprises. The company management had identified most profitable enterprises and core business activities as group loan program, redemption of mortgaged land, seed paddy production and fertilizer and agrochemical supply. The analysis of the business activities of the company shows that, the company had by and large failed to operate as a viable commercial entity, though it had created a competitive environment in the input supply and output marketing. It had also developed partnerships with large number of public and private sector organizations beneficial to the farming community.

The main sources of income of the company during the period 2000-2004 were, interest income earned from the bank deposit of Rs. ten million which was provided by the government to FC as seed money, share capital of the investors, O&M allocation received from ID through SLFO and the profit earned from business activities.

The major achievement of the company was its successful service delivery to SLFO in irrigation system O&M, which had helped to improve water and land productivities. The achieved results should be credited to the commitment of all the stakeholders viz; ID, IMD, SLFO and FC. It should be emphasized that ID was always supportive in timely operation of the main sluice of the reservoir and issuing required quantity of water. The main impact of the partnership had been increased cropping intensity, increased extent of dry season cultivation and reduced water duty. Over 80% of farmers declared that, FC supplied adequate amount of water in time. However, it should be noted that, there is a huge unaccounted cost in this experiment which the government had to bear through the IMD during initial experimental period.

FC had made several initiatives to improve water management. The recruitment of a full time Irrigation Engineer and three water masters (*Jalapalaka*) who continued their services with minimum facilities, availability of technical supports for the farmers seven days a week, de-silting of main canals using machinery, provision of reliable and timely water to cultivators, close supervision of on-farm water management, crop diversification, mid season cultivation and release of water early to start land preparation were some of the activities undertaken by FC which had enormously helped to improve O&M and increase land and water use efficiency. Although RBE scheme received service of full time technical personals during the turn over period, in the past (pre project period), the Irrigation Engineer and other technical staff of ID responsible for RBE were also had to operate a number of other irrigation schemes as well as those in the area.

The company performance was at its best during the period of handling irrigation management responsibilities, though the company was not fully successful as a business model. Handling irrigation responsibilities had given strength to the FC

providing financial vigour, developing farmers' trust on FC and keeping beneficiaries' intact with the company. The involvement of the company had created a competitive market environment and had led to reduction in input prices in the open market.

The concept of complete turnover through SLFO had been successful during the experimental period. But considering the short time span, large amount of human and physical resources mobilized by the government through the IMD, limited management experience during a four year period and lack of experience without IMD backup supports, it is difficult to make any firm conclusions on achieved results and the sustainability. Therefore the concept needs more experiments over a longer period under different contexts and management to develop more appropriate models. A more detailed, analysis also is needed to assess the farmers' willingness to pay for improved irrigation services. However the process of formation of the company and its activities should be closely monitored through an advisory body with high ranking regional and area based government officials and utilization and employment of locally available retired professionals to lead the company are measures that can be recommended.

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List of Abbreviations

AEC	Agro Enterprise Centre
AGM	Annual General Meeting
ALSC	Aquaculture Livelihood Service Centre
BOD	Board of Directors
CSISA	Cereal Systems Initiative for South Asia
DC	Distributory Canal
FC	Farmer Company
FOs	Farmer Organizations
GM	General Manager
GOSL	Government of Sri Lanka
ID	Irrigation Department
IE	Irrigation Engineer
IMD	Irrigation Management Division
IMT	Irrigation Management Transfer
INMAS	Integrated Management of Irrigation Schemes
LB	Left bank
NDC	National Development Council
O&M	Operation and Maintenance
PIM	Participatory Irrigation Management
PPP	Public-Private Partnership
RBE	Ridi-Bendi Ela
RB	Right bank
SLFO	System Level Farmer Organization
WUA	Water Users Association

Chapter One

Introduction

1.1 Background

Since independence, the Government of Sri Lanka (GOSL) had implemented a number of water resources development projects with massive investment to increase productivity of agriculture, primarily paddy cultivation to meet the growing needs of increasing population. To an extent, this objective has been achieved regarding rice production. However, it is generally accepted that, there is a wide gap between the potential created and actual performance of irrigation systems. Although, numbers of programmes were implemented in the past to improve and renovate existing irrigation infrastructural facilities and sustainable operation and maintenance (O&M), the real beneficiaries were sidelined in the planning and decision making of irrigation related issues. Irrigation water was harnessed, conveyed, regulated and distributed primarily by the state agencies. Therefore, much emphasis was given to participatory irrigation management (PIM) after late 1980s as a means to improve irrigation efficiency, sustainable operation and maintenance and farmer's income. With all these efforts and hard work, the improvement achieved in terms of farmer's livelihood and the sustainability of infrastructure had produced mixed results.

Performance evaluation studies carried out have indicated various drawbacks in participatory irrigation system management approach (Hussain and Perera 2004). One of the major issues highlighted was that farmer Organizations (FOs) were unable to ensure overall economic and social wellbeing of smallholder farming communities through profitable economic ventures.

Land fragmentation, monotonous cropping pattern, inefficient use of water and non-commercial nature of operations have contributed to the low level of living standards of farming community (IMD, 1998). In consideration of mixed outcomes of past approaches, the working group on agricultural policy of the National Development Council (NDC) recommended a new approach for irrigation system management during 1997. The NDC proposed the creation of an institutional arrangement with public-private partnership, where, the isolated small-scale agricultural producers were expected to merge in to a Farmer company (FC). Wijyaratne (1997) also indicate that commercialization and diversification of agriculture and agro-industries are necessary to derive maximum benefits from the economic liberalization and the market economy. He pointed out that farmer companies can tangibly address these issues capturing economies of scale as the FCs are less susceptible to political, bureaucratic and other external pressures.

The company proposed by the NDC was empowered to use all inputs including land and water in an optimal manner. As a result it was expected to ensure economic use of land and water for agricultural production while engaging in market oriented production and value addition to ensure full benefits to farming community. The basic concept of the FC was evolved after the experiences of two pilot projects conducted by International Water Management Institute (IWMI) at Huruluwewa watershed and Nilwala river basin under the Shared Control of Natural resources (SCOR) project.

The process of forming a FC and other related institutional arrangements were commenced in 1997 as a pilot project at Redi-bendi Ela (RBE) major irrigation scheme managed by Irrigation Department and at Chandrikawewa managed by the Mahaweli Authority of Sri Lanka. The pilot projects envisaged improving farmer livelihood from subsistence to commercial level. The project was based on the concept of commercialization of farming operations to overcome most of the current problems faced by farmers. The existing Farmer Organizations (FOs) for specific purposes such as O&M of irrigation were continued to function in the project area. Further, a System Level Farmer Organization (SLFO) was also established to co-ordinate the efforts between FOs, FC and the irrigation agency. The objective of the FC was to function as a service and entrepreneurial arm of the SLFO.

Ridi Bendi Ela Irrigation System

The RBE irrigation system is located in Nikaweratiya Divisional Secretary (DS) Division in the North-Western province of Sri Lanka. The major part of the scheme belongs to the Deduru-oya river basin. The RBE scheme receives water from ancient Magalla reservoir, which was augmented by Deduru-oya water diverted at Ella and conveyed through a 20km long feeder canal.

Magalla reservoir was originally built by King Mahasen (274-301 BC). The tank was later expanded by King Parakramabahu. He also constructed the feeder canal currently known as Ridi Bendi Ela canal. The RBE scheme was renovated around 1950s by the ID. At present total capacity of the Magalla tank is 7,480 ac.ft. The total command area of the system is 2,483 ha, including some areas cultivated under the feeder canal (around 900 ha). The number of farming families depending on the scheme is 2,769. The irrigation scheme consists of three main canals, namely right bank (RB) canal, left bank (LB) canal and middle canal (*Meda ela*). The major problem in water management is the limited capacity of the Magalla wewa to provide irrigation for 2,483 ha (6000ac).The reservoir also need to meet the demand of drinking water in the city which is approximately 1,200 acre.ft/year. It has been said that, the reservoir must be filled three times to meet the water requirement of a season.

Irrigation Engineers' (IEs) Office of Nikawarertiya was in-charge of managing the RBE scheme. However the RBE scheme was one of the many schemes under the purview of Nikawarertiya IEs Office. They had utilized their limited human (One Irrigation Engineer and few technical staff and support staff) and physical resources to look after all the schemes under their control while involved in some Deduru-oya basin level activities.

Formation of farmer company through public-private sector partnership approach, anticipated in providing farmers with information and knowledge on cultivation practices, extension services, new seed varieties, fertilizers, farm equipments, credit, information on input-output prices, help to establish marketing linkages, and to provide updated information on government policies under one roof. The broad objectives of the NDC plan on the establishment of Farmer Company were;

- to test new institutional arrangements for commercialization of small farm agriculture in line with the developing agricultural policy of the government

- to be a responsible agency for provision of the major proportion of agricultural and irrigation support services previously delivered through government agencies
- to generate innovative market arrangements resulting in the improvement of agricultural production from the selected irrigation schemes
- to take over the management of the O&M of irrigation schemes
- to take initiatives to provide farmers with water rights and free holding of land titles

The Ridi Bendi Ela farmer company was established as a people's company with limited liability under the companies Act No. 17 of 1982 in September 1998. The objectives of the company were derived after a series of consultation made with FO leaders and other key personals in the area by the project implementation team of IMD.

The specific objectives of the RBE farmer company were;

1. To provide necessary technical support to land owners, tenants, and those involved in agriculture related businesses in the scheme
2. To provide or facilitate the provision of agricultural inputs either wholesale or retail
3. To provide or facilitate the provision of agricultural credit
4. To supply or facilitate the supply of Agri-equipment and related inputs
5. To establish agreements with relevant agencies for O&M of the irrigation system and for providing water for agriculture
6. To provide agricultural extension services for the development of agriculture and/ or coming into agreements with relevant agencies for providing such services
7. To introduce new agro-processing, packing and transporting methods and preserving techniques and agro-based industries
8. To wholesale purchasing, storing, selling or exporting the total agricultural production in the area
9. To introduce new agricultural technologies and new seed varieties
10. To solve the production and marketing related problems of producers and coordinating with state and private agencies to provide maximum prices for the products
11. To improve living conditions of agricultural producers by commercializing the production process
12. To introduce animal product industries or related investors to the project area in order to generate employment
13. To prepare and implement agricultural plans with the participation of farmers
14. To make necessary arrangements for the maximum utilization of local resources in the production process

1.2 Research Problem

Ridi Bendi Ela farmer company model under public-private partnership adopted was one of the distinctive approaches experimented in irrigation system management in Sri Lanka. GOSL has invested large amount of money and expertise in this pilot project from 1997-2000. According to the financial documents maintained by the RBE Farmer Company, the company had issued shares among 2,285 shareholders with a capital value of Rs.860,290 by the end 2007. The annual reports of the company describe the various business activities started by the company including group loan programme, seed paddy production, supply of fertilizers and agro-chemicals, poultry farming, production of vegetable seeds, ornamental fish programme and various other business activities in order to increase the livelihoods of the farming community. The main tasks of the company was management of the entire scheme (O&M) and management of the irrigation water in a more productive and efficient manner under the tripartite agreement signed between ID, SLFO and the FC for a period of three years. However, the agreement was extended for one year period after the initial contract period of three years and therefore the allocation of maintenance fund to FC was stopped in 2004 by the then minister in-charge of the subject. The responsibility of O&M of the main system was entrusted back to ID as managed in other major irrigation schemes.

Therefore, assessing and comparing the performance of Farmer Company, especially in sustainable O&M, improving agricultural productivity and farmers' wellbeing before and after 2004 is important in the irrigation management and integrated service provision. The findings will be useful in the policy arena of PIM in order to fill the current gaps in irrigation system management.

1.3 Objectives:

1. To study the approach and institutional arrangement adopted in irrigation system management and commercialization of irrigated agriculture
2. To assess the performance of the sustainable O&M under the complete management turnover
3. To study and compare the public-private irrigation system management model with current management system and its sustainability
4. To evaluate the role of public-private model in enhancing agricultural production and farmer's income
5. To make recommendations for future policy formulation

Chapter Two

Methodology

2.1 Conceptual Framework

The conceptual framework of the public-private partnership in Irrigation system management programme implemented in RBE scheme was based on some key concepts. These concepts are discussed below;

2.1.1 Participatory Irrigation Management

The concept of participatory irrigation management (PIM) was promoted as a solution to reduce the government cost in irrigation system management and to bridge the gap between the potential created in irrigation system and the actual performance. The actual water users had no much say in water management before PIM. The government agencies, exploited, harnessed, conveyed, controlled, regulated and distributed water. The PIM attempted to loosen the tight control of bureaucracy and give responsibility to the farmers in water management. PIM has been the national policy since late 1980s in Sri Lanka, where farmers had to play active roles in irrigation system management with the line agency.

2.1.2 Irrigation Management Transfer

As an extension of PIM programme, irrigation management turnover (IMT) was undertaken to ensure formal transfer of power and authority to user groups to operate and maintain the secondary and tertiary irrigation infrastructure on their own via mobilizing adequate amount of resources and also to have a control on releasing water for irrigated agriculture. The IMT necessitated the formation or strengthening of FOs and creation of project management committee (PMC) as a forum for the joint management decision making. However, to mobilize meaningful investment by farmers towards sustainable irrigation infrastructure O&M, they were expected to earn sufficient amount of income from irrigated agriculture.

2.1.3 Farmer Company

Agricultural production and productivity are determined by multiple factors in addition to land and water management. Lack of access to good quality inputs such as seeds, fertilizers and agro-chemicals in adequate quantities on time and at a reasonable price, low awareness and lack of access to new production technologies, to extension services and to credit, especially to poor and vulnerable farmers and problems in output marketing were identified as major causes leading to low productivity and low farm income (Hussain and Perera, 2004). The basic reason for the above situation was the existence of ineffective mechanisms and institutional arrangements in the interventions. Farmer Company was proposed as a public-private partnership tool to deliver integrated services to farmers in an efficient manner by providing right incentives and enabling environment for both farmers and the private sector.

The management of irrigation infrastructure and efficient use of water was planned to be at optimum level with complete IMT to FC through SLFO. The SLFO is composed of the farmer representatives from all FOs and function as the apex body of FOs. The SLFO acts as an intermediary in transferring O&M funds to the FC since regulations do not permit direct transfer of government funds to a private organization like a farmer company. Moreover, the SLFO monitors the use of these funds by the FC. This process anticipated to cater integrated services to farming community which in turn would deliver maximum output through optimum use of land and water resources and providing other support services in a reliable way.

2.2 Description of the Study Area

The command area of the RBE scheme has eleven FO areas (villages) along with head, middle and tail end of the irrigation system. The head end includes the FO areas of Katagamuwa, Meda ela, Ibbawala, Magallegama, and Balagollagama; the middle end FO areas are Kebellewa, Danduwawa, and Budhumuttawa; and the tail end covers Heelogama, Tharanagolla, and Divullewa.

The scheme has both purana villages (traditional villages with ancestral land owning families) and settler villagers. Heelogama, Katagamuwa and part of Meda ela are purana villages, while rests of the areas have settler population from various parts of the country. Therefore, the scheme consist a heterogeneous population with different social and cultural backgrounds though almost all the people are Sinhala Buddhists.

FOs in the RBE scheme were re-structured under the INMAS programme during the period of 1985-1988. However, real INMAS model of PIM was not practiced in the scheme, rather, FOs were seen by farmers as further development of traditional '*vel vidhane*' system. FOs were further re-structured and activated under the INMAS programme during 1993/94 by the project management to revitalize and activate the FOs based on INMAS model. The FO setup in the RBE scheme is given in table 2.1.

Table 2.1: Farmer Organizations setup in RBE Scheme

Name of FO	No. of Farmers	Design command area (ac)	Actual command area (ac)	No. of farmers representatives (FRs)
1. Katagamuwa	525	614	614	28
2. Magallegama	256	420	420	11
3. Ibbawala	280	322	322	16
4. Meda-ela	146	187	187	15
5. Balagollagama	300	990	1444	28
6. Budhumuttawa	350	667	600	22
7. Kebellawa	238	473	500	13
8. Heelogama	200	337	337	13
9. Divullewa	260	660	660	15
10. Danduwawa	226	526	526	14
11. Tharanagolla	195	480	480	11
Total	2997	5676	6098	186

Source: Records at the Project Managers' Office, Ridi Bendi Ela, (2009)

The irrigation command area in Katagamuwa receives water from feeder canal, before reaching water to the reservoir. Therefore, farmers in the Katagamuwa area enjoy prior right to the waters of the reservoir. The Katagamuwa area was not transferred for irrigation management to FC under the tripartite agreement.

2.3 Data Collection Instruments

To achieve the objectives stated in the previous chapter, the study adopted following technical approaches in the collection of necessary data and information.

- I. Review of literature: The study team conducted a methodical literature review by perusing the number of unpublished reports, secondary data and progress review meeting minutes of the Farmer Company and SLFO to understand the organization and activities of the company.
- II. Key informant interviews: Guided interviews were conducted among Board of Directors of the FC, officials of SLFO, FO leaders and officials of Irrigation Department and other relevant government agencies. A checklist was prepared to guide the interviews using the information gathered from literature review.
- III. Focus group discussions: Focus group discussions were conducted in all eleven FO's in the RBE scheme targeting FO office bearers. Another series of focus group discussions were conducted among farmers in the selected FO areas representing head, middle and tail end areas of the scheme. The selected FOs for focus group discussions were Magallegama and Meda Ela from Head end; Budhumuttawa, representing Middle end and Heelogama and Divullewa representing tail end areas. The focus group discussions were conducted using a checklist prepared from the initial information distilled from literature review and the key informant discussions.

The information elicited from focus group discussions were verified and validated by multiple field visits to the selected areas, discussions with key informants and review of farmer company records.

Chapter Three

Farmer Company Model

3.2 Evolution and past experiences of Farmer Company concept

In ancient times it was the farmers who managed the irrigation systems themselves through their own institutions and according to their own rules and regulations. The history of farmer organizations goes back to ancient times. In the early post-independence era, the institution of *Vel Vidane* (irrigation headman), established during the British colonial period, was continued. The *Vel Vidane* was appointed by the government and was given power to execute decisions for the operation and maintenance of minor irrigation systems. The authority of *Vel Vidane* was transferred to an elected committee of farmers known as the cultivation committee by the Paddy Lands Act, No 1 of 1958 and this institution had powers to deal with non-irrigation activities as well. The Agricultural Productivity Act of 1972 abolished the cultivation committees and established Agricultural Productivity Committees (APC). Later on, these were also abolished and a new institution known as Agrarian Services Centre was established.

In year 1988 the government of Sri Lanka formally approved and accepted the policy of participatory irrigation management (PIM) through a cabinet paper. The turnover of O&M responsibilities and transfer of ownership of irrigation channels and structures below the distributory canals to farmer organizations was one of the main objectives of the PIM.

Although farmer organizations were established in most of the agricultural areas, they were not able to ensure the small farmer's economic and social wellbeing through profitable economic ventures. The absence of combined set of interventions to promote year-round cropping, crop scheduling, value-added production, and agro-based industries, market links in the form of forward contracts of sufficient scale as profitable business for farmer organizations, the absence of procedures for decision making in the implementation of trade policy sensitive to farmers, promoting partnerships between farmer organizations and the organized private sector as well as between state and farmer organizations; remained as obstacles (Wijeratna, 1997).

Considering all those weaknesses, the National Development Council functioned in the country in late 1990s, formulated a set of policy recommendations for the development of the agricultural sector aiming the development under open economic transformation process. This process emphasized the need for a single organization, to attract Foreign Direct Investment (FDI) and new technologies, and also to facilitate investments in the agricultural sector by building partnerships, joint ventures with the foreign investors, adopting existing incentive packages designed by the Board of Investments (BOI). The projected institutional framework was expected to facilitate obtaining the ISO standards for the future export agricultural products (e.g. green or organic products) and encourage building contract farming initiatives to avert the risk of both exporters' and farmers' in the commercial agricultural enterprises. Further, the proposed institution had the possibility to formulate policies to gain benefits under the 'green box' policies of GATT/Uruguay Round negotiations. The formulations of

multi sectoral complimentary agricultural policies were to encourage land saving technologies such as green houses and poly tunnels. It was also a measure for minimizing agricultural externalities and encourages competition through a regulatory framework. The policy package also recommended the establishment of a National Farmer Company as an alternative marketing institution with a limited liability structure enabling farmers' involvement in purchasing and marketing of all agricultural commodities on a competitive basis (NDC, 1996).

Farmer Companies in Sri Lanka

Although FCs in Sri Lanka became popular in the late 1990s, the history of FCs goes back to the early 1980s when the government of Sri Lanka introduced the concept of people's companies. The Export Development Board (EDB) took the initiative to establish Export Production Villages (EPVs) with the aim of integrating the village level producers and the exporters. Under this program about 36 EPVs were established of which about 20 were involved in the production of agricultural products.

The basic structure of the FCs were based on two pilot projects implemented by the International Water Management Institute (IWMI) in 1994 under the Shared Control of Natural Resource project (SCORE) in Huruluwewa and Nilwala river basin area and it was sponsored by United State Agency for International Development (USAID)(Wijayarathna, 1997). Based on these experiences, several other government agencies like the Department of Agriculture, Ministry of Irrigation and the Mahaweli Authority of Sri Lanka (MASL) have promoted farmer companies based on the people's company concept in the late 1990s. To understand the history and the evolution of the concept of Farmer Company in Sri Lanka, Table 3.1 summarizes the background, aims, and characteristics of FCs promoted in the recent past by various government agencies in Sri Lanka. The Ministry of Irrigation and the MASL developed farmer companies based on the existing farmer organizations and system level farmer federations in the irrigation schemes with the aims of handing over part of the operation and maintenance (O&M) of the irrigation schemes and accelerating commercialization of agriculture through crop diversifications, intensive cultivation and initiating value addition of agricultural produces and agro based business activities.

Table 3.1: Background and characteristics of farmer companies in Sri Lanka

Promoting Agency	Background and aims	Examples
Department of Agriculture	Assisted the formation of about 32 farmer companies. Originated from interest groups which were mainly farmer organizations registered under the Agrarian Service Centers. Main aim was commercialization of Agriculture	Hiriyala Farmer Company
Ministry of Irrigation	Assisted the establishment of about 8 farmer companies based on major irrigation schemes. Apart from commercialization, irrigation system management was another objective	Rajangana Farmer Company Ridi Bendi Ela Farmer Company
Mahaweli Authority	Established about 4 farmer companies based on major irrigation schemes. Originated from farmer federations in the Mahaweli scheme. Main aims were commercialization and irrigation system management	Elahera Mahaweli Farmer Company
Export Development Board	Assisted the establishment of 36 companies with the objective of linking the rural producers with the exporters. At present, only two companies are operating	Dambadeniya Export Production Village

Source: Esham, M. and K. Usami (2007)

The most common approach adopted by the Department of Agriculture in establishing FC was, firstly identifying a group of people who were interested on particular activity and then identifying the suitable activity appropriate for viable economic ventures. Finally the identified groups of people were transferred into FC. In 17 districts, 85 interest groups were formed, 32 of which were transformed into FCs (Batuwitage, 2001).

Following this, in 1998, under a directive of NDC, Farmer Company approach was reintroduced as a national program for irrigation management transfer. Two pilot studies were implemented to draw lessons for future expansion under two different organizational structures, namely Ridi Bendi Ela irrigation scheme Chandrika wewa, Scheme. Chandrika wewa FC is currently not functioning and Ridi Bendi Ela FC is still functioning with some ups and downs.

According to the available information, 154 farmer companies had been established at the end of year 2004. They were scattered all over the country including North and the East. Out of total 154 companies, 103 were legally registered under the Registrar of the Companies (HARTI, 2004).

At the same time, another type of company known as *Gamidiriya* Company, which was also registered under the Companies Act was initiated in 1999. The objectives of organizing these companies were somewhat different from most of the other companies discussed above and their main target had been poverty alleviation in the rural sector. *Gamidiriya* (strength of the village) Community Development and Livelihood Improvement Project in Sri Lanka was designed after testing the hypothesis that if information, decision making power and supplementary resource assistance were provided to rural communities, they would manage the resources better and effectively. This was tested under a project titled Village Self Help Learning Initiative (VSHLI) in 1999 in Polonnaruwa District of the dry zone, North Central province. The results observed during four years of implementation in 26 villages paved the way for the design of *Gamidiriya* project to scale up VSHLI to cover 5000 villages. The World Bank supported the VSHLI. The project had already covered over 1000 village communities in 852 Grama Niladhari Divisions by 31 December 2008 (Batuwitage, 2009).

3.2 Review of Private- public partnership approaches adopted for agriculture development in selected countries

1) Public-Private Partnership for Agriculture Development in Nepal

To achieve the agricultural development, Nepal had identified the need of high value/ low volume, cash crop based, market led, export oriented and private sector driven development strategy. According to Thamrakar, (2008), a tripartite partnership between Nepal government, a Donor agency and FNCCI (private sector apex body of Nepal) was initiated in 1992 and established the Agro Enterprise Centre (AEC). AEC has implemented and continuing a wide range of programme activities under partnership arrangements and it is continuing. Some of the programmes of the organization are listed below;

- Research and development programmes involving food and nutrition, production, collection, grading, storage, processing and packaging
- Commercial production, processing and marketing
- Agro technology extension services and market information system
- Establishment and management of agricultural produce collection centres, whole sale markets, Haat bazaars
- One Village One Product (OVOP) programme
- “Commercial Agricultural Alliance” as non-profit company formed to assist “commercial agricultural development project” of ADB/Government of Nepal with the involvement of FNCCI, agro enterprises and cooperatives

One of the achievements of the AEC in Nepal have been the strengthening of private sector institutions at different levels to undertake partnership programmes of different nature and magnitude in the country. There were five different partnership agreements signed up to 2008 (*ibid*).

From nearly two decades of experience in AEC in Nepal, the importance of clear and transparent government's public-private partnership (PPP) approach and pre-determined set of different conditions (rules of game) for PPP, as well as stable government policies on PPP had been emphasized. Identification of mutually supportive and complimentary roles of both sectors and awareness of each other's problems and issues were of utmost importance to the success of the partnership (*ibid*).

2) Public Private Partnerships and Water for Irrigation in Mauritania

Agriculture and Rural Development Unit of the World Bank conducted a public-private partnership project in Nakhlet Small-Scale Irrigation Scheme, Mauritania. According to the World Bank (2010) the key challenges to the irrigation sector in Mauritania is common to many publicly managed rural infrastructures such as inadequate financial allocation to undertake operations and maintenance, poor service delivery, low levels of cost recovery, degrading infrastructure, inefficient infrastructure use and unsustainable or volatile public subsidies. Irrigation also suffers from growing environmental degradation, social conflicts, and a lack of integration of irrigation and drainage systems.

In this model the role of government in the O&M of irrigation works was transferred under a management agreement to a water users association (WUA) such as a farmers' cooperative. The driving forces for the public sector was essentially to reduce the local irrigation authority's recurrent expenditure, improving water management and cost recovery, reduce social conflicts and enhance the productivity and returns on investments for farmers.

The Nakhlet IMT project is located on the northern bank of the Senegal River in Mauritania. Water Users Association is the organization that manages water pumping and irrigation, input supply (herbicides, fertilizers, fuel etc) and land preparation. WUA uses collective strength to raise credit to lend on to the beneficiary farmers, to purchase inputs in bulk and undertake land preparation. Cost recovery was done by variable user fee payments by farmers to WUA for agricultural inputs, irrigation charges to support operations and equipment maintenance, and share of depreciation of irrigation equipment. WUA has to sign contractual management agreement with government authorities if taking over state assets. There were service contract agreements between individual farmers and the WUA.

Project evaluation studies done by Warner, *et al* (2008) revealed that Internal Rate of Return (IRR) to farmers per season was 103 per cent and breakeven yield was 2.7 t/ha. This suggests that introducing a third party to help, had reduced the fixed costs to farmers, improved credit terms, and enhanced the quality and responsiveness of irrigation O&M. Risk factors associated with this model is lack of commercial experience, disputes among members and inefficiency of WUA. Another factor that needed to be taken in to consideration is common physical risks (bad weather, delay in supply of inputs) associated with agriculture. They have direct effects on farmer income and ultimately leading to elevate the credit default risk and reducing capability of WUA to make debt service repayments. Introduction of short-term credit and inputs should be more favourable owing to the collective strength of the WUA, and it reduces the default rate. One area for further consideration could be for the

WUA to provide some type of insurance scheme to individual farmers and that will guarantee the credit repayment in crop failure incidences. (Warner *et al*, 2008).

3) Agri-clinics and Agribusiness centers in India

The project on Agri-clinics and Agribusiness centers was initiated by the Ministry of Agriculture in India in collaboration with the National Bank for Agriculture and Rural Development (NABARD) in 2002. The major objective of the agri-clinics and agribusiness centers was to assist agricultural graduates/graduates in subjects allied to agriculture in setting up of 30,000 agri-clinics/agri-business ventures over a period of six years at the rate of 5000 per year. Agri-clinics were expected to provide expert services and advices to farmers on various aspects of production and marketing and clinical services for animal health, which would enhance productivity of crops/animals. Agri-business centers were expected to provide inputs, farm equipment on hire and similar services.

Under this project, agricultural graduates were being provided initial training necessary to establish the centers. Loans were granted amounting to 1 million Indian Rupees for an individual and 5 million Indian Rupees for a group of around 5 from the NABARD. Loans were expected to be repaid within 5 to 10 years in concessionary installments. By the end of the year 2002, 15,609 graduates representing all Indian states had applied for training, and 2,853 graduates had either completed or were undergoing training through a network of 57 training institutes countrywide. By December 2002, 235 agri- entrepreneurs had started agri-clinics or agribusiness centers in small villages (Hussain and Perera, 2004).

4) Public Private Partnerships approach to develop aquaculture

With ongoing intensification and global networking, aquaculture is creating an increasing demand for infrastructure and public services support, resulting in a diversity of public-private partnerships (PPPs). As an example, in Aceh Province, Indonesia, low quality seed material, diseases, financial problems and lack of expertise were endangering the livelihoods of more than 20,000 small scale milkfish and shrimp farmers. As a result, pond productivity had been very low, often less than 100kg per ha, where as 300 to 500kg per ha was possible. To help farmers increase the productivity of their aquaculture ponds, Aquaculture Livelihood Service Centres (ALSC) had been established in collaboration between private farmers with development agencies, banks and NGOs, including the Japanese OISCA, the Asian Development Bank (ADB), and the World Fish Center.

During this PPP project, groups of farmers formally established ALSC's as private cooperatives, each led by a *Pertuah Neuhun* (traditional community leader with responsibility for aquaculture livelihoods). Each centre was therefore a community-run business which was designed to increase local farmer networking for the advantage of the communities. ALSCs provided the farmers with technological and market information, technical assistance and microfinance support through an innovative system of community information services that included interactive learning DVDs, SMS services, training events and member networking through a modern GPS database. The centres also supplied feed, fertilizer and high quality seed material for shrimp, milkfish and tilapia to the farmer members. By the end of March

2010, four ALSCs were assisting 2,656 small-scale farmers with ponds of 0.5-2 ha. More centres are planned to support up to 10,000 farmers in the region by 2011(Weirowski, Liese, 2010).

Another aquaculture project in Cameroon, the 'Sustainable Use of African Rainforest Rivers' project, involving the World Fish Center, the World Bank's Development Marketplace and the National Geographic Society, built partnerships between fishers and Gulf Aquatics, a private aquarium fish exporter. Using the 'Farmer-Scientist Research Partnership' model, the project established community-based producer networks to raise and sell ornamental fish. Some 20 fishing villages now sell ornamental fish to a new trade company through a supervised process to ensure transparency. In addition to the construction of fish spawning and holding ponds at four sites, the partnership had led to the sustainable use of natural resources, increasing awareness about the use of pesticides, higher incomes for fishermen and quality of fish supplied, and building trust within the Cameroonian ornamental fish market.

It has often been argued that PPPs mobilize additional financial resources, capacities and expertise, and increase the effectiveness and sustainability of development cooperation. To determine the applicability of PPP approaches in to the aquaculture and fisheries sector, WorldFish, and the Humboldt University, on behalf of GTZ Germany, reviewed 53 PPPs across Africa, Asia and South America. The review revealed that, most of the cases in developed countries, PPP approach evolved when there was a strong incentive for private sector such as access to global markets and food safety. The objective of private sector was to develop supply chains and markets. Public and civil institutions and development organizations used PPPs to accommodate the demand for public service needs such as improving production infrastructures and technologies, or implementing development oriented research activities. Most of the time in aquaculture, PPPs depended on the financial input of private partners, but the knowledge and in-kind contribution of small scale farmers with local expertise were undervalued (Weirowski and Liese, 2010).

5) Public Private Partnerships approach to transform cereal production in South Asia

For over a decade, annual growth rates in rice and wheat production had failed to reach even one per cent increase, trailing far behind the rate of population growth. The impacts of this had been devastating in terms of high food prices and increased poverty and child malnutrition ranging from 40-50 per cent. In response, the Cereal Systems Initiative for South Asia (CSISA) had launched a ten year programme in late 2000s that aims to increase cereal production in the region. CSISA was focusing on four major production areas with approach of focusing on bundle of technologies rather than single technology in isolation. The production areas were the western Indo-Gangetic plains of Pakistan and north-west India, the Central and East Gangetic Plains of north India and Bangladesh, and the plains of subtropical south India. However, CSISA did not only target increased production but also initiated the cereal value chain with the aim of increasing household income as well as grain yield, recognizing that poverty can persist even when harvests are good.

To implement the initiative, CSISA had set up nine field offices or knowledge centres, known as hubs, each of which was run by a hub manager, an extension agronomist and several field staff. Forming its 'spokes', each hub had a technical working group of invited partners, who had a vested and complementary interest in the agriculture development of the area. They also had the necessary size and range of expertise to work on a large scale. In its first year the initiative had signed up over 200 partners across the nine hubs, including government research and extension organisations, private seed and inputs companies, banks, Farmers' Organisations, and many others.

One hub was located in Samastipur district in Bihar state, a drought-prone area where poor quality seed and inefficient use of water were major causes of low grain yield. Through the technical working group, national and regional agricultural institutes developed foundation seed of improved high yielding maize, wheat, mungbean and chickpea varieties. Further laser land leveling was used to achieve greater uniformity in crop growth through even distribution of water to plants in Punjab and Haryana. In an exchange with the Punjab-based hub, CSISA took representatives from a Samastipur farmers' cooperative to see how laser land leveling equipment enables farmers to remove mounds or depressions in their fields, and to meet manufacturers of the tractor-mounted laser leveling machine.

According to CSISA's target, was by year 2010, at least 6 million farmers should have an increased cereal yield of 0.5 - 1 ton per hectare, raising their annual income by at least US\$350, and producing 5 million additional tons of grain each year. However, for this to be achieved in a region where 85 per cent of farmers in the region only had access to small and fragmented blocks of land, poor yield, poor market orientation and poor return, the programme required the involvement of public institutions, civil society, farmers' cooperatives and private sector companies that could work together in a coordinated manner in order to achieve the success. Such partners already included the well-staffed extension wing (KVKs) of the Indian Council for Agricultural Research, NARC (Nepal) and BARI (Bangladesh), private seed companies such as Bayer and Syngenta, and integrated cooperatives like DSCL. The project officials believed that complementary partnerships could convert the farmer's traditional vicious cycle into a virtuous one of better farming practices, better yields, better markets and better returns (<http://www.new-ag.info/focus/focusItem.php?a=1614>).

3.3 Organizational structure and the institutional arrangements under the Ridi Bendi Ela Farmer Company

Farmer companies get their formal status and the license to do business once they get registered under the Companies Act. The Registrar of companies registers three types of companies, viz.; private companies, public companies and peoples' companies. Farmer companies are investor-owned companies established under the companies act as people's companies to safeguard against possible private ownership by imposing restrictions on membership and share trading. The minimum requirement of a people's company is to have not less than 50 registered shareholders. The price of a share is Rs.10 and no single shareholder, individually or jointly with their family members can own more than 10 percent of the total shares. A Memorandum of

Articles and the constitution of the Association has to be submitted which clearly outlines the objectives of the company and the by-laws for operations. Ridi Bendi Ela FC has to follow the rules, practices and procedures of other private companies, as a company registered under Registrar of Companies. According to the Articles of Association, land owners, tenant farmers, people engaged in buying or processing of agricultural or animal products and people supplying loans or inputs for agriculture were able to become members of the company by purchasing shares.

3.3.1 Structure and management of the company

In peoples' companies, the Board of Directors is elected by the shareholders and the responsibility of the directors is to make profits for the shareholders. Director's tenure in office is one year although he/she can be re-elected for the following year. Ridi Bendi Ela Company management consisted of seven members Board of Directors (BOD) and a General Manager. The BOD members are elected or selected at the Annual General Meeting (AGM) of the company. The company area has been divided into five zones/regions and five directors are elected representing one each from a zone. Two other Directors are elected on a floating basis. One of BOD member is selected as the company chairman. Since all the shareholders of the company are farmers, all the members of BOD are farmers of the irrigation system. A member will be eligible to become a Director when he had purchased not less than 100 shares. A BOD member can serve for a period of 3 years, unless the shareholders decided to change him at AGM.

The BOD is supported by externally recruited management team headed by a General Manger (GM). GM is a professionally qualified officer recruited by the BOD. The GM is the Chief Executive Officer (CEO), who is responsible for the BOD. He is the key technical person providing all the necessary assistance and guidance in planning, executing and implementing company activities. GM is also responsible for development of business activities and overall management, supply of inputs, providing agricultural credit to the members, association with external public and private sector officials.

As shown in figure 1, the company has a functional organizational structure consisting five sections namely, operation and maintenance of irrigation system, agricultural crops, animal husbandry, credit, and administration and accounts. At the time of survey, the company had externally recruited nine employees- General Manager, the accountant, assistant accountant, loan officer, livestock officer, agricultural officer, sales assistant, clerk and driver.

3.3.2 Institutional arrangements of Ridi Bendi Ela irrigation Scheme

As in other irrigation schemes, institutional arrangement is based on hydrological boundaries. Main channels coming from the tank are divided into distributoray channels, field channels and end up to the farm plots. Farmers belonging to each field channel get together and form Field Channel Groups (FCG) and amalgamation of FCG make the Distributory Channel Organization/ Farmer Organization. Figure 3.2 illustrate the institutional arrangement in Ridi Bendi Ela irrigation scheme.

Figure 3.1: Structure of the Ridi Bendi Ela Farmer Company

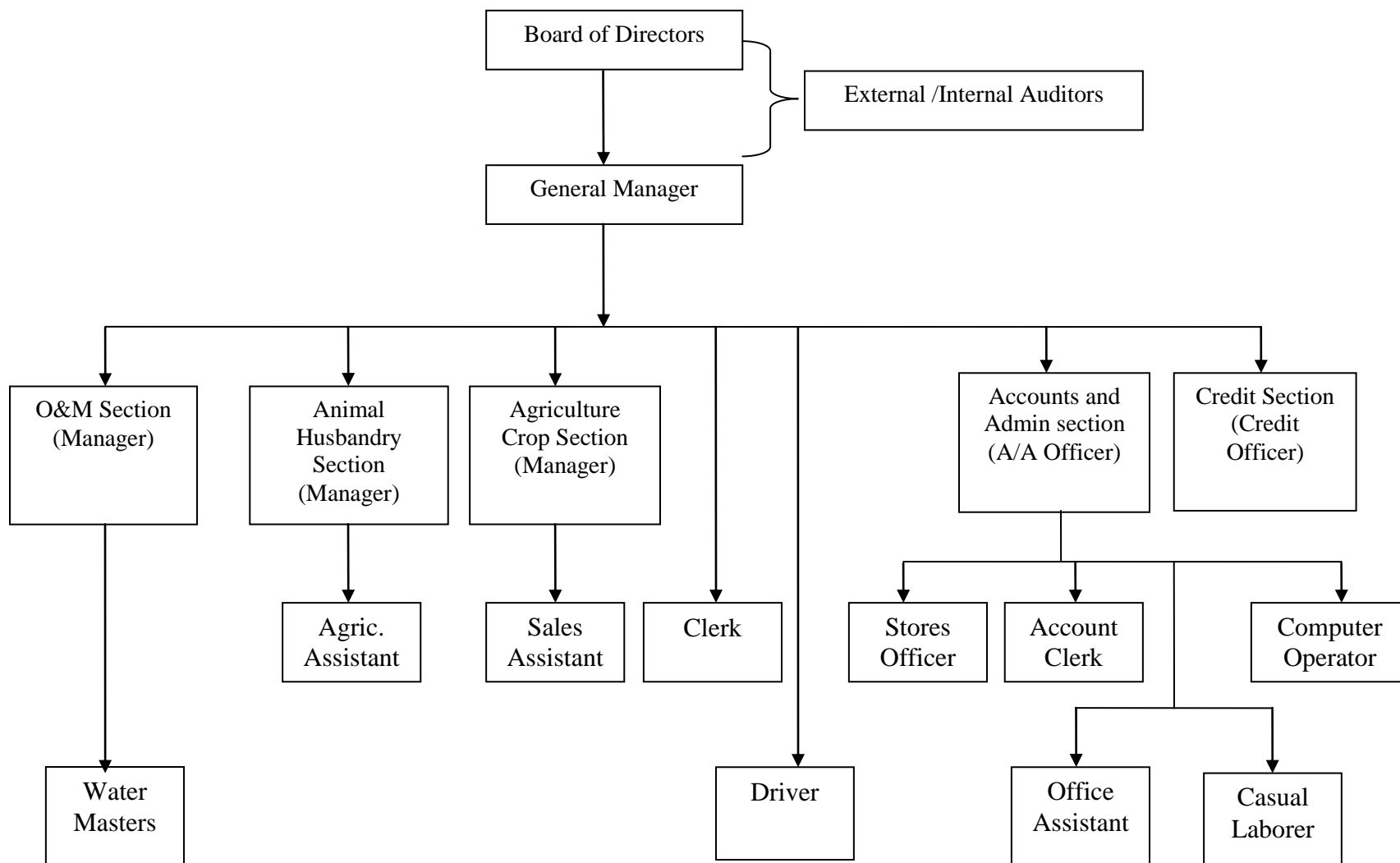
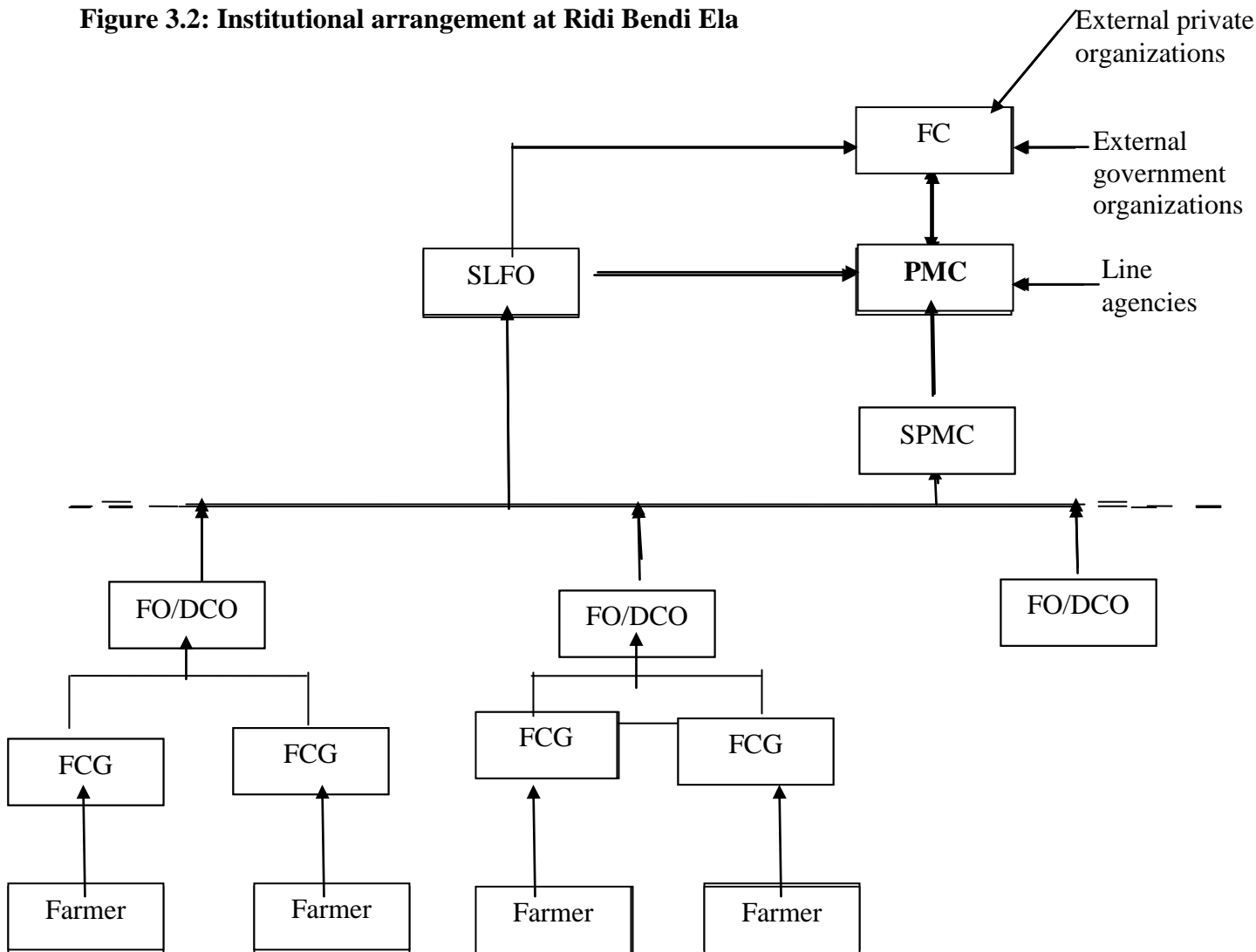


Figure 3.2: Institutional arrangement at Ridi Bendi Ela



- FC- Farmer Company
- SLFO- System Level Farmer Organization
- FO/DCO - Farmer Organization/ Distributory Channel Organizations
- FCG - Field Channel Groups
- PMC - Project Management Committee
- SPMC - Sub project Management Committee

External Institutions

Irrigation Management Division (IMD) under the Ministry of Irrigation and Water Resources Management is the implementing agency that played a central role in the process of conceptualizing and creating the FC at Ridi Bendi Ela. IMD was fully involved in all activities of the company at the point of initiation and the establishment, and it helped for the rapid expansion of company activities. FC has built partnerships with external institutions like Banks, private companies such as Ceylon Agro Industries, Maxeese farms, A Baur and Company, CIC Agri business, Hayleys, Weehena Farms, Plenty soya Ltd, and Kelani Valley Canneries Ltd, and government agencies (Irrigation Department, Department of Agriculture, Irrigation Management Division, Paddy

Marketing Board, Seed Certification Centre, and Department of Agrarian Development to facilitates provision of goods and services such as input, extension, credit and marketing linkages to meet the integrated services requirements of the members.

3.4 Company Activities and Functions

In order to increase the commercial viability of smallholder agriculture in RBE irrigation scheme, FC initially had started more than 25 new business enterprises. Most of them had failed in a short period of time. Summary of the business activities started by the FC from its beginning are listed in the Table 3.2.

All the business activities were initiated on trial and error basis without proper business planning and feasibilities. Based on the past experience, the company management had identified most profitable enterprises as core business activities. They are; group loan program, redemption of mortgaged lands, seed paddy program, fertilizer supply and agro-chemical supply.

Table 3.2 Company activities

Activity	Commenced	Profitability	Status in 2009
Seed paddy farming	Yala 1998	Profitable	Continuing
Supply of fertilizer	Yala 1998	Profitable	Continuing
Inland fishery	Maha 98/99	Loss	Failed
Group loan program	Maha 98/99	Profitable	Continuing
Growing quality vegetables	Maha 98/99	-	Failed
Poultry farming	Maha 98/99	-	Continuing
Perennial crop development	Yala 1999	-	Failed
Growing white sesame	Yala 1999	-	Failed
Supply of seed Mung	Yala 1999	-	Failed
Growing Passion fruit	Maha 99/2000	-	Failed
Integrated farm	Maha 99/2000	-	Failed
Growing Soya	Yala 2000	-	Failed
Supply of Agro-chemicals	Yala 2000	Profitable	Continuing
Redeeming mortgaged land	Yala 2000	-	Stopped
Growing Papaw	Maha 2000/01	-	Failed
Growing Soya	Maha 2000/01	-	Failed
Combined harvester	Maha 2000/01	Loss	Failed
Ornamental fish production	Maha 2000/01	Loss	Failed
Vegetable seed program	Maha 2000/01	Profitable	Failed
Maize cultivation	Yala 2001	Profitable	Not continuing
OFC cultivation	Yala 2001	Profitable	Continuing
Gherkin cultivation	Maha 01/02		Failed
Milk cow program	Maha 01/02		Continuing
Basmathi paddy cultivation	Maha 01/02	Profitable	Not Continuing
Peanut cultivation	Maha 01/02	-	Failed

Source: Hussain, I; Perera, L.R. 2004 and Authors' Survey 2009

Maize and Basmathie rice cultivation programmes were profitable at that time, but farmers were reluctant to cultivate those crops. In the case of Basmathi, farmers did not prefer the

cultivation due to low yield and lack of processing facilities though basmathi rice has a higher market price.

3.5 Company Financing and Related Issues

The major objective of the establishment of the FC was to ensure overall economic and social wellbeing of small holder farmers through establishing profitable economic ventures, and to reduce the government expenditures on irrigation system O&M. Farmers income is expected to increase substantially through commercialization and they should be able to invest more on O&M responsibilities.

The FC depended on different sources for income, but was mainly limited to interest income earned from seed money deposited in the bank, the share capital of the investors, the annual irrigation system management allocation (during 2000-2003)), and the profit accruing from business activities.

1. Share Capital

The company has two million shares at the price of Rs 10 per share. The total anticipated share capital of the company is Rs 20 million. Though, shares are an important means of building up the capital, the company does not launch any specific programmes to promote investment among farming community. According to the Annual Report of 2008 of the FC, currently the company has 2285 shareholders with a share capital value of Rs.860,290. The company has attracted 510 and 285 new shareholders during 2007 and 2008 respectively. Without being a shareholder, farmers are unable to obtain the full package of services provided by the company. Therefore the farmers purchase shares primarily for the purpose of receiving benefits from the company activities, but not in the sense of making an investment. The company has declared dividends only in two instances in 2004 and 2005. Majority of shareholders viewed the company as a service providing organization, so they are not concerned about the payment of dividends for their investments and consider the investment in shares as a mere subscription for accessing the services provided by the company.

2. Profit earned from business activities

For the sake of increasing income of the farmers and to earn some profit, the company has initiated more than 25 business activities up to now. Most of them had failed due to improper planning, poor identification of projects and targeting. Failures of business ventures created loss to the company, but since the scale of operation being small, loss was not intolerable.

Agricultural inputs sale, seed paddy production, and group loan programme are the major revenue generating commercial activities undertaken by the Company. The Group loan programme has provided good income to the FC while providing a great service to the beneficiaries.

3. O & M budget received from the government during the irrigation management turnover period

The period of four years (2000-2003) of irrigation system management, the FC saved some money from the O&M allocations provided by ID under the tripartite agreement. The total amount received during the period was Rs. seven million which improved the company's financial liquidity and provided financial strength to the company. When the O&M activities were done by the company by itself, or giving contracts to the Farmer Organizations, costs of those operations were condensed due to reduced overhead costs and high level of farmer participation. Therefore, at the end of the year company was able to save some money from the O&M allocation. At present company has lost this opportunity due to transfer of O&M responsibilities to ID.

4. Seed money provided by the government

At the point of the formation of the company, the government has provided ten million rupees as seed money to facilitate the initiation of business activities. This money had been deposited in a couple of banks as fixed deposits, and the interest earned is being utilized for running cost and the payment of interest for bank overdraft taken under the collateral of fixed deposits. The main issue here is that, the government seed money of Rs. 10 million could be recalled at any time. This would significantly reduce the company income and loss of the bank collateral arrangement.

3.6 Role of Farmer Company Model in Increasing Agricultural Production and Farmers' Income

Lack of access to good quality inputs such as seeds, fertilizer, and chemicals at appropriate time was a major difficulty faced by the farmers in the area. With the formation of the Company, farmers were able to purchase good quality inputs at lower prices from the Company. Company has opened a sales outlet known as 'Green Corner' to market agro chemicals and other inputs with the intention of saving the farmers from the clutches of private dealers. Before this intervention farmers had to buy chemicals at higher prices as marked in the labels of the products on credit from private dealers with the agreement of selling the harvest at the pre determined lower prices. This was indeed a double blow for the farming community. The selling of inputs at lower prices by the company created competitive environment in the input market in the area and forced the private dealers to cut down their profit margins to bring the prices down.

Paddy cultivation in the areas is totally depended on irrigation water. During the FC involvement in water management, farmers also actively participated in decision making process on their cultivation practices and they were able to get timely water supply adequately. Adequacy and timeliness of issuing irrigation water reduced the crop damages and enhanced the productivity. Farmers were able to get higher income by selling non paddy Crops like Green gram, Black gram and Soya Bean. These aspects are further discussed in Chapter 5.

Marketing of the produce at a reasonable price is a major constraint and the FC was involved in solving this problem by creating marketing linkages. The company either directly involves or acts as a facilitator in developing farmers-agribusiness linkages. In poultry and maize production, the company acts as a facilitator in establishing linkages

between farmers and agribusiness firms. The Farmer Company selected suitable farmers from its shareholders and entered into a contract with the agribusiness firm on behalf of them. In the Basmathi and traditional rice varieties production and seed paddy production programmes, the company entered into a market specified contract with a super market chain to market Basmathi and traditional rice. The company also utilized the Agrarian Development Centers to market seed paddy produced by the company. The agreement reached with the public and private sectors helped to eliminate the involvement of middlemen thereby resulting in higher prices for the products.

Another set of activities undertaken by the FC towards improvement of production efficiency was provision of new technologies to farmers. This includes provision of market information to shareholders, capacity building of share holders and members on new techniques of production, conducting demonstrations on new high yielding varieties, and introduction of low cost of cultivation methods and farming practices. Increasing efficiency and productivity via new technology leads to income enhancement of the farming community.

In rural farming community, unless family income is supported by non-farm sources, subsistence smallholder farming alone is not capable of improving livelihood conditions. In this background the FC sought to convert subsistence farming into commercialized farming. The FC initiated diversifying production by introducing value added products and high value crops. Company provided facilities and opened up avenues for farmers to start animal husbandry projects such as rearing milk cows, poultry farming, and ornamental fish production. Farmers devoted time to engage in these types of activities while involved in paddy farming to earn an additional income.

Chapter 4

Performance of the Company in Commercial Activities: Achievements, Drawbacks and Prospects

4.1 Overview of Farmer Company Activities

The involvement of farmer based institutions and the different approaches adopted by them to facilitate farming as well as agri-business activities have been reported in many developing countries (Hussain and Perera, 2004). As such, the RBE Farmer Company has started several business activities using public-private partnership approach aiming to provide integrated services to the farming community in general and the shareholders in particular. According to the FC annual reports of various years, marketing of agricultural inputs, certified seed paddy production, group loan program and basmati rice production (high value marketable products) are the major revenue generating commercial activities undertaken by the company. Other than that, company was also involved in redeeming mortgaged lands of the shareholders, perennial crop development, growing high return vegetables, papaya cultivation, soy bean production and passion fruit cultivation. The company either directly involves or acts as a facilitator in developing farmer-agribusiness linkages.

By and large, the company distributes inputs, provides extension services with the assistance of the qualified extension officers and also establishes linkages for the output market. The company produced branded 'Ridi Bendi' products such as Basmati rice, vegetables seeds and seed paddy, were marketed through the supermarket chain and Agrarian Development Centers. In these operations, the company provides all necessary inputs on credit basis and free extension services to the targeted shareholders.

4.2 Major Business Activities

4.2.1 Group Loan Programme

The group loan programme was initiated with the objective of providing one of the essential services to the members of the company. This loan scheme was commenced in Maha1998/99 season as most prominent activity and it was the core business of the RBE Farmer Company. To obtain a loan under the programme, the member must form a small group for collective responsibility of the repayment as practiced in most of other micro-finance programmes. All loan applications need to be certified and recommended by the member of BOD representing the respective zone of the applicant. The group loan programme has been very useful especially for poor and vulnerable farmers and tenant farmers who find it difficult to offer collaterals in the form of fixed assets and are not well familiar with institutional credit.

This loan programme was mainly targeted to the paddy cultivation programme under the RBE irrigation scheme. At the initial stage farmers had received loans at an average of Rs.2,578 per borrower, but, the average loan size has increased to Rs.5,733 over the years. The credit is delivered in kind (agricultural inputs, mainly fertilizer, agro chemicals and seed paddy) but not in the form of cash. Farmers can buy inputs equivalent to the loan

amount, which is Rs.12, 350 per hectare of paddy cultivation (2003/2004 Maha season) from the main sales center or any of the nine sub-sales centers established by the company in various regions of RBE scheme. The strength of the ‘Collective Personal Security’ method lies in this fact. On the one hand each borrower is made to do the lender’s work by keeping watch on the activities of the rest, and on the other, each borrower has responsibilities to his fellows, with whom he has to live, as well as to the distant and often impersonal creditor. But to maintain that method successfully, clear and correct documentation and monitoring is needed.

The important proposition of the programme was that participants were expected to sell their produce through the company to settle the loan soon after selling the output, but this is not a necessary condition. Therefore, farmers have not always sold their harvest to the company in the past. They were dependent on the open market price twisted by the competition created by the FC in purchasing paddy. However, the selling of the produce to open market make the FC unaware of the amount of harvest and the revenue earned by the beneficiary that has a direct impact on loan repayment. The progress of the group loan programme up to the end of March 2009 is given in Table 4.1.

Table 4.1: Yearly Progress of Group Loan Programme in RBE Farmer Company (recovery rates)

Loans:	2002 March 31st	2003 March 31st	2004 March 31st	2005 March 31st	2006 March 31st	2007 March 31st	2008 March 31st	2009 March 31st
1999 Yala	100	100						
1999/2000 Maha	97	97	97	99	99	99.64		
2000 Yala	98	98	98	98	99	99	99	99
2000/2001	91	92	95	95	95	95	95	99
2001 Yala	97	98	98	98	98	98	98	99
2001/2002 Maha	72	96	97	97	98	99	99	100
2002 Yala		98	99	99	99	100		
2002/2003 Maha		74	89	93	93	98	98	99.7
2003 Yala		98	94	96	96	97	97	98.7
2003/2004 Maha			63	89	90	90	92	97
2004 Yala			88	100				
2005 Yala					51	66	76	93
2005/2006 Maha					27	81	94	99
2006 Yala						95	100	
2006/2007 Maha						47	99	100
2007 Yala							96	99
2007/2008 Maha							90	100
2008 Yala								100

Source: Annual reports, RBE Farmer Company (Various years)

According to the Farmer Company records, farmers repaid their loan installments on scheduled time during the first two seasons of the programme (Maha 1998/99 and Yala 1999). After that the recovery was delayed though the recorded cumulative recoveries in table show higher values in 2009. For instance 45 farmers have defaulted their repayment during Maha 1999/2000, while the recovery rate was only 79 percent on scheduled time as

reported by Esham and Usami, in year 2007. However, the cumulative recoveries of the loan issued in 1999/2000 had reached 100 percent by end of March 2007. Similar pattern is observable in other years as well. The lowest recovery on scheduled time had been recorded as 27% in 2005/2006 Maha season and followed by 47% in 2006/2007. The FC had to make much effort to recover the loan arrears in the following years though the recovery had reached to over 90% in those years. However it is noted that the recovery rates were better in the last two years as indicated in the table 4.1 mainly due to stiff practices implemented by the new management.

The main reason for default or delayed payment of loan as revealed by farmers was low return from paddy cultivation. According to the cost of production analysis, price of paddy in Maha 1999/2000 in Kurunegala district was around Rs.9.00/kg and the cost of production was around Rs. 10,193/ac excluding family labour (DOA, 2000). It should be noted that, during, 1999/2000, there were no fertilizer subsidy programmes and the rice prices were much lower than current market prices. Therefore, high cost of production and low price of paddy had led to lower profit margin of paddy cultivation which could be one reason for high rate of loan default.

According to the FC management, one of the major reasons for the poor loan recovery was attributed to the farmers' expectation that the FC was a service centered organization and the government had supported the activities of the FC. Therefore they expected a loan write off as the government did in the past for agricultural credit in various instances for political reasons. The same line of thinking was expressed during focus group discussions by some of the farmers. As there were no reported crop failures and loss of income during the period under discussion, main causes for the loan default was linked to political and socio-cultural reasons. This is not a novel situation to a country like Sri Lanka. As reported in Asian Productivity Organization (1984) that low credit recovery is an inherent feature in Sri Lanka due to politically motivated Government policies. The similar kind of attitudes on loan repayment under government sponsored cultivation loan programmes had been reported by many past studies (Ratnayake, 1992; Nakamura *et al*, 1997).

The initiatives taken by the FC management in the recent past have helped to reduce the number of defaulters up to 50 and outstanding debts up to Rs.352, 562 which is only 0.77% of the total money disbursed (Table 4.2). FC has initiated legal actions for the default cases appointing a loan recovery officer though it is costly. He has adopted some other strict management procedures in disbursement and recovery. The improvement in loan disbursement and recovery achieved in the recent past is highlighted in Table 4.2.

Table 4.1: Progress of Group Loan Programme

Season	Amount Disbursed	No of Beneficiaries	No of Defaulters	% of Defaulters	Outstanding Balance (Rs.)	% of Default amount
Maha 99/00	961,693	549	2	0.36	11637	1.2
Yala 2000	3,251,584	396	1	0.25	208	0
Maha 00/01	2,233,360	803	9	1.1	61053	2.7
Yala 2001	5,250,563	449	3	0.67	18607	0.35
Maha01/02	3,002,179	823	0	0	0	0
Yala 2002	5,444,000	581	0	0	0	0
Maha 02/03	3,843,584	842	7	0.83	20843	0.54
Yala 2003	7,159,379	436	5	1.14	23808	0.33
Maha 03/04	3,343,988	669	13	1.94	142348	4.25
Yala 2004	4,965,041	97	0	0	0	0
Maha 04/05	828,860	406	0	0	0	0
Yala 2005	665,244	81	4	4.9	49854	7.49
Maha 05/06	2,038,995	162	5	3.1	18315	0.89
Yala 2006	381,985	53	0	0	0	0
Maha 06/07	765,053	114	0	0	0	0
Yala 2007	647,790	68	1	1.47	5889	0.90
Maha 07/08	579,591	72	0	0	0	0
Yala 2008	229,550	33	0	0	0	0
Total	45,592,439	6634	50	0.75	352,562	0.77

Source: Annual reports, RBE Farmer Company (Various years)

Stakeholders' Perception on Group Loan Programme

One of the biggest problems of the peasant farmers in South East Asia and rest of the developing countries is scarcity of capital to purchase inputs, implements and machinery (Jayaweera, 2007). Agricultural credit is the foremost tool used to curtail this problem at varying levels of success. Over 60% of the farmer representatives and the general farmers in RBE believe that, the group loan programme initiated by the RBE farmer company is a successful and a useful activity in meeting their capital demand. In addition, the company is also involved in supplying farm machinery and agricultural implements at reduced rates while transferring new technologies for cultivation through trained extension officers at the field level. These are considered as credit plus services to ensure high return and avert crop losses.

During pre- project period, the private moneylender played a prominent role in the credit market in the RBE area as in other parts of the country. The money lenders provided their services at higher interest rates and rigorous conditions unfavourable to farmers. The similar findings on private money lenders have been revealed by Chandrasiri (2005). Emergence of RBE Farmer Company as a semi formal credit institution eases the credit availability in the area especially for poor and marginalized farmers and also reduces the credit transaction costs. However, most of the farmers (shareholders) believed that the mechanism and procedures adopted by the company in disbursing funds is not systematic and this has led to delayed repayment (Fig.4.1).

There are two main reasons for loan defaults by farmers. These are based on the findings of focus group discussions and key informant interviews. Firstly, the IMD under the

Ministry of Irrigation had made all efforts as government counterparts to establish the FC and the government treasury had provided seed money to activate the company. Therefore shareholders believed that the FC is a government entity though it is a private company legally owned by the shareholders. This misconception was one of the reasons for the loan defaults as farmers expected loan write off similar to the government sponsored credit programmes in the past.

Substandard procedures adopted by the company for the loan recovery is the other reason behind the high rate of defaults. The FC had not appointed a credit recovery personal at the initial stages and also there were number of loopholes in the loan agreement prepared by the company. Some of the agreements were not even signed by the beneficiaries. This was one of the reasons which prevented the company from taking legal action against the defaulters. Failure to take legal action on time was also a management failure of the BOD. More interestingly, of some of the BOD and their close relatives were also in the defaulter's lists. This situation has reduced the motivation of the rest of the beneficiaries from repaying the loan.

4.2.2 Seed Paddy Programme

The seed paddy production programme was another important business activity of the FC second only to group loan programme. The BOD of the FC is responsible for selecting suitable prospective farmers for the programme. The beneficiaries selected for the programme were provided with necessary inputs for seed paddy production on credit basis, but with the agreement of selling the output to the FC. Seed paddy production was seen by farmers as an opportunity to earn higher income with an assured market.

Seed paddy production programme has been continuing with the collaboration of Seed Certification Center of Department of Agriculture (DOA) to maintain high quality. The programme was able to attract the farmers already contracted with DOA seed paddy production programme. Therefore it made a steady progress during the initial stages. The company was able to supply the seed paddy on their brand name "RIDI BENDI" beyond the boundaries of RBE irrigation system to Kurunegala and Gampaha Districts. The drought that prevailed in yala 2008 caused heavy damages to the seed paddy production in a number of Districts including Anuradhapura, Polonnaruwa and Ampara. Therefore the demand for quality seed paddy was very high in the drought stricken districts as well.

But in the later stages, the programme experienced a number of problems. The problems were two fold. One was internal; such as poor planning and improper management of seed paddy stocks and other was externally linked barriers. The main external problem was delays in the certification process of seed paddy by DOA. The internal problems were production of low quality seed paddy by some beneficiaries due to lack of proper guidance and due to failure to meet market need of the seed paddy linked with short vs long grain varieties. The lack of demand resulted in increase of seed paddy stock within FC for long time and this led to sale of stock for rice milling at ordinary paddy price. This situation caused less profit/loss for both the beneficiary farmers and FC. At later stages the FC started to sell seed paddy without obtaining DOA seed certification, but with the company label to avoid the delay in timely supply of seed paddy. The company made an agreement with the seed paddy buyers to replace any poor quality seed with good ones.

Stakeholder Perception on Seed Paddy Production Programme

It was revealed during the focus group discussion held with farmers and FO representatives that, the seed paddy production programme implemented by the FC was not fully successful (Fig.4.1), mainly due to improper procedures adopted both in selection of beneficiary farmers and mechanism used to purchase seed paddy to the company. One of the FO officials said that, as the seed paddy production programme was a very profitable enterprise and good source of reliable income, the beneficiary selection was mostly influenced by the BOD. The relatives and friends of BOD usually received priority in the selection process rather than an entrepreneur farmer. Another criticism broadly forwarded by the farmers about the programme was sub standard quality of seed paddy sold by the company (low germination percentage and higher percentage of inert materials). The reasons for the outcome as perceived by the beneficiaries were selection of inexperienced farmers and purchase of low quality seed paddy due to the influence of members of BOD. However, FC Officials claimed that, lack of funds impeded them from buying all the seed propagated by the seed paddy farmers and farmers had to sell part of their seeds as ordinary paddy. But the farmers stated that the FC was buying seed paddy from their relatives and friends irrespective of checking quality of the product. It is clear from the analysis that FC lacks clear transparent mechanism in seed paddy production programme in both selection of beneficiaries and purchasing of seed paddy stock. The final outcome is the discouragement for the shareholders about the FC resulting in reduction of participation of shareholders in the company activities including attendance at the AGM.

4.2.3 Supply of Agro-chemicals and Fertilizer

The company commenced fertilizer and agro-chemical business in Yala 1998. Farmers had to pay the price for the agro-chemicals as marked in the product label in the past. The FC successfully developed the business linkages with some leading agro chemical and fertilizer suppliers in the country and was able to cater to the inputs needs of the entire farming community in the area at reduced prices than label price of products while keeping a profit margin for the FC. The engagement of FC in the input supply market created a competitive market condition among the private dealers in the RBE area. Therefore, the private dealers had to reduce the prices in accordance with the new market developed by the FC to survive in the business. Therefore farmers started to receive benefit from private dealers as well due to the action taken by the FC in reducing fertilizer and agro-chemical prices.

Until 2005, the fertilizer market of the country was mainly controlled by the private sector and there was lesser stake for the state. Nevertheless the role of government became much prominent with the government fertilizer subsidy programme introduced in 2005 for paddy cultivation. Fertilizer subsidy was primarily channeled through the respective Agrarian Development Centres (ADC) to the farmers including RBE. However, the responsibility of distribution of subsidized fertilizer in RBE was entrusted from ADC to the FC after couple of seasons. The company was able to provide expanded services in fertilizer distribution by transporting the fertilizer to respective villages using part of the FC commission income earned by the fertilizer distribution programme. The provision of transport for fertilizer to respective villages was an added service provided by the FC to the beneficiaries. The service has been open to the entire farming community of RBE irrespective of the company membership. Over 90% of the farmers appreciated the service

provided by the FC in fertilizer distribution as it had reduced the transaction costs and also helped to save the farmers' valuable time. The farmers perceived that they had experienced number of difficulties in receiving subsidized fertilizer during the supply handled by the ADC such as finding transport, additional expenses incurred for transport, labour time for visiting ADC and queuing up to receive the fertilizer, and accept the rigid time frame given by the ADC to receive fertilizer.

According to the views of company officials and FO members, after losing the authority of FC to control irrigation water, fertilizer subsidy programme is the only major activity at the moment that has made farmers dependent on the FO and the FC and keeps the shareholders connected to these village level institutions.

The prices of some of the agro-chemicals marketed by the FC at the moment are comparatively higher as perceived by the farmers and confirmed by the FC officials. It was revealed during the key informant discussions held with company officials that, the current liquidity problem in the company is not allowing the purchase of all the agro-chemicals on cash payment to qualify for high discounts. The FC purchased some selected products on credit basis at lower discounts, and some products on cash payment at high discounts. Therefore the FC is not in a position to reduce the prices of all products to a significant level unlike they did in the past. Nevertheless the existence of FC and its involvement in the agro-chemicals sales have helped to reduce the market prices of the agro-chemicals in the area. This is a positive aspect of the FC which brings benefits to the farming community.

4.2.4 Redemption of Mortgaged Lands

A loan programme was initiated by the FC to redeem the mortgaged paddy lands of the members. Under this loan programme, farmers who were unable to repay the debt to redeem their mortgage lands were given a loan. The company redeemed these lands on a lease agreement signed with the borrower. He had to repay the loan in six seasonal installments at an interest of 24 percent per annum. Redemption of mortgaged land programme commenced in Yala 2000 and was very successful. The programme was a big relief for the farmers to get back their mortgaged land for cultivation. The programme is not continuing today due to lack of funds.

4.2.5 Animal Husbandry

Poultry farming under the out growers scheme was the most prominent livestock activity launched by the FC under animal husbandry category. This programme was implemented with the collaboration of a leading private company engaged in the poultry industry. The FC provided a loan to the selected beneficiaries to purchase equipments and to construct poultry shelter. The FC also made arrangements with the People's Bank to provide credit facilities for the participating farmers to cover initial expenses. The private company provided day old chicks, poultry feeds, medicines and other nutritional supplements and the necessary technical advices. The FC played a facilitator role in selection of suitable beneficiaries for the programme and in negotiating any problems between the private company and beneficiaries. The FC received a service charge of one rupee for each kilogram of chicken marketed to the private company.

Initially, there was a higher level of interest among shareholders to participate in the poultry production programme, but, due to financial constraints a limited number of beneficiaries were selected. However, the FC records show that, number of farmers involved in the programme had declined over the years. The major reason for the situation as revealed by the farmers was drawbacks existed in the facilitating role provided by the FC. Also, farmers said that after two to three seasons profit margin was minimal or negative. In the mean time, the price of poultry feeds had risen at a higher rate without proportionate increase in the price of poultry meat. This was a difficult situation to cope up by small scale poultry producers. In fact, it was a common problem faced by the small scale poultry producers all over the country.

There are some other reasons which caused farmers to abandon this business of poultry farming. Some of the farmers complained about malpractices of the buyer (Poultry Production Company) at the point of weighing of live birds. The weighing process was not transparent as the live birds were weighed by the buyers in their industry premises and not at the farm gate. Farmers believed that the buyers under weighted live birds causing heavy losses to them. The main concern of the farmers was that as the FC received a commission of one rupee from each kilo, they failed to negotiate with the private buyers to solve this problem. According to the farmer perception this was the main reason for the failure of the poultry production programme (Figure 4.1).

However, credit programme for poultry farming also had faced heavy defaults similar to the experiences in recoveries reported in group loan programme. As a result, company had remained as a facilitator without being engaged in providing credit directly to poultry farming. Farmers themselves had made arrangements to obtain loan facilities from banks and from other sources like private moneylenders.

Other than poultry farming, the FC had initiated dairy cattle rearing project, and projects of ornamental fish and inland fisheries. But, the programmes launched by the company on the livestock sector had to be abandoned within a short time due to improper planning and poor intervention of the company.

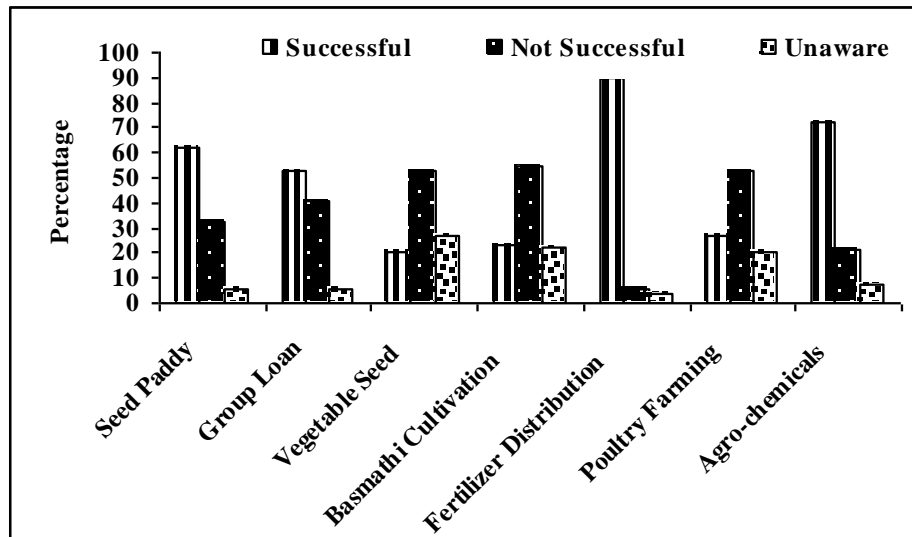
4.2.6 Other Business Activities

The FC had started number of business activities from time to time, but they were short lived due to non profitability and the defaults. Some of the activities started by the FC were cultivation of Soybean, Papaw, vegetables, perennial crops, white sesame, Gherkin and passion fruit and curd making, and coconut sapling distribution. Soybean cultivation was promoted under the forward contract agreement with plenty Soya Ltd among eight farmers in a total land extent of 12 acres. Papaw cultivation was implemented with the support of the Kelani Valley Canneries Ltd among 17 farmers in a total land extent of 15 acres. At the initial stages, these programmes had shown some success but none of them had continued for more than two consecutive seasons. The cultivation of Basmathi and traditional rice varieties (*Rathhal, Suvandal, Madaval and Kaluveenati*) and rice milling industry were continued until recently, but that programme was not functioning at the time of survey.

4.2.7 Review of Business Activities

The major weakness of the implementation of the business activities was lack of proper business plans and non identification of feasible projects. The company had received wider experiences by now and had learned lessons in planning, initiating, managing and sustaining a range of business ventures. It is appropriate for FC management to review the past experiences and prepare appropriate business plans for benefit of the both farming community and the company.

Figure 4.1: Beneficiary Perceptions on FC Business Activities



Source: Author's survey data, 2009

The farmers are not investors in the same sense as urban entrepreneurs who engage in trade. Normally, subsistence farmers prefer to avert risks as his stock-in-trade is fixed and his options are limited. Farmer's behavioural and attitudinal problems towards formal credit may be due to politically biased policy decisions like the periodical waiver of loans, and their inability to reach credit sources easily for emergency needs. Owing to the past experiences, the FC had made several adjustments and had adopted rigid procedures in disbursing group credit.

However, past political decisions that turn agricultural credit programmes into a grant or subsidy had an adverse impact on the recovery of loans. The treatment of regular payers and errant payers of loans equally has been a great disincentive for the regular payers. Therefore priority or special incentives should be granted to beneficiaries who pay the installments regularly in new programmes.

The company management staff has used the public money allocated for the company to launch several activities but many have failed as discussed above due to lack of planning and priority determination. Most of the activities unsuccessful had failed to meet the aspirations and interests of the farmers.

The company had failed to pay proper attention to financial control and record keeping of its business ventures. Even to date the FC lacks sufficient information, operational data and accounts details on the individual enterprises in order to conduct an accurate business evaluation.

Chapter 5

Performance of the Farmer Company in Irrigation System Management

5.1 Tripartite Agreement for Irrigation Management

Transfer of O&M responsibilities to the FC was one of the important activities listed in the project concept note prepared by Irrigation Management Division for public-private partnership arrangement at RBE scheme. As water is the main input affecting the livelihood of the farmers in the major irrigation schemes, use of water at optimal level is crucial for achieving the expected goal of the project in improving agricultural production and enhancing household income levels. The management of RBE scheme from head system to primary canal system (main canal system) was the responsibility of Irrigation Department, while FO's were responsible for O&M of secondary and tertiary canals (DCs and FCs) until 1999/2000 Maha.

In February 2000, the management of RBE scheme below the main sluices of Magalla tank was transferred to FC. The ownership of the RBE tank (Magalla wewa) and operation of the main sluice remained the responsibility of ID. The O&M responsibility of main system and monitoring of O&M work undertaken by FOs below main system in a major irrigation scheme was transferred to a non-government body for the first time in the history of Sri Lanka through a formal tripartite agreement. The agreement was signed between GOSL represented by the Director General of Irrigation Department, the System Level Farmer Organization (SLFO) in RBE scheme and Ridi Bendi Ela Govijana Vidhana (Peoples) Company Limited (FC).

The agreement paved the way to transfer the management of the irrigation infrastructure including all assets below the main sluices in RBE scheme to SLFO for a period of three years starting from Yala 2000. The SLFO had to accept the custody of the irrigation infrastructure and manage, adopt all measures and procedures necessary to maintain it, and protect and safeguard assets with the assistance of the RBE Govijana Vidhana (peoples) Company Limited. The details of the roles and responsibilities of each party are given in the annexure 1.

5.2 Performance of the Irrigation Management Model under the Public-Private Partnership

5.2.1 Pre-project Water Management

During the pre-project times, the ID through IMD was responsible for O&M of the main and secondary canal system while farmer participation was obtained in system O&M at field canal levels. There were no fulltime staff including IE and other technical staff for the RBE scheme alone, rather they were responsible for a number of other schemes in the Nikawaretiya IE's region. Although water was supplied to the whole area in *maha* seasons, it was limited to two thirds of the command area in most of the *yala* seasons. In other words about 2000ac of land area was left fallow in *yala* seasons. The entire command area had been divided into three parts with almost similar extents. They are right bank (RB) canal area without its main branch, the RB branch canal area, and the central canal (Meda ela) plus LB canal area plus 900 acres irrigated land under feeder

canal. The each part had to abandon the *yala* cultivation once in three years. Therefore, the approximate annual cropping intensity was close to 1.66.

Under the PIM policy, O&M responsibilities of main canals were handled by ID. As there were no DCs in RBE, field canals were formally handed over to FOs. However, the FOs used to receive sub contracts from ID in the form of seasonal maintenance allocation to clean and de-silt the main/branch canals. The savings of the ID maintenance contracts were used to raise FO fund which was utilized for structural repairs in field canals demanding cash investment.

The rotational water issue was handled by '*Jala Palaka*' (JP) (water master) appointed by ID at main canals and the JP appointed by the respective FOs at field canal levels. A seasonal planning meeting was held prior to the commencement of cultivation in every season with the participation of government officials. The meeting made decisions on matters like date of first water issue for land preparation, date for sowing, crops and varieties to be cultivated, tentative calendar for rotational water issue, and last date for issuing water. The progress of water schedules were discussed at project management committee (PMC) and sometimes were rescheduled depending on the availability of water. The decisions made at PMC were discussed at FO level to make farmers aware of the decisions. Water management at field canal level was highly dependent on the water issues made from main canals by the ID appointed JP and therefore there was limited flexibility in water management by FOs. In an average wet season, almost all farmers usually received sufficient amount of water, but in dry seasons many farmers had to abandon their cultivation or experience crop losses. According to the baseline survey report of RBE scheme conducted in 1997, about 69% of farmers in *yala* and 37% of farmers in *maha* had received less water than their requirement (HARTI, 1997). The head-tail disparity in water allocation was reported by the farmers in pre-project situation; especially head-end farmers had preferential access to water resources and had greater access to water than required amount for cultivation, but at the expense of tail-end farmers.

There was no equality and reliability in water supply, for tail-end farmers. Therefore they did not maintain tail-end areas and this led to deterioration of infrastructure. There was no fee payment system by farmers to undertake O&M by FOs.

5.2.2 Efforts to Improve Water Management

Under the tripartite agreement, the responsibility of O&M below the main sluice was transferred to the FC through SLFO. The company recruited its own staff, a qualified irrigation engineer (IE) as a water management specialist and three *Jala palakas* (JP). All these technical staff were assigned only for the RBE scheme. The IE was provided a motor cycle for field visits regularly which minimized the transport cost involved in the supervision activities. It was expected that the irrigation infrastructure was operated by the FC to keep the system in good operating condition while delivering adequate water in time for the benefit of farmer community. The FC had attempted to improve the condition of infrastructure from O&M allocation and they had once utilized machinery to de-silt the branch canals which was a long felt need.

The FC had made several initiatives to save water and thereby increase cropping intensity. The first initiative was to diversify crop cultivation from water intensive paddy crop to

less water consuming cash crops especially during *yala* seasons. The company had provided seed materials, training, demonstrations and other necessary technical advices to undertake non-paddy crop cultivations (NPC). Although some entrepreneurial farmers had made some investment in NPC, the market had remained uncertain for widespread cultivation of NPC. Further, the cultivation of small extent of gherkins and some other vegetables did not make any significant impact on saving of water.

The FC had paid greater attention in providing adequate amount of water in more reliable and timely manner to the farming community. The company had taken trouble to ensure the issue of water to as many farmers as possible in dry seasons. In *yala* 2001, the company had introduced some new ideas and practices to improve the water management. The water distribution patterns became more predictable and reliable and water levels in the canals were maintained at steady levels depending on the stage of the crop growth and scheme topography. Farmers who were in the fallow areas in the respective dry season were promised a supply of limited amount of water to cultivate non paddy crops. This process was started by issuing water two weeks prior to seasonal water issues to NPC cultivation in the fallow areas. This was one of the significant achievements of the company water management team. Obtaining farmer consensus at the 'Kanna meeting' to issue water for OFC cultivation in the fallow area was remarkable as farmers tended to oppose such proposals earlier. The extent of NPCs cultivated area before the FC intervention was less and it had been 15-20 ha during 1999 and 2000 *yala*. The FC succeeded in increasing NPC extent up to 150ha during *yala* 2001 and it was further increased to 325 ha in *yala* 2002. The increase in crop extent achieved in dry season was largely attributed to improved irrigation distribution, reliable water supply and water saving efforts of the FC.

The FC had taken another step in *yala* 2001 in issuing water one week in advance of earlier scheduled date. The traditional method of land preparation leading to consumption of high level of water estimated to be one third of total seasonal water requirement had been extensively discussed at the seasonal meeting. The major reason for the extended period of land preparation was scarcity of machinery and labour to undertake land preparation in the entire scheme concurrently. Therefore the company had proposed and implemented another innovative strategy by dividing the irrigation command area into zones to split the issue of water and had commenced the early issue of water in late March for land preparation instead of early April. These actions had been useful in saving reservoir water for later stages of the crop as farmers got the opportunity to fulfill the part of water requirement for land preparation utilizing rainwater.

Mid season cultivation of NPC was started in 2001 for the first time using available water in the reservoir with the continuous inflow from Deduru oya. The extent of mid season cultivation in 2001 was 48.58 ha and in 2002 it was increased to 60.73 ha. This was a new experience for farmers, which was possible purely due to trust built on the company's water management activities and the constant guidance and the extension supports given to farmers on NPC cultivation. According to Hussain and Perera (2004), most of irrigation problems such as inadequacy of water, unreliability of water, water stealing and violation of water rotations, water wastage and structural problems had shown a marked decrease after undertaking irrigation management responsibility by the FC. Farmers were ready to accept the risk of cultivating their traditional fallow land by placing confidence on the water management ability exhibited by the FC.

5.2.3 Impacts and Outcomes

The impacts and outcomes of the FC involvement in water and irrigation facility management were measured using quantitative and qualitative techniques. Tank water duty, cropping intensity, extent of dry season cultivation and crop diversification were used as indicators for the assessment.

5.2.3.1 Tank Water Duty

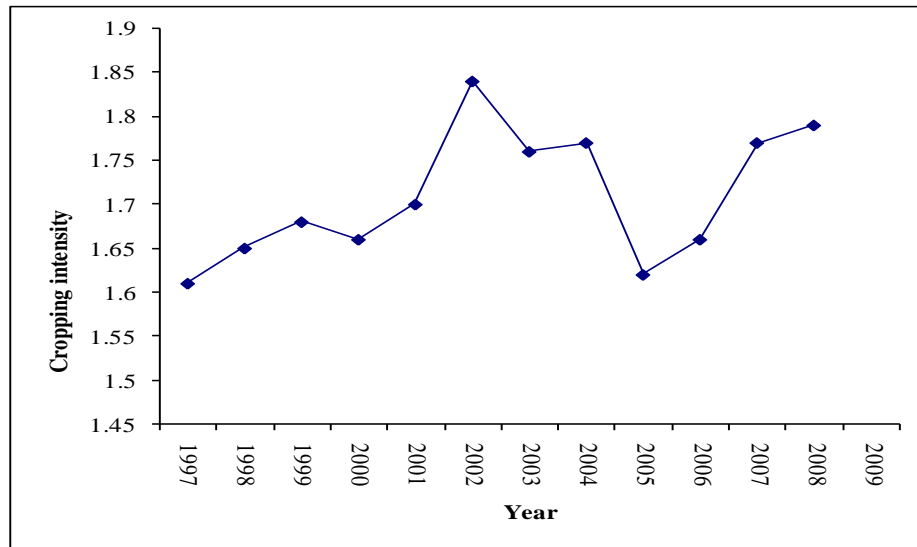
The data on tank water duty in recent years is not available in the relevant agencies. According to the farmers and officials, the past tank water duty was over 5 ac.ft, but, during the company involvement periods (2001-2004), the duty was reduced to 3 to 3.5 ac.ft. The records on water duty show increase in water use after post company irrigation management period. For instance the water duty in *yala* 2007 and 2009 was recorded as 5.5 and 4.24 ac.ft respectively. The close supervision of the water issues up to filed canal levels including on-farm water management, proper irrigation scheduling, timely maintenance of channels, easy access to irrigation management staff seven days a week irrespective of day or night, collaboration existed among the FC appointed *Jala palaka* in sharing responsibilities, proper operation of gates and reduced damages to channel system were major reasons for the reduced water duties. It was reported that, the country-wide drought which prevailed in 2002, caused massive crop damages all over, but the FC had managed to issue water very efficiently and was able to save the crop cultivated in the RBE scheme. This is evident from the extent cultivated and extent harvested as given in records maintained by the both FC and the Nikawaretiye Irrigation Engineers' office.

5.2.3.2 Cropping Intensity

Cropping intensity data maintained by Project Managers' office of RBE scheme shows an upward trend during the period of management of the scheme by the FC (2000-2004) as illustrated in figure 5.3. The major fact to be considered is that, although 2002 was a drought year the scheme had recorded highest cropping intensity without any reported crop failures commonly occurring due to water shortages. However there were drought related crop failures in many places of the country during this period. The tribute for this achievement must be paid to the efforts of the water management team of the FC and also good cooperation provided by the ID. The success in introducing mid season crop, increased extent in dry season cultivation and reduction in head tail differences in water allocation are the major factors which had led to increased cropping intensity.

The figure indicates a sudden drop in cropping intensity after 2004 with the management transfer from FC to ID, but it has been recaptured slowly in subsequent years. According to FO officials, the capacity built among farmers by FC and the efforts taken by ID officials in managing water had helped them to manage the irrigation water more efficiently and increase the cropping intensity.

Figure 5.3: Trend of Cropping Intensity



5.2.3.3 Extent of Dry Season Cultivation

The company management had paid more focused attention to ensure supply of water to as many farmers in dry season through a set of agreements after a great deal of dialogue between different FOs. The management had taken action to restrict the unauthorized cultivation in the upper parts of the feeder canal by seizing the water tapping hose pipes and other equipments in order to increase the inflow into reservoir although FC had little leverage on this issue. This action was very well appreciated by the RBE farmers especially due to its positive impact on dry season cultivation. Figure 5.4 illustrates the trend of the percentage extent cultivated in dry seasons during last two decades. The figure indicates a slight increase of extent during the company managed period of 2001 to 2004. Most importantly the trend continued even after 2004 indicating the changes in the behaviours and attitudes of farmers in their traditional ways of activities in cultivation. The farmers in the area were motivated to cultivate NPCs in dry seasons, which show an increasing trend after 2000 as indicated in table 5.1. Cultivation of NPC had continued after the end of FC involvement in water management. That appears to be a permanent change which had taken place due to involvement of FC.

Figure 5.4: Percentage Extent Cultivated in yala Seasons

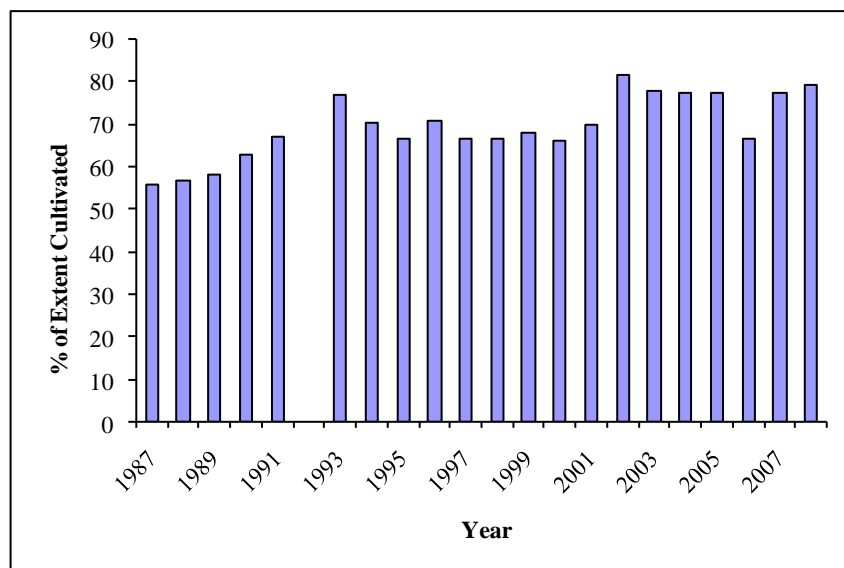


Table 5.1: Cultivation of Non-Paddy Crops

Year	Cultivated Extent	
	<i>Maha</i> (ha)	<i>Yala</i> (ha)
1988	8.10	156.28
1989	13.36	181.38
1990	13.36	111.74
1991	4.45	3.64
1992	6.88	0.00
1993	2.83	145.75
1994	0.00	88.26
1995	8.91	0.00
1996	0.00	67.61
1997	4.05	0.00
1998	3.24	42.51
1999	8.10	35.63
2000	16.19	0.00
2001	29.15	131.58
2002	0.00	323.89
2003	0.00	182.19
2004	0.00	268.02
2005	0.00	259.92
2006	0.00	237.65
2007	0.00	263.15
2008	0.00	303.64
2009	0.00	400.80

Source: Data maintained at Project Manager's Office, Ridi Bendi Ela

5.3 Beneficiary Perception on Role of Farmer Company in Irrigation Management

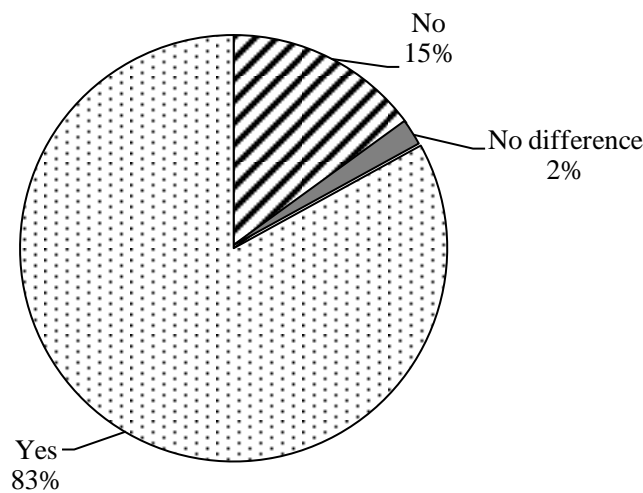
Perceptions of FO representatives on company performance in water management, quality of irrigation system maintenance and the structural repairs undertaken in handed over irrigation channels were obtained and the results are shown in table 5.2 and figures 5.1 and 5.2. The majority of the beneficiary representatives were well satisfied with the FC performance in water management, system maintenance and the quality of structural repairs undertaken. According to findings, the majority of the people who were not satisfied with the performance of FC in water management and system O&M belonged to head end areas of the scheme. For instance, 80% and 100% of the non-satisfied FRs on water management and provision of irrigation water adequately in time respectively were from head-end areas. In contrast, almost 100% of FRs representing tail-end FOs (Tharanagolla, Heelogama and Divullewa) were satisfied with the FC water management performance and provision of adequate quantity of water on time. These findings indicate the loss of inequitable access to water formerly enjoyed by the head end farmers after involvement of the FC in irrigation system management and increased assurance of water for tail-end farmers.

Table 5.2: Performance of Farmer Company in Water and Irrigation Facility Management Compared to Pre-hand over period (% of Farmer Representatives Responses)

	Performed well	Performance was not good	No Difference	Not Aware
Water management	75	21	2	2
Irrigation System maintenance	69	29	2	-
Quality of structural repairs	83	15	2	-

Source: Authors' Survey data

Figure 5.5: Did the Farmer Company supply adequate amount of water on time compared to pre-hand over period?

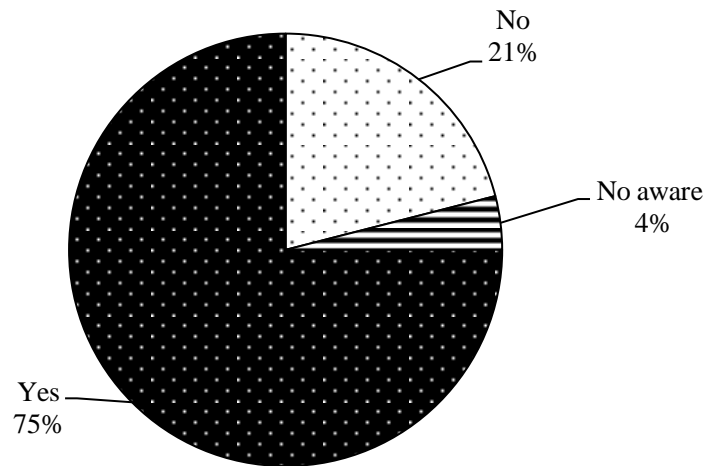


Source: Authors' Survey data

It was expressed in the group discussions that the FC was flexible in implementing the seasonal water management activities. It was possible for the company with less rigid procedures and rules and without much bureaucratic procedure. FC water management team had instantly responded to the water management problems and the disputes and had solved them amicably. Rotational water issues were very systematic. The water management team was ready to provide uninterrupted services irrespective of day or night and week days or week ends/holidays. Supervision of the officials had gone beyond the distributory canals up to farmers' individual farm plot though the team was very small and had limited transport facilities.

The 'Water Masters' appointed by the company were requested to undertake routine maintenance of the canals during their off days. The company also had invested in purchasing expensive herbicides to kill the weeds which were difficult to remove manually (example: Sedges) and were obstructing the irrigation channels. These chemicals were applied by the water masters during their off days. This is one of the examples which illustrate how the company had utilized their limited manpower for the best use of irrigation system maintenance.

Figure 5.6: Did the Farmer Company obtain farmer's concerns in determining seasonal crops for cultivation?



Source: Authors' Survey data

The FC had not only obtained farmer's consents in determining seasonal crops, but also had provided free extension services and established private sector linkages for input supply and marketing the outputs.

Chapter 6

Findings and Policy Implications

6.1 Major Findings

6.1.1 Business Model Perspective

The RBE Farmer Company has been functioning in the area with ups and downs in their performance during the last nine years. The company has made several development and business oriented initiatives at various levels of success to achieve two of its primary objectives- diversification of smallholder agriculture and enhancement of household income.

The company was at its best during the period of handling irrigation management responsibilities from 2000-2003 and had provided benefits to the entire community irrespective of FC membership. Irrigation performance indicators and the beneficiary responses clearly indicate the superior water and irrigation management system by the FC in the pilot area during its tenure, even during drought stricken seasons. Handling of irrigation responsibilities had given strengths to the FC providing financial vigor, establishing farmers trust on the FC and keeping the beneficiaries intact with the company. The involvement of the FC in providing inputs (fertilizer and agro-chemicals) had created a competitive market leading to price reduction and availability of quality inputs in the market. This competitive environment is continuing even today, and it is one of the reasons for the acceptance of FC by the farmers in spite of the losses incurred.

The company had achieved great success in water management during their management period. Reduction of water duty from over 5ac.ft to less than 3ac.ft and minimizing head-tail differences and conflicts in access to water are notable achievements of the FC. These had helped to increase the extent of dry season cultivation, crop productivity and farmers' income. The supports given by IMD, and competent Water Management Specialist hired for the project had contributed to this success. However it is not certain whether the same levels of operation of the scheme will prevail if the technical staff, especially Water Management Specialist hired by the company changes. Finding competitive and committed technical staff will be a crucial challenge to the company. Therefore, four years can be considered a comparatively shorter period for an enterprise to establish itself and make judgments on the ability of the company to operate the irrigation scheme independently.

Group Credit programme has been a great service to the farmers. It has provided easy access to credit and also been a source of income for the FC both in terms of interest income and income from sales of input (in kind credit). However, misuses of the credit facility by some of the officials attached to the FC management and lack of specific criteria for selecting creditworthy customers were main reasons for default of loan and delays experienced in repayment. The provision of credit to tenant farmers and agricultural labourers were main concerns of the beneficiaries in terms of creditworthiness. However, as the tenant and agricultural labourers have the right to acquire FC membership under present farmer company constitution; company management cannot totally reject loan requests of these groups, unless it changes the membership recruitment criteria.

Various business activities were initiated by the company on trial and error basis with little analysis on feasibilities and market potentials. The company has not adopted a systematic, transparent approach in formulating business plans for commercial activities. None of the stakeholders had any clear vision or strategic plan for sustainable commercial activity development. This has resulted in failures at a number of projects and has increased company debt. Of course, the company debt has increased due to variety of other reasons such as default of shareholders, poor business decisions of the management, corruption and malpractices and increase of legal expenditures connected with loan defaults. The business model adopted by the company has been highly dependent on external funds and is one of the factors which discourage farmers from active participation in the business planning activities and weak sense of ownership of shares. Lack of business plans and the resultant losses experienced by the company have led to liquidity problem. This has limited the company activities designed to provide integrated services to the farming community such as group loan programme and input supply.

6.1.2 Institutional Perspective

The IMD as the implementing agency of the FC pilot project has provided continuous support. The IMD officials had taken keen personal interest in the entire process and had remained committed until the company was able to stand alone but in later stages, apparently the company has failed to stand alone. The process adopted in the formation of the company was very systematic and effective in convincing all stakeholders on the proposed commercialization concept. The open and transparent awareness campaign implemented by using various tools such as personal contacts, group meetings, workshops and media conferences had been successful in mobilizing people and in avoiding any unwarranted resistance. Officials of IMD and ID had been very active in promoting FC activities. The strong institutional setup and the backing provided by the line agencies is one of the main reasons for the success achieved in irrigation management responsibilities handled by the FC. The IMD had enough committed individuals and sufficient financial allocations to provide adequate support for the pilot experiment. Therefore any replication of this model needed to critically analyse the strengths, weaknesses, commitment and energy of the line agencies and the available staff in the relevant locations toward implementing this concept. Efficient irrigation performance was achieved in very brief period of four year of turnover under strong government support and financial backup. Therefore, it is difficult make any firm conclusion about the future outcome of the FC in irrigation system O&M without such supports. However, the achieved results clearly demonstrate the potential of the irrigation system in improving water use efficiency and enhancing agricultural productivity.

Even though the company had continuous losses during the last five years, 92% of the farmer representatives and majority of the participants of the focus group discussions reiterated the need of the FC in the area and its positive contributions in providing integrated services to the farming community. The FRs who rejected the need of the FC were mainly (75%) non-shareholders. Purchase of shares from the company by 775 new members during 2007 and 2008 further indicate the important role played by the company, despite the losses incurred on the investment made. The FC has been successful in the role of being the professional arm of the SLFO. However the major question is what are the costs in developing and maintaining a company of this nature to accomplish the benefits?

The company has by and large depended on external funds and public money to experiment and launch various activities, but businesswise most of them have failed.

Although farmers emphasized the need of a FC in the area, the majority of shareholders have been away from active participation of FC activities. The number of shareholders participated at the AGM has decreased until 2008, and the maximum participation was recorded as 886 in 2002, out of around 1500 shareholders. The number of participants in 2008 AGM was just 65 out of 2300 shareholders. Some of the major issues raised by shareholders for their decreased interest in participation are lack of transparency in company activities and corruption and malpractices by some of the company managers. The shareholders are unable to understand the accounting procedures and the terminology used in the annual accounts submitted to the AGM. Many people are suspicious of the use of O&M allocation given by ID to the FC during 2000-2004 and also other transactions made by the company with private sector organizations. One of the reasons for the situation as highlighted by the beneficiaries is that, non-recruitment of suitable persons to manage the company. There were occasional conflicts between shareholders elected as company directors and externally recruited management staff. This conflict has been seen as the conflict of knowledge of management staff and power entrusted to the BOD. The BODs lacked knowledge to counter or negate the unsuitable proposals forwarded by the managers at BOD meetings. On the other hand the managers were obliged to support nepotism of BOD in providing or prioritizing company services, especially in selecting beneficiaries for the FC sponsored business activities such as purchasing seed paddy and providing credit facilities.

The above negative facts have pushed the shareholders to lose the trust on the FC. Most of the activities undertaken by the company after water management functions were withdrawn by ID, were not directly beneficial to the farming community except seed paddy programme, group loan scheme and supply of fertilizers. The energy and efforts put forward to business activities such as packing of tea, rice milling, ornamental fish production and poultry farming were seen as waste of time and resources as they were not considered as important by the community. These activities have failed due to lack of planning. This phenomenon again shows the top down approach of the company in making important business decisions.

6.2 Policy Implications/ Recommendations

1. The government should experiment with the concept of complete irrigation management implemented in RBE in some other sites to assess the appropriateness of the model and find out the suitability to bridge the gap in resources allocation for sustainable irrigation system management. A more detailed analysis is needed to assess the farmers' willingness to pay for improved irrigation services in the light of RBE experiences. To carry out an experiment of this nature, there has to be strong policy support. Otherwise the experiment will fail and the whole concept of FC will be considered a failure, though the problem lies with the policies.
2. O&M handing over was to ensure reliable water supply to farmers so that their productivity is maintained. It appears that this activity has been reasonably successful. In the case of O&M, there has to be government support in policy, technology and finances. Commercialization has to be sustainable in the long term without government financial support, but with policy support.

3. The Farmer Company in RBE is a social capital and a service arm for providing integrated services to the beneficiary community, but most of the business activities have failed under the current business model.
4. The government should play an important role in the case of replications of this model to ensure adequate financial controls and procedures from the initial stages of the operations. This should be supported by providing necessary orientation and capacity building for BOD and other company staff on principles of financial control, record keeping and evaluation.
5. Shareholder participation in FC activities must be increased by designing better communication system with shareholders, building trust among shareholders on company, ensuring shareholder representations and incorporating shareholder's interests in preparing business plans.
6. Activities of FC should be guided and closely monitored with an advisory body appointed from senior government officials such as District/ Divisional Secretary, Irrigation Engineers, provincial Director of Agriculture and project manager of IMD.
7. Priority should be given to locally available professionals/retired qualified government officers in selecting GM and other technical staff.
8. Communication barriers between company management and the shareholders should be minimized by avoiding use of technical jargons in day to day activities as well as the AGM.

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Annex 1

Government of Democratic Socialist Republic of Sri Lanka
Memorandum of understanding for
Participatory Management of Ridi-Bendi Ela Irrigation Scheme
MOU No: IMD/RBE/001

This Tri-Partite Agreement is among (a) the Government of Democratic socialist Republic of Sri Lanka, represented by the **Director General, Department of Irrigation** and his successors as the first party, (b) **System Level Farmer Organization in Ridi Bendi Ela Irrigation Scheme** and their successors representing all farmers benefiting from the irrigation system under **Ridi Bendi Ela Scheme**, and (c) **Ridi Bendi Ela Govijana Vidhana (Janatha) Company Ltd**, and their successors representing providers of system management services.

1. WHEREAS the Government of democratic Socialist Republic of Sri Lanka (herein after called the Government), had provided the total financial investment for the development of the irrigation infrastructure in **Ridi Bendi Ela Scheme** (herein after called the Scheme) and owns the irrigation system and desires to improve the benefits of the investment and ensure the sustainability of the irrigation infrastructure by participatory management of the system.
2. Whereas the Government of Sri Lanka has vested with the Department of Irrigation (herein after called ID), the authority to represent the government, adopt all measures and procedures to nurture, protect and safeguard assets of the irrigation infrastructure in RIDI BENDI Ela Scheme, described in Annexure I-A, to the best interest of the Government and the beneficiaries of the Scheme. The Irrigation Engineer Nikaweratiya (Herein after called the IE) will represent the Director General, Department of Irrigation.
3. WHEREAS the Government in Conformity with the irrigated agriculture policy, desires to transfer the management of the irrigation infrastructure including all assets described in Annexure I-A to this agreement, below the Head-Works in **Ridi Bendi Ela Scheme, for a period of 36 calendar months from the date signing this agreement, to the System Level Farmer Organization in Ridi Bendi Ela Scheme.**
4. WHEREAS the System Level Farmer Organization in Ridi Bendi Ela Scheme (herein after called the SLFO) accepts the custody of the irrigation infrastructure, including all assets described in Annexure I-A to this agreement, in **Ridi Bendi Ela Scheme** below the Head-Works from the **IE Nikaweratiya** and manage the Scheme with the assistance of **Ridi Bendi Ela Govijana Vidhana (Janatha) Company Ltd**. SLFO will ensure the safety, proper operation and maintenance of the irrigation infrastructure.
5. WHEREAS **Ridi Bendi Ela Govijana Vidhana (Janatha) Company Ltd** (herein after called the Company) shall undertake to assist the SLFO to manage the irrigation infrastructure in **Ridi Bendi Ela Scheme** below the Head-works and provide other necessary services for sustainable management of the **Ridi Bendi Ela Scheme**.

6. NOW WITNESSETH AS FOLLOWS:

- i. IE as the overall custodian, shall fulfill the responsibilities of providing services and facilities as described in Annexure II of this agreement
- ii. SLFO shall fulfill the responsibilities described in Annexure III of this agreement to the membership and the IE
- iii. The Company shall fulfill the responsibilities described in Annexure IV of this agreement to the SLFO and the IE
- iv. Any conflict in the implementation of this agreement shall be resolved by mutual consultation, consensus and compromise. Failing such mutual resolution within 30 days, the dispute shall be referred to the ***Secretary to the Ministry in charge of the subject of irrigation*** by the affected party. If the issue/s had not been resolved to the satisfaction of all three parties to this agreement or failure to resolve the issue/s represented within 60 days by the ***Secretary to the Ministry in Charge of the subject of irrigation*** or on disagreement with the decision of the ***Secretary to the Ministry in charge of the subject of irrigation***, the affected party shall seek redress under the prevailing arbitration act of Sri Lanka
- v. Any modifications to this agreement shall be in writing and make by the mutual consent of all three parties

IN WITNESS WHEREOF the said three parties have set their hands at the places on 17th day of February Two Thousand.

For the Government of Democratic Socialist Republic of Sri Lanka	Ridi Bendi Ela – System Level Farmer Organization	Ridi Bendi Ela Govijana Vidhana (Janatha) Company Ltd.
Signature	Signature	Signature
Name H.M. Gunatilaka	Name K.B. Ratnayake	Name H.M. Herath Banda
Designation Irrigation Engineer	Designation Chairman	Designation Chairman
Address Irrigation Office Nikaweratiya.	Address System Level Farmer Organization, Millagoda, Nikaweratiya	Address Ridi-Bendi Ela Govi Jana Vidhana (Janatha) Co. Ltd., Millagoda, Nikaweratiya.
Telephone: 037-60201	Telephone: 037-60475	Telephone: 037-60077
Fax: 037-60201		Fax: 037-60077
E-mail	E-mail	E-mail: ridi@mail.ewisl.net

In the presence of:

Witness:

	For IE Nikaweratiya	For SLFO	For Company
1.	Signature	Signature	Signature
	Name W. Gamage	Name A.N. Wimalasena	Name S.H.D. Lokusooriya
	Designation Deputy Director of Irrigation	Designation Secretary	Designation General Manager
	Address Kandy Road, Kurunegala.	Address Resident Project Manager's Office, Millagoda, Nikaweratiya	Address Ridi-Bendi Ela Govi Jana Vidhana (Janatha) Co. Ltd., Millagoda, Nikaweratiya.
2.	Signature	Signature	Signature
	Name S.A.P. Samarasinghe	Name N.M. Tennakoon	Name W.A.C.K. Weerasekera
	Designation Additional Director (Eng.)	Designation Treasurer	Designation Manager, WRL.
	Address Irrigation Management Div. P.O. Box: 1138 Colombo 7.	Address Resident Project Manager's Office, Millagoda, Nikaweratiya	Address Ridi-Bendi Ela Govi Jana Vidhana (Janatha) Co. Ltd., Millagoda, Nikaweratiya.
	E-Mail: imdiv@sltnet.lk		E-Mail: ridi@mail.ewisl.net

Responsibilities of the Irrigation Engineer- Nikeweratiya

The Irrigation Engineer Nikaweratiya on behalf of the Government, within the national policy framework, will perform the functions listed below, in conformity with regulations directives issued by the Government/ Irrigation Department, to insure the safety and sustainability of the irrigation infrastructure and all related government assets within the Ridi Bendi Ela Scheme.

1. Operate and maintain all the infrastructure related to head works and feeder canal described in Annexure I-B
2. Ensure timely diversion of adequate quantities of water depending on the availability from Deduru Oya, to cater to the needs of the beneficiaries under Ridi Bendi Ela Scheme
3. Regulate (a) quality and standards of services, (b) tariff determination, (c) equitable allocation of water resources within Ridi Bendi Ela Scheme
4. Provide technical assistance to SLFO and the Company in:
 - i. the decision making process for allocation and optimizing the water resources within the Scheme
 - ii. preparation of the operations and maintenance plans for the irrigation infrastructure
 - iii. preparation of water distribution schedules
 - iv. monitoring the implementation of such operation and maintenance plans,
 - v. preparation of the seasonal cultivation reports
 - vi. building the technical capacity of the SLFO and the Company for sustainable management of the irrigation infrastructure
 - vii. Creating awareness of water management among the water users
5. Ensure sustainable management of the irrigation infrastructure for maximum productivity and include:
 - i. preparation of the annual/seasonal operation and maintenance plans for the head-works of the Scheme covering the following:

Operations:

- a. preparation of irrigation schedules for issue of water from the head-works in conformity with the decisions made at the cultivation meeting
- b. provide guidelines and advice for operations of the irrigation infrastructure
- c. Monitor and record water issues from the head-works and meteorological variations at least daily
- d. issue water from the main sluices in conformity with the irrigation schedule agreed at the cultivation meeting
- e. cooperate with the SLFO and the Company in the resolution of practical field problems and issues and revise the irrigation schedules if and when required

- f. Respond promptly without undue delay, to any reasonable requests, within the overall operation plan, for adjustment of water issues from main sluices (Not later than two hours or six hours to decrease or increase the flow respectively)
- g. Maintain a record of the cultivated crop including the type, extent, stagger and distribution patterns

Maintenance:

- a. Preparation of a detailed maintenance plan for head-works and the augmentation canal.
 - b. Provide guidelines and advice on the maintenance of the irrigation infrastructure
 - c. Implement the maintenance plan to ensure the safety and smooth operation of all the structures related to head-works and augmentation canal.
 - d. Maintain the spill tail channel.
 - ii. Promote measures to improve water use efficiency and conservation of water
 - iii. Assess regularly the water requirements for each distributory channel with the SLFO
 - iv. Ensure timely and equitable delivery of water to meet the water requirements of farmers
6. Provide guidelines and manuals for the O&M of the irrigation infrastructure jointly by the three parties to the tripartite agreement
 7. Assist the SLFO to resolve issue related to water distribution and irrigation schedules among the water users
 8. Avail to SLFO any financial provisions allowed by the Government for operation and maintenance of the Scheme through accepted administration procedures
 9. Attend to flood damage repairs and any other damages due to reasons beyond the control of the SLFO
 10. Attend to major repairs of the structures and structural improvements on the request by the SLFO within available resources
 11. Oversee distribution of water and present to the SLFO, the seasonal water-issue report at the end of every cultivation season
 12. Review proposals submitted by the Company for simple amendments and improvements to structures in the irrigation system and approve those conforming to ID standards
 13. The key officials of ID available for implementation of this MOU are as follows:-

1. Irrigation Engineer, Nikaweratiya
2. Technical Assistant
3. Work Supervisor – 1
4. Work Supervisor - 2

Responsibilities of the System Level Farmer Organization at Ridi Bendi Ela Scheme

The SLFO, registered with the appropriate government institutions for legal recognition, will represent all beneficiaries under Ridi Bendi Ela Scheme. SLFO will perform functions related to the sustainable management of the irrigation infrastructure in their custody and is entitled to tariffs, transact business, own and manage and maintain such services and facilities. SLFO, is accountable to the user community they serve and to the Irrigation Department and, subject to the regulations and standards laid down by the Government, / Irrigation Department, and will be responsible for:

1. Assessing the needs, demands and aspirations of the membership for irrigated agriculture and related facilities and services.
2. Assessing the technical feasibility and economic viability of different options to provide the needed/ demanded services.
3. Negotiating and arranging internal funding from financial sources or its members.
4. Taking a lead role in designing and preparing seasonal agriculture plan including all inputs and marketing of produce in conformity with the aspirations of the community.
5. Securing the participation of the beneficiaries and the other partners at all stages of the process.
6. Playing the lead role in planning the operation and maintenance of the irrigation infrastructure and other assets for the benefit of the water user community in the Scheme.
7. Managing the facilities and providing services to the satisfaction of the water user community and the IE. This includes operation, maintenance, and recovery of tariff.
8. Conservation of environment with emphasis on water sources, watershed areas and the reservations identified for the Scheme.
9. Preparation of seasonal/ annual operation and maintenance plan with the assistance of the IE for sustainable management of the irrigation infrastructure taken over. The operation and maintenance programme should include following activities:

Operations:

- a. Prepare with the assistance of the IE and the Company the seasonal operation plan for the irrigation system taking into consideration the availability of water resources.
- b. initiate meetings of the cultivation committee to finalize seasonal cultivation plans
- c. Cooperate with the IE and the Company in implementation of the seasonal cultivation plan and ensure timeliness and equity of water issues.
- d. Cooperate with the IE and the Company in resolution of practical field problems and issues related to water distribution and irrigation schedules.

- e. Maintain a record of the cultivated crop including the type, extent, stagger and distribution patterns.
- f. Assist in the resolution of problems among water users
- g. Create awareness on water management among water users.

Maintenance:

- a. Prepare with the assistance of the IE and the Company the seasonal / annual maintenance plan for the irrigation system taking into consideration the cultivation and non-cultivation seasons.
 - b. Cooperate with the IE and the Company in implementation of the seasonal/ annual maintenance plans.
 - c. maintain side slopes and profiles of canals
 - d. fill scours in embankments of canals and the minor tanks within the system
 - e. repair structures
 - f. maintain drainage channels
 - g. removal of debris from the turnouts and off tanks
 - h. removal of obstruction in canals
 - i. painting and greasing gates and iron parts in irrigation structures
 - j. maintain road embankments of canals
 - k. Maintain water measuring devices.
10. Initiate measures to enhance the financial capacity of the SLFO to ensure the sustainable management of the irrigation infrastructure.
 11. Ensure active participation of all members of SLFO in the decision making process.
 12. Protect the irrigation infrastructure and reservations.
 13. Obtain prior approval of the IE to alter or amend any component of the irrigation infrastructure.
 14. Obtain technical assistance and guidance of the IE in activities related to the irrigation infrastructure.
 15. The key office bearers in SLFO in relation to the implementation of this agreement are as follows:
 - i) Chairman, secretary and Treasurer of SLFO
 - ii) One Farmer representatives from each FOs

Responsibilities of the Ridi Bendi Ela Govijana Vidhana (Janatha) Company Ltd

Ridi Bendi Ela Govijana Vidhana (Janatha) Company Ltd, registered as corporate body with the Registrar of Companies, will transact business in providing goods or services to the SLFO for sustainable management of Ridi Bendi Ela Scheme. The Company will function as providers of facilities and services subject to the terms and conditions specified by the SLFO and IE and are be accountable to the SLFO and the membership they serve and to IE.

Subject the regulations and standards laid down by the Government, and the Irrigation Department, the Company will provide the necessary managerial skills and inputs for

sustainable management of the irrigation infrastructure in Ridi Bendi Ela Scheme and increase the agriculture productivity.

The Company will assist the SLFO to:

1. Assess the needs, the demands and the aspirations of the membership for irrigated agriculture faculties and services.
2. Assess the technical feasibility and economic viability of different options related to irrigated agriculture for providing the needed/ demanded services.
3. Negotiate and arrange funds from internal sources.
4. Design and prepare seasonal agriculture plans including all inputs and marketing of produce in conformity with the aspirations of the community.
5. Secure the participation of the beneficiaries and the other partners at all stages of the process.
6. Manage the facilities and the services in a sustainable manner and to the satisfaction of the user community and the IE. This includes operation, maintenance, and recovery of tariff.
7. Conservation of environment with emphasis on water sources, watershed areas and the reservations identified for the Scheme.
8. Prepare the seasonal/ annual operation and maintenance plans, for the irrigation infrastructure taken over, with the concurrence of the IE. The operation and maintenance programme should include the following activities.

Operations:

- a. Prepare with the concurrence of the IE and the SLFO the seasonal operation plan for the irrigation system taking into consideration the availability of water resources.
- b. Provide necessary information at meetings of cultivation committees to finalize the seasonal cultivation plans.
- c. Assist SLFO and the IE in implementation of the seasonal cultivation plan and insure timeliness and equity in water issues.
- d. Assist SLFO in the resolution of practical field problems and issues related to water distribution and irrigation schedules.
- e. Maintain a record of the cultivated crop including the type, extent, stagger and distribution patters.
- f. Maintain records of daily water issues at least at entrance and exit of each Farmer Organization boundary.
- g. Maintain rainfall records in different tracts.
- h. Assist SLFO in the resolution of problems among water users
- i. Assist SLFO to create awareness of water management among water users.

Maintenance:

- a. Prepare with the concurrence of the SLFO and the IE the seasonal / annual maintenance plan for the irrigation system taking into consideration the cultivation and non-cultivation seasons.
- b. Assist the SLFO in the implementation of the seasonal / annual maintenance plan.

- c. Assist the SLFO to organize and timely implementation of the following activities:
 - i. De-silting canals and maintaining side slopes of canal embankments.
 - ii. Filling scours in embankments of canal sand minor tank
 - iii. Repair structures
 - iv. Maintins drainage Channels
 - v. Removal of debris from the turnouts an doff tanks
 - vi. Removal of obstructions in canals
 - vii. Painting and greasing gates and iron parts or irrigation structures.
 - viii. Maintain canal embankment roads
 - viii. Maintain water measuring devices

9. Initiate measures to enhance the financial capacity of the SLFO
10. Procure the active participation of all members of SLFO in the decision taking process
11. Protect eh irrigation infrastructure and the reservation.
12. Obtain prior approval of the IE to alter or amend any component of the irrigation infrastructure.
13. Obtain the technical assistance and guidance of the IE in activities related to irrigation infrastructure.
14. The key office bearers of SLFO in relation to the implementation of this agreement are as follows:
 1. Chairman
 2. Director – 1-6
 3. General Manager
 4. Manager – Water Resources & Land
 5. Manager – Accounts & Administration
 6. Manger – Agriculutre Advice