

## ***APPENDIX - W***

### ***Participatory Planning based on PCM Method***

## **APPENDIX - W PARTICIPATRY PLANNING BASED ON PCM METHOD**

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## **APPENDIX - W PARTICIPATORY PLANNING BASED ON PCM METHOD**

### **Chapter 1 INTRODUCTION**

#### **1.1 Authority**

In response to the request of Sri Lankan Government, the Study for the Potential Realisation of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka (hereinafter referred to as “the Study”) has been carried out by the Japan International Cooperation Agency (JICA). During the period of November 1999 to January 2000, JICA Study Team performed the fieldwork of the feasibility study. This report presents the results of the PCM workshops carried out in the field.

#### **1.2 Objectives and Areas covered in the Study**

The objectives of the Study are to present a Master Plan (M/P) for the potential realisation of irrigated agriculture in the dry and intermediate zones, with the goal of achieving more profitable agriculture and higher standards of living for rural farm households. It is to be implemented through facility rehabilitation, more efficient use of water with participatory management, improvement of support services including credit and marketing. A feasibility study on selected high priority projects is also to be conducted. The area to be covered by the Study is estimated at about 6,500 km<sup>2</sup>, extending over the four districts of Anuradhapura, Kurunegala, Puttalam, and Matale.

#### **1.3 Irrigation Schemes (Project Area) for the Feasibility Study**

The feasibility study is carried out in the priority irrigation schemes that were selected from the 100 irrigation schemes covered by the Master Plan Study. At the meeting with the Sri Lankan Government (Ministry of Irrigation and Power), both sides agreed to cover 2 major schemes, 2 medium schemes and one cascade system, that includes 6 minor schemes, in the feasibility study. These are:

- 1) Nachchaduwa major irrigation scheme,
- 3) Palukadawala major irrigation scheme,
- 2) Periyakulamea medium irrigation scheme,
- 4) Mahananneriya medium irrigation scheme, and
- 5) Mahananneriya minor schemes (cascade) including 6 minor schemes.

#### **1.4 Objectives of Participatory Planning**

The Master Plan Study, proposed to adopt the implementation of development programmes through farmers' initiative. Participatory planning, (PP) focusing on following objectives was adopted as the method of survey.

- Formulation of development programmes enabling the positive participation of beneficiaries.
- Formulation of sustainable development programmes based on Participatory Planning (PP).

Overall, PP was applied primarily by using the Project Cycle Management (PCM) method, which has been developed by the Foundation for Advanced Studies on International Development (FASID), Japan. The method is almost the same as the Logical Framework Approach (LFA) developed by the Norwegian Agency for Development Co-operation (NORAD), which had been introduced to Sri Lanka at the beginning of the 1990s.

Basically, PCM method consists of three components, namely, "Participatory Planning (PP)", "Appraisal (AP)" and "Monitoring and Evaluation (M&E)." This report deals with PP method used in the field.

## **Chapter 2   PRESENT CONDITIONS OF THE PROJECT AREA**

### **2.1       Location of the Project Area**

The project area, which consists of two major, two medium and five minor irrigation schemes (the five minor schemes forming a cascade) are all located in the Anuradhapura and Kurunegala Districts. The irrigation projects included in the study are: Nachchaduwa Major Scheme, Palukadawela Major Scheme, Periyakulama Medium Scheme, Mahananneriya Medium Scheme and the Mahananneriya Minor Scheme, which is cascade formed by the Thambanawewa, Ihalgamawewa, Mailewawewa, Arthikulamawewa and the Kallanchiyawewa, all minor tanks.

### **2.2       Demographic Feature**

Table W 2.1 shows the demographic feature of the irrigation schemes. Altogether, there are over 35,000 people living within the study area and there are over 9,900 households. The average family size is 3.6 persons. Primarily, the population living in the area are Sinhala and Buddhist, and it is in the Nachchaduwa, Plaukadawela and Mahananneriya minor schemes that there are 19%, 11% and 2% Muslims, whose religion is Islam, respectively, changing the general Sinhala/Buddhist ethnic and religious pattern. On the basis of education 40% had completed primary school level, 35% had studied up to General Certificate of Education - Ordinary Level, and another 20% up to the Advanced Level. Only 01% of the population has had a University education. Generally, the population falls into the 'lower-middle' to 'low' income levels, with the main occupation being farming.

### **2.3       Socio-economic Feature**

On the basis of land ownership, those in the major schemes of Nachchaduwa and Palukadawela own more than 02 hectares per family. In the Periyakulama medium scheme it is a little over 1.5 hectares and in Mahananneriya, both in the medium and minor schemes, land owned by each family, on the average, is less than 1.4 hectares. However it has to be noted that in all schemes there is a significant proportion that fall into the 'landless' category. The general ownership of land is around 85%, except in the Mahananneriya medium scheme, where it is as low as 62% and in this instance, the percentage of encroachers is also as high as 21%.

The shortage of some of the basic amenities such as, drinking water and electricity, although a problem in all areas, is most grave again in Mahananneriya medium scheme, where those with drinking water and electricity facilities are as low as 20% and 08% respectively. Generally, health services are poor in all areas, except perhaps in Nachchaduwa, which is fairly better placed, with shortages of medical centres, doctors, medicine supplies and hardly any health clinics are held.

#### **2.4 Major Problems in the Project Area**

The major problems faced by people in the project areas are common to all schemes. The insufficient supply of irrigation water is the most serious, followed by low agricultural production. The absence of infrastructure facilities, such as, electricity, roads, educational and health facilities, housing and toilets are serious problems in all scheme except in Nachchaduwa, where they are not as acute as in other areas. Unemployment, especially among the youth, decline of social and moral values and addiction to alcohol and drugs are common to all schemes, irrespective of size. Finally, the damage caused by wild animals, particularly by wild elephants, to both life and property, especially to crops, is a serious problem that has drastically effected the social and economic well-being of the communities living in the areas.

## Chapter 3 PARTICIPATORY PLANNING BASED ON PCM METHOD

### 3.1 General

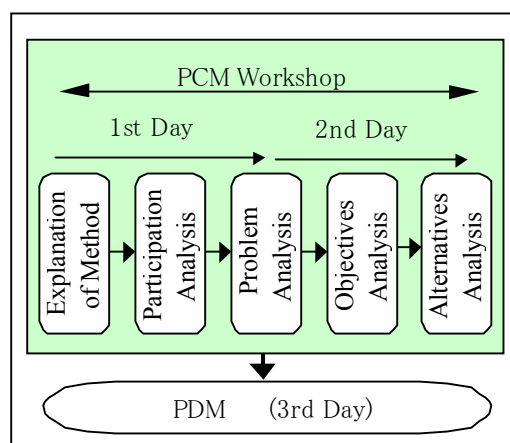
#### 3.1.1 Objectives and Overall Goals of the Project

The PCM method emphasises the use of participatory planning by enabling all stakeholders, especially the beneficiaries, to associate themselves with the project planning process. The participatory planning workshops assure the participatory approach to planning. The use of the Project Design Matrix guarantees consistency in management throughout the project cycle. This contributes to effective and accurate project management especially because it attempts to accommodate the beneficiaries needs. It also facilitates better communication and co-ordination among all parties involved in the project.

In the M/P Study, the following items were identified as the super goal of the Potential Realization of Irrigated Agriculture in the Dry and Intermediate Zones of Sri Lanka: (i) the improvement of agricultural productivity and farm economy, and (ii) the sustainable development of rural agriculture. These were adopted as the overall goals of the Project for the feasibility study.

#### 3.1.2 Methodology

The PCM workshops were conducted on two consecutive days. All workshops were held in the respective project areas. Farmers, leaders of Farmers' Organisations, women, young men and women in the communities involved, local government officials comprised the main participants at the workshop and they formed the target group. Representatives of the key government agencies involved in the project activities were also invited to participate as resource persons. The workshops were held each day from 10.00 a.m. to 5.30 p.m. and lunch and tea with a snack were provided to all participants mid mornings and mid afternoons.



The workshops consisted of four main activities. In the first session a 'Partici-



patory Analysis<sup>1</sup> was conducted. The objective of this exercise was the categorisation of the various groups among the participants. The second session was devoted to the identification of the core problem facing each community, together with the various other problems leading to the core problem. At the end of this 'Problem Analysis' session the causes and effects of existing problems on the project area are presented in the form of a 'project tree'. In the 'Objectives Analysis', which was the focus of the third session, the 'problem tree' was transformed into an 'objectives tree', depicting the future solutions to the problems already identified. In the final session, an attempt is made to identify the project components on the basis of the information from the 'objectives tree'. This is referred to as the 'Alternatives Analysis'. Each component so identified is called an 'Approach'. The workshop concludes with a session where there is a dialogue between the participants and the resource persons, where the focus is on the problems and the objectives already identified and proposed by the participants.

### 3.1.3 Selection of Participants

Participants for the workshop were selected so that a clear representation of the entire community is obtained. The target group being the farmers, the Farmers' Organisation leaders as well as their members and farmers who were non-members were invited. Representatives of other community-based organisations also participated. As it was evident from preliminary surveys women and the youth were also made to participate. Some of those in the last two groups represented their own organisations, such as, the Women's Society and the Youth Club. Finally, there was yet another important group of persons, who were members of the community, belonging to farmer families, but were employed as government field officers. It was believed that their participation would bring in a different viewpoint from the others. This cross section of participants gave a fairly comprehensive coverage of all sections in the communities.

#### Participants of PCM Workshop

- a) Leaders of Farmers' Organisations
- b) Beneficiaries (farmers)
- c) Leaders of community based organisations (Women's Society, Youth Club, Death Donation Society, etc.)
- d) Farmer Animators
- e) Institutional Development Officer (RPM Office, IMD)

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<sup>1</sup> The terms of "Participants", "Participatory Analysis", "Problems Analysis", "Objectives Analysis" and "Approach" are the same with that defined by FASID.

- f) Manager of Farmers' Organisation (officer of DOI)
- g) Grama Niladhari

#### Resource Persons

- h) Officers of the IMD, DOI, DOA and DAS
- i) Divisional Secretariat (DS)

The Participants carry out the workshop as mentioned earlier, and the Resource Persons provide the Participants with the technical and financial information needed for the planning of development programmes.

The officers under h) and i), above, were also able to join the workshop as the Participants, because they are involved in the development programmes as representatives of the executing agencies. However, since the social status of officers and farmers differed, and it was not possible to treat the officers and Participants as equals, if the officers had joined the workshop as Participants. It was therefore decided that they join workshop only as the Resource Persons. By attending the workshops as resource persons, it was possible for them to contribute to the results of workshop with their expertise and knowledge.

The actual attendees at the PCM workshops are given in Table W 3.1. The total number of participants at the PCM workshops, in all irrigation schemes, was 490 persons and consisted of 352 males and 138 females.

### 3.1.4 Schedule

The schedule and place of the PCM Workshops are shown below:

Date	Venue of Workshop
21-22 November	Periyakulama Medium Scheme
23-24 November	Mahananneriya Minor Scheme - Cascade (Attikulama, Ihala Mailewa)
25-26 November	Mahananneriya Minor Scheme - Cascade (Ihalagama, Tamborewewa, Ihalananneriya)
27-28 November	Nachchaduwa Major Scheme (Low Level FO 1-3)
27-28 November	Nachchaduwa Major Scheme (Low Level FO 4-8)
01-02 December	Mahananneriya Medium Scheme
04-05 & 11 December	Nachchaduwa Major Scheme (High Level FO 9-14)
05-06 December	Palukadawela Major Scheme (Track No.2-3)
07-08 December	Palukadawela Major Scheme (Ancient Village Track No.1)
11-12 December	Palukadawela Major Scheme (Track No. 4-6)

## 3.2 PCM Workshops

All results of the PCM workshops are presented in Appendices 1 to 5 and are described hereinafter.

### 3.2.1 Nachchaduwa Major Scheme

#### (1) Participants

There were 95 beneficiary participants at the three workshops held in Nachchaduwa. In addition there were 23 resource persons, making a total of 118 in all. There were 28 farmer leaders from Farmers' Organisations and 29 who held membership of whom 14 were women. The Women's Society had one participant. The local field officers had 32 participants. There were Farmer Animators, 05 of whom were women, 12 Grama Niladaris, with 03 women, 02 female Samurdhi Animators and 07 Managers and 03 Works Supervisors from the Department of Irrigation, with 04 of the Managers being women. Altogether there were 66 male participants and 29 female participants.

Of the total of 23 resource persons, 03 were women participants, one each from the Departments of Agrarian Services, Agriculture and Irrigation. The total number of participants, from each of the above Departments, was 02, 06 and 08 respectively. The Divisional Secretary attended two of the workshops. The Irrigation Management Division had 05 participants.

The total of 118 participants at the workshop, there were 86 male and 32 female participants.

#### (2) Participatory Analysis

There were two main groups of participants at the workshop, namely the beneficiaries and the resource persons. The beneficiaries were selected so that it gave as wide a representation as possible. The farmer leaders were represented by the office-bearers of the Farmers' Organisations and the Farmer Companies, then there were the ordinary farmers who either held membership in the Farmers' Organisation or not. Two other important categories of participants were the women and the youth. It was necessary to identify them separately because each of these two groups had their own problems and aspirations. There were then the local field officials, who were resident in the project area and belong to farmer families. However, since they were government officials, their views of local socio-economic conditions, were found to vary from those of the farmer community, according to preliminary surveys conducted, hence the identification as a separate category. Finally, there were the resource persons, who were government officials, and were brought in to the workshop to get an official response to the views aired by the farmers.

### (3) Problems Analysis

The core problem facing the farmer community in the Nachchaduwa major irrigation scheme is the low income received. There are three main problems faced by the farmers that lead to this situation. They are that they cannot obtain enough water for irrigation, the unsystematic cultivation practices of the farmers and increasing family disputes.

#### 1) Inability to obtain enough water

This is a result of a number of factors. The irrigation canal system is damaged. The construction work has been not done well, and it had not been maintained and rehabilitated in time. The situation had been worsened by the ignorance of the farmers and the damage caused by cattle. Furthermore, the tank does not have sufficient capacity. The irrigation system has been silted and the Farmers' Organisation does not have the funds to attend to it. And they do not know how to raise the necessary funds. Even the water that is available is not received in time. There is no systematic water management due to improper management by the farmers and illegal tapping of water. In addition, there is wastage of water, since there is no co-operation among the farmers and the officers, the farmers not being interested in water management. Canal and tank reservations are being cultivated illegally, leading to silting of the irrigation system. Leasehold (badda) farmers are not eager to be involved in maintenance work.

#### 2) Unsystematic cultivation:

Primarily there is weak organisation in the community. The crop yields are low as a result of three main factors. First, the farmers follow poor farming techniques. They follow traditional techniques and do not use modern methods of cultivation. There was a reluctance of the part of the farmers to seek knowledge and additionally, there were no knowledgeable trainers in the field. The farmers did not use good varieties of seed and the farmers were careless in their attitude. Cultivation of crops by the farmers was not done in time. Farmers are dependent only on paddy cultivation. Farmers are not interested in cultivating other field crops. Wherever it is done, it is cultivated only as an upland crop using rain water. The supply of agricultural equipment was not enough to meet the demand. Furthermore, the quality of equipment available in the market was low. The price of equipment was too high, and was beyond reach of the farmers. Access to credit facilities to purchase such equipment was also poor. Second, marketing

opportunities for agricultural produce was limited. Prices for agricultural products were low during the harvesting season. There was intervention by the middlemen and farmers could not fetch good prices for their produce. The absence of storage facilities made the farmers sell their entire produce at harvesting time. At this time cheap foreign products entered the market and there was no co-operation from the government agencies. Furthermore there was no variety in the products of the farmers. They did not know the value of by-products and there was no quality in their products. Processing facilities were not available and were therefore selling non-processed products. They had poor access to credit to install such facilities. Third, there was a shortage of land for cultivation, which was primarily due to the increase in population. Government land was not distributed fairly. The ownership of land by farmers limited, and ownership of land was limited to a few farmers. Those who owned land used the 'thattumaru' system.

### 3) Weak Farmers' Organisations:

There is an absence of unity in the community. The farmer leaders lack education, and do not have good relations with officials. They act without plans and there is a lack of co-ordination between the members and office-bearers and women's participation is limited. They also do not receive adequate assistance from government agencies.

### 4) Increasing family disputes

There were three factors resulting in this situation, namely, there was poor management of family affairs, men were addicted to alcohol and drug use and there was a shortage of employment opportunities, especially for the youth, and finally, women were going abroad in search of employment. The community is also distancing themselves from the temple and religion.

### 5) Unemployment

There is acute problem of unemployment, especially among the youth. There are no opportunities to receive vocational or technical training. There are no infrastructure facilities, inputs and markets for self-employment development. Therefore there is no interest in self-development and depends on others for livelihood.

## (4) Objectives Analysis

The main objective was to increase the income of the farmer community. This

was to be done by obtaining enough water for irrigation, strengthening the organisation in the community and by resolving family disputes.

1) Obtaining enough water for irrigation

This was to be done first, by repairing the canal system. The canals were to be constructed well, rehabilitated in time and maintained. Additionally, action is to be taken to rid the farmers of their ignorance, and also prevent the damage to canals by cattle. Second, action will be taken to increase the capacity in the tank, by de-silting the entire canal system and getting enough funds, to the Farmers' Organisations, for the purpose and making the farmers aware of the need to increase the funds of the organisations. Third by supplying water for cultivation in time. A systematic water management system is to be set up, with proper management by farmers and stopping illegal tapping. Water is to be saved by getting the farmers interested in water management and with the co-operation of officials.

2) Strengthening organisation in the community

The main objective is to do cultivation systematically, first, by increasing crop yields. Training is to be provided, using knowledgeable trainers in the field. The farmers would seek knowledge and would be advised on modern techniques. Other field crops could be cultivated in the paddy fields. Cultivation would start in time. There would be enough agricultural equipment in the market, they would be of good quality and will be sold at reasonable prices, with the reach of small farmers. Credit facilities would be made available for the purchase of equipment. The supply of agricultural inputs will be increased. Proper chemicals and fertilisers would be used and credit will be provided for the purchase of inputs. Second, sufficient marketing opportunities would be provided for agricultural produce. Suitable prices will be provided during the harvesting season. Intervention of middlemen would be stopped and storage facilities would be provided. Import of cheap foreign products will be stopped, and co-operation of government will be obtained for this purpose. Quality standards in agricultural products will be maintained and quality products will be sold at the market. There will also be a diversification of products. Knowledge of by-products will be acquired and produce by-products. Credit for improvement of processing facilities will be obtained, processing facilities will be established and processed products will be sold.

### 3) Strengthen Farmer s' Organisation

An educational program must be set up for leaders. Co-ordination between the leaders and the farmers and the governmental agencies must be improved. More assistance also should be given by state agencies. Planned programmes should be implemented. Participation of women in organisation's activities should be strengthened.

### 4) Resolving family disputes

Family disputes will be resolved by introducing good management practices to the family unit and at the same time stopping alcohol and drug addiction among men. Available employment opportunities will be increased by creating additional employment opportunities and particularly create jobs for women to dissuade women from seeking foreign employment.

### 5) Create employment opportunities

Vocational and technical training programmes must be improved. Infrastructure, inputs and marketing facilities must be improved. Unemployed must get rid of the dependency complex. More self-employment opportunities must be created

## (5) Alternatives Analysis

In the three workshops held in the Nachchaduwa major irrigation scheme seven 'Approaches' or 'Alternatives' have been identified. In prioritising the different 'Approaches', the 'strengthening of Farmers' Organisation' have been identified as the most important, followed by the 'rehabilitation and improvement of irrigation'. 'Improvement of agricultural activities' is the third important 'Approach'. The 'Improvement of agricultural education' too could be grouped under the same 'Approach'. 'Land development' is ranked next in the list of priority. Finally, 'campaign to stop addiction to alcohol and drugs' and improvement of social and moral values and campaign to stop addiction to alcohol' could be grouped together and occupies the last of the priorities.

## 3.2.2 Palukadawela Major Scheme

### (1) Participants

There were three workshops conducted in Palukadawela and the total number of participants were 252, 210 of them were project beneficiaries and 42 were resource persons representing the different government agencies. Of the total,

204 were males and 48 were females. All female participants were from among the beneficiaries. There were 162 male beneficiary participants. There were 18 farmer leaders from Farmers' Organisations. All of them were males. Among the 139 members of Farmers' Organisations present 111 were men and 29 were women. There were 08 representing Women's Societies. Notably there were none from the Youth Clubs. There were 22 farmers who did not belong to any of the community organisations. A total of 23 local field officers participated in the workshop. There were 11 Farmer Animators and 08 Grama Niladaris and of them 09 and 03 were women, respectively. In addition, there were 01 Manager and 03 Work Supervisors, from the Irrigation Department present. All 04 of them were males.

Among the resource persons 13 were from the Department of Agriculture and 09 were from the Department of Irrigation. There were 07 from the Divisional Secretariat and 13 from the Irrigation Management Division. All 42 official participants were males.

## (2) Participatory Analysis

The participants could be grouped into six main categories, inclusive of the resource persons. First, there were the farmer leaders, who were office-bearers of Farmers' Organisations. Then there were the ordinary farmers, who consisted of two groups, those who held membership in the Farmers' Organisations and those who did not. Women participants formed a separate category. Although there were no Youth Clubs, there were a significant number of young men and women participating in the workshop. They formed a separate category. A significant number of local field officials attended the workshop, because of the official representation, they were considered as a separate group. Although they participated in their official capacity they were all residents in the area and members of farmer families. Finally, there were the senior official representing the different government agencies active in the project area. Their contributions at the end of the workshop were informative and useful.

## (3) Problem Analysis

The absence of a socio-economic level is the main problem facing the community living in the Palukadawela Major Irrigation Scheme. There are many factors that lead to the present plight of those living in the project area. The inefficient irrigation system, low agricultural production, organisational weaknesses, lack of infrastructure facilities, unemployment and the decline of social and moral values are the problems in the area.



### 1) Inefficient irrigation system

There are a large number of shortcomings in the present irrigation system. The irrigation system has not been designed well, it has not been rehabilitated and it has also not been maintained. The tank and canal reservations are being cultivated illegally and consequently, both the tanks and the canal system have been silted. There are earth dumps on either side of the main tank sluice, and the sluice gates cannot be operated. The gates and the doors are either damaged or missing. Because of the improper design of the system Attanagalla wewa sluice water flows into the village and the spillway water floods the paddy fields. The capacity of the main canal to store sufficient water is reduced and there is no permanent water supply to the tank. Furthermore, there is no proper water management system and Farmers' Organisation and Irrigation Department rules and regulations are not being implemented.

### 2) Low agricultural production

The income derived from agriculture is low. The low quality, high price and non-availability of inputs, including agricultural equipment, when needed are some the factors that has brought about this situation. Especially the supply of good seeds and proper advice and guidance and the lack of technical knowledge were other negative factors. Because of the lack of advice there is fear of following scientific methods. There is a shortage of training officers and training facilities. Furthermore there is an absence of markets and general difficulties in marketing of agricultural produce, mainly due low quality of products, unreasonable competition from cheap imported products, low prices paid and the interference from middlemen have all caused the low incomes derived from agriculture. Finally, there is damage caused to crops by animals, both by unattended cattle and serious and more extensive damage caused by wild elephants.

### 3) Organisational weaknesses

The absence of unity in the community is a major factor causing organisational weaknesses. Capable persons are not appointed to office. There is no dedicated service and leaders tend to take individual decisions. There are many instances that political goals come to the forefront. In addition there are communication weaknesses between the leaders and the members as well as the government officials. Farmers' Organisations do not function systematically. Farmers also do not realise the importance of Farmers'

Organisations and also do not participate in community activities.

#### 4) Absence of infrastructure facilities

Palukadawela scheme most of the infrastructure facilities. Adequate electricity facilities are not available, except along the roads. Health facilities too are not available, there are no medical centres, doctors and in most instances medicine. Health clinics are not held and there are no nutritional and sanitary programmes. This together with the lack of drinking water facilities, toilets, poor housing conditions have created a serious situation. Furthermore, educational facilities are lacking. These include the absence of library facilities, science laboratories, playgrounds and equipment, There is also a shortage qualified and trained teachers. Buildings and equipment for pre-schools are also lacking. Road, as well as, transportation facilities and bridges together with lack of communication facilities make the situation as regards infrastructure facilities very bleak.

#### 5) Unemployment

There are a number of problems causing unemployment. The general level of education is low, and there are no professional or technical training facilities. There is also a lack of self-employment facilities. No facilities are available to develop the tank fishing industry, nor are there any agro-based industries. Livestock industry cannot be developed due to objections from the elders, based on traditional values and religious beliefs. Because of the lack of advice and guidance the unemployed are unable to start self-employment by using even available resources. There is also a lack of capital and other basic inputs, infrastructure facilities and markets.

#### 6) Decline of social and moral values

There is a general distancing from the religious environment and there is no assistance to develop religious institutions. Villagers are getting addicted to alcohol and drugs, sometimes due to economic and social reasons and also due to the ready availability. There is also an increase in corruption and crime due to alcohol use. Even children are being drawn into this habit. Ignorance, the lack of education, selfishness, unemployment and economic difficulties within the community have also led to a decline of social and moral values.

#### (4) Objectives Analysis

##### 1) Develop irrigation system

A systematic irrigation system has to be reconstructed, rehabilitated and maintained. This includes the tank, and the canal system, including the main canal. Illegal cultivation of the tank and canal reservations has to be stopped and the tank and the canals de-silted. The earth mounds on either side of the main sluice must be remove, construct the sluice gate to operate easily and all gates and doors should be fixed. A system to prevent water from flowing to the village and flooding the paddy fields must be evolved. A permanent water supply to Palukadawela tank must be provided and sufficient water has to be stored in the de-silted with increased capacity. A systematic water management scheme must be established. Farmers' Organisations need to be activated and Farmers' Organisation and Irrigation Department rules and regulations must be strictly enforced.

##### 2) Improve agriculture

Income generated from agriculture must be increased. Farm inputs including equipment are to be provide when required and at a reasonable price. They should also be of good quality. In particular, quality seeds must be provided and if necessary farmers should be encouraged to produce their own seeds. Credit facilities provided should match the expenditure, and savings must be encouraged. Farmers are to be provided with technical skills and necessary so that they could follow scientific methods. Wherever possible farmers should be encouraged to use organic fertiliser. Adequate number of extension officers must be appointed. Sufficiently trained officers should be appointed as trainers with the necessary facilities. Quality products should be produced and fixed prices must be offered. Agro-wells should be provided to cultivate the uplands. Facilities are to be provided to market agricultural produce. Action should be taken at least to minimise the damage caused by wild elephants.

##### 3) Strengthen Farmers' Organisations

Farmers' Organisation need to be reorganised to benefit members. Unity in the community must be restored and better communication with farmers and officials established. Active and dedicated officers need to be appointed, and they should not be slaves to political objectives. Decisions taken must be implemented. Members and other farmers must be impressed of the importance of Farmers' Organisations. The leaders must also serve with

frankness and openness and not take independent decisions.

#### 4) Provide infrastructure facilities

Adequate electricity must be provided, particularly on branch roads. Health services must be provided, with medical centres, doctors and sufficient medical supplies. Health clinics must be conducted and sanitary and nutritional programmes must be conducted. Drinking water facilities, toilets, and adequate housing has to be provided. Educational facilities should be improved, by providing buildings, laboratories, library facilities and playgrounds. Necessary equipment should also be provided. These facilities should also be provided to the pre-schools. Where necessary trained and qualified teachers should be appointed. The road system must be improved and transportation facilities provided.

#### 5) Unemployment

Educational levels need to be improved, by providing necessary facilities. Improved educational methods and training, both professional and technical, must be provided. In order to provide self-employment opportunities the fishing industry in the tank, livestock industry must be promoted and agro-based industries established. Traditional ideas need to be changed, through awareness programmes to stop obstruction by the elders. Advice and guidance should be made available to those seeking employment and the necessary inputs, infrastructure, training, credit and markets for finished products must be provided.

#### 6) Re-establish social and moral values

Improve religious centres and direct community towards religion. Establish unity in the community. Direct people away from alcohol and drugs. Stop children going astray through education. Develop economy and provide employment to improve economic status to check increase of corruption and crime. Rid ignorance, selfishness and alcoholism through education and awareness programmes.

### (5) Alternatives Analysis

There are seven different 'Approaches' identified at the three workshops conducted in Palukadawela. The 'Approach' that received the highest priority is the 'strengthening of Farmers' Organisations'. This was followed by the 'rehabilitation and improvement of irrigation' alternative. 'Improvement of agricul-

tural activities' and the 'improvement of social and moral values' were next in line of priorities. The 'Approach' The improvement of social and moral values and campaign to stop alcohol and tobacco' is almost identical to the last alternative mentioned, therefore, they could be grouped together. The 'alternatives' 'environmental conservation' and 'land development' were ranked next in that order of priorities.

### 3.2.3 Periyakulama Medium Scheme

#### (1) Participants

There were 58 participants in all at the Periyakulama workshop, 49 of them were beneficiary participants and 09 were resource persons. In all there were 38 male and 20 female participants. 19 of the beneficiaries were female participants and only 01 of the resource persons was a female. There were 03 farmer leaders and 22 Farmers' Organisation members, 02 of them, were women. The Women's Society was represented by two of their members, and there were 05 from the Youth Club, 03 of whom were females. There were 07 local field officials, 01 woman Farmer Animator, 03 Grama Niladaris-01 of them a woman and 01 Manager and 01 Work Supervisor from the Irrigation Department and 01 Samurdhi Development Officer, all of them males.

Among the resource persons, there were 02 from the Department of Agrarian Service, 01 from the Department of Agriculture, 03 from the Department of Irrigation. There were 02 each from the Divisional Secretariat and the Irrigation Management Division. Among the 09 resource persons there was only 01 woman representative.

#### (2) Participatory Analysis

The 58 participants in the workshop could be grouped into seven main categories. There were the farmer leaders, who were office-bearers of the Farmers' Organisation and other community Based organisations, and there were the members of the Farmers' Organisation, who were identified as a separate group. The ordinary farmers, who were not members of the Organisation, formed another category of participants. The women, youth and the local field officials were identified as separate categories. It is important to note that the members of the last named group are residents in the area and members of farmer families. The final category of participants, the resource persons, represented the various agencies operating within the Palukadawela Scheme.

### (3) Problems Analysis

The low economic status of the farmer community was the core problem facing those in the Periyakulama Scheme. The two main supportive problems were the low agricultural income and the difficulty in managing family affairs only on the income derived from agriculture. The low agricultural income is the result of three main problems, namely, irrigation water being not sufficient for cultivation, village resources not being utilised to a maximum, and the inability to obtain enough profits from agricultural produce. The difficulty in managing family affairs with the agricultural income received is mainly due to the problems of there being only few other income sources in the village and not saving at the proper time.

#### 1) Irrigation water not sufficient for agriculture

This is mainly due to environmental factors, silting of the main tank and the inability to provide irrigation water in time. Because of the damaged irrigation canals even the water that is received is wasted and not used well. Maintenance is not done well, in particular the canals and bunds are not cleared. The weak management of water and the presence of 'Jalapalakas' with very poor knowledge are other factors leading to the insufficiency of water.

#### 2) Village resources not used to a maximum

The two main reasons leading to this situation are the fragmentation of land and the poor organisation among the farmers. There is not enough land for family members and this results in land fragmentation. This leads not only to disputes within the families but to the increase of tenant farmers (Vee badda). There are three factors that cause the unorganised nature among the farmers. First, there is division among the people, second, there is a gradual decrease in communal cultivation practices and third, there are low concepts among the farmers, resulting in no planning. This is mainly due to traditional ideas. The participation of men in crop protection, especially, protection from wild animals is low. Because of the divisions in the community, there are no women in the farmer committee and youth are not involved in agriculture. In particular women have only limited knowledge of agriculture and also women do not get the necessary assistance from men in their agricultural activities.

### 3) Inability to obtain enough profits from agricultural produce

First, the limited knowledge of agriculture, the high capital investment to cultivate crops and the difficulties in selling agricultural produce at the market are factors that limit the profit margin. Unorganised cultivation, weak extension services, lack of practical knowledge, insufficient advice from agricultural instructors and the lack of crop protection and damage by wild animals has a negative effect on agriculture. Second, the high capital investment needed for agriculture is a major problem the farmers face. They are unable to buy inputs and equipment, because of high cost. Furthermore, there are shortages of seeds and equipment. The farmers are indebted to shop-owners who advance credit, because of the difficulties of obtaining credit. Third, there are difficulties in selling the produce at the market, and consequently, the produce is sold to middlemen at very low prices.

### 4) Very few 'other' income sources around village

The farmers are dependent on agriculture for their income, and other income sources are limited. This is so, especially because there are no self-employment opportunities in the Periyakulama for the farmer community to engage in.

### 5) Not saving at the proper time

One of the serious problems in the village is the addiction of men to alcohol, on which they waste their hard-earned income. They also become lazy. The men, in particular, have no plan or vision to develop the family. Because of these factors the villagers not in a position to save, even at the time they get some money in hand.

## (4) Objectives Analysis

The main objective is to improve the economic status of the farmer community, primarily by increasing agricultural income and the income derived from other income sources. This is to be accomplished by fulfilling five different objectives. Obtaining sufficient irrigation water, the maximum utilisation of village resources, increasing income from agricultural produce, creating self-employment opportunities and promoting saving activities are the different ways in which this is to be achieved.

### 1) Obtaining sufficient irrigation water

This is primarily to be done by a programme of reforestation and by desilting the tank. The water received is to be judiciously used. The irrigation canal system is to be rehabilitated. The canals (west sluice) would be concrete lined, smaller anicuts are to be constructed in cement and farm gate pipes are to be constructed. Farmers are to be provided with awareness programmes and educated. Farmers would clear the canals through shramadana. A proper water management system will be implemented and trained Jalapalakas will be appointed by the Farmers' Organisation to carry out the programme.

### 2) Maximum utilisation of village resources

Land in Kasagallegama ancient village is to be cleared and developed. The land would then be cleared would be distributed among farmers after discussing with them. This would solve family disputes and create an interest in agriculture. The community has to be organised by involving the Farmers' Organisation in community development work, increase its membership and plan community activities. Community-cultivation systems will be promoted and the participation in crop protection activities, especially from wild animals will be sought. Interest of the community will be developed through awareness programmes. Small group activities will be organised and more women will be involved in Farmers' Organisation activities and youth too will be involved. Women's activities will be promoted through the community and the Farmers' Organisation. Training programmes will be started, and using education the differences that divide the community, such as, rich-poor, male-female and the caste system will be removed.

### 3) Increasing profits from agricultural produce

First, this would be done first by collecting information from the relevant agencies and by attending the Kanna meeting. This would be helped through training, getting information and knowledge on farming from extension officers. A co-operative cultivation system will be implemented and damage to crops by wild animals will be controlled through joint action. Second, investment will be in high value crops. Farmers' Organisations will be strengthened by educating the community and with the assistance of external agencies such as, banks and non-governmental organisations. Since there are difficulties in obtaining loans, pay the debts to the shop-owners and establish a revolving fund under the Farmers' Organisation.



Farmers could also be provided with agricultural inputs and equipment through the Farmers' Organisation. Third, stores are to be provided and this will enable farmers to store their products and sell them when prices are high, directly, by themselves and without going through middlemen. Also agro-wells are to be constructed and this would facilitate the cultivation of other field crops.

#### 4) Create self-employment opportunities

It is proposed that the possible sources and resources in and around be checked to determine the possibilities of developing self-employment opportunities. Furthermore, opportunities for training in skills have to be provided for those in need, for them to qualify for available job opportunities.

#### 5) Implement saving programmes

Initially, the drinking habit has to be stopped. Awareness programmes should be organised at community level and those addicted must be involved in community activities. They should also act responsibly towards their families. Plans should be prepared for saving and must be implemented during the harvesting season. Awareness and educational programmes have to be conducted before savings begin.

### (5) Alternatives Analysis

Four different 'Approaches' were identified at the workshop. 'Strengthening of Farmers' Organisations' is the topmost priority 'Approach'. This is followed by 'rehabilitation and improvement of irrigation', 'improvement of agricultural activities' and 'land development', in that order of priority.

### 3.2.4 Mahananneriya Medium Scheme

#### (1) Participants

There were 43 participants in all at the workshop in Mahananneriya Medium Scheme, 36 of them were beneficiary participants and 07 were resource persons. Of the beneficiary participants 20 were males and 16 females. There were 11 farmer leaders, who were office-bearers of the Farmers' Organisation and all of them were men, in addition to the 04 members, two of them being women. The Women's Society had 09 participants and none from the youth club. There were 12 local field officials, 04 Farmer Animators – 03 were women, 06 Grama

Niladaris, with 01 woman and 01 Manager and 01 woman Work Supervisor from the Department of Irrigation.

Among the resource persons 01 from the Department of Agrarian Services, 02 from the Department of Agriculture and 03 from the Department of Irrigation participated. There was none from the Divisional Secretariat and 01 from the Irrigation Management Division attended the workshop. All resource persons were males.

## (2) Participatory Analysis

There were four main categories of participants could be identified, First there were the farmer leaders, who were office-bearers of the Farmers' Organisation. Second, ordinary farmers, most of them were not members of the Farmers' Organisation, and were grouped together. Third, women formed a separate and a powerful group with their own views and ideas. Fourth, there were the local field officers who formed a distinct category. Although the youth club was not represented, there were many young persons both among the farmers and the local field officers. In addition to these main categories of participants among the beneficiaries, there were the resource persons who made a valuable contribution during the last session of the workshop.

## (3) Problems Analysis

The core problem facing the community living in the Mahananneriya Medium Irrigation Scheme was the unsatisfactory economic status in which they were placed. The problems that resulted in this situation were fivefold. The irregularities in the irrigation system, collapse of agriculture, unemployment, disunity in village and poor public amenities were the critical problems in the village.

### 1) Irregularities in irrigation system

The farmers do not receive sufficient water, not even as much as they received before. There are a number of reasons that cause this problem. The tanks are silted, especially because there is illegal cultivation in the tank reservations and also because the tank has not been rehabilitated. There is also a loss of water due to the canal system being not rehabilitated and also because the anicuts have not been permanently constructed. Improper water management, especially because of the lack of advice and guidance by the officials and also due to non-adherence to Kanna rules and decisions. Finally due to the unlawful destruction of forest resources environmental changes have taken place.

## 2) Collapse of agriculture

First, the low productivity of paddy, not cultivating other field crops in the paddy fields and the dearth of land for cultivation are the three main problems facing agriculture. There is a lack of knowledge of the prevalent loan schemes and therefore there is a shortage of funds for agriculture. Since inputs are not received in time the farmers find it difficult to cultivate according to Kanna schedule. As a result of co-operation extended to the Farmers' Organisation and its own lack of planning the Department of Agrarian Services cannot estimate the agricultural inputs required and therefore, farm inputs are not received in sufficient quantities. The absence of long-term planning, and assistance from government agencies agricultural equipment is not available at a reasonable price. Second, the farmers do not cultivate other field crops in the paddy fields. The farmers also do not receive a proper price for other field crops. In Yala, there is not enough water to cultivate other field crops, moreover other facilities are also lacking, especially, the farmers do not receive sufficient advice from the agricultural officers. Third, there is the problem of land, both the shortage of land and also the fact that the land that is available is dispersed.

## 3) Unemployment

There is a lack of qualifications to seek outside employment, especially because facilities and finances to obtain professional and technical training are not available. It is also not possible to start self-employment ventures because of a number of problems. There is no infrastructure facilities, such as electricity and also no capital, ideas or marketing information. Therefore, even the resources that are available are not used.

## 4) Disunity in village

The collapse of social and moral values and increase of social problems is a result of the disunity that prevails in the community. There is a shortage of officials to seek advice and the problem does not receive the attention of the officials. One of the serious problems is addiction to alcohol. Community activities are absent and laziness prevails and people are moving away from simple living. There is a loss of traditional rural culture and the rise of social and economic differences within the community, where some are without bare necessities such as, housing and toilet facilities are other reasons for disunity.

#### 5) Poor public amenities

Lack of drinking-water, toilets, proper housing and communication and health facilities are the main problems. However, the most serious is the absence of health facilities, where doctors are not available or change very often and medicines are not available has made it difficult to care for disease.

#### (4) Objectives Analysis

The development of the socio-economic status of the people is the main objective of those living in the Mahananneriya Medium Scheme. There are five principal objectives to be achieved. They are to construct a proper irrigation system, improve crop cultivation, create job opportunities, create unity and obtain common amenities.

##### 1) Construct proper irrigation system

Sufficient water for cultivation is to be received first, by reducing water loss, by rehabilitating the canal system and building permanent anicuts. Second, by removing encroachers on reservations, de-silting and rehabilitating the tank. Third, by protecting the forests. Fourthly, by proper water management, adhering to Kanna decisions and organising to get advice from the relevant officials.

##### 2) Improve crop cultivation

This is to be done by improving productivity of paddy and by cultivating other field crops in the paddy fields. Productivity is to be increased first, by obtaining necessary advice and financial assistance. Second, it is to be done by cultivating according to the Kanna schedule and obtaining inputs in time. Seeds are to be produced in the community by farmers. Third, quality inputs are to be used in the proper quantity. A plan is to be prepared by the Farmers' Organisation in consultation with the Department of Agrarian Services and estimate the input requirements. Fourth, a programme is to be established to get agricultural equipment at a reasonable price. This is to be done by establishing close communications between the farmers, the Farmers' Organisation and the Department of Agrarian Services. In addition, other field crops would be cultivated in the paddy fields, Water for cultivation in Yala will be obtained by constructing agro-wells. Necessary advice will be obtained from the relevant officers and good prices will be obtained by producing good quality other field crops.

### 3) Create job opportunities

Higher qualifications will open the way for better jobs opportunities. Additional professional training will be provided and funds for such training will have to be provided. Small enterprises would be set up to provide self-employment opportunities. Necessary infrastructure facilities and capital will have to be provided. Methods of using available resource need to be identified and extension services and market information will have to be obtained from relevant agencies.

### 4) Create unity

Social problems will have to be resolved and social and moral values will have to be re-established. Obtain services of educated persons and also legal advice to eradicate alcoholism. Educate the involved persons. Educate villagers to rid laziness and lead simple lives. Knowledge about traditional rural culture must be revived, economic difference must be reduced.

### 5) Obtain common amenities

Provide better housing, toilet facilities, drinking water and health facilities. Necessary medical officers and medical supplies must be provided. In order to create better health habits, health clinics covering sanitation and nutrition must be conducted.

## (5) Alternatives Analysis

Four alternatives or 'Approaches' were identified at the workshop held in the Mahananneriya Medium Irrigation Scheme. On the basis of priority 'strengthening of Farmers' Organisations' is ranked first, followed by 'rehabilitation and improvement of irrigation'. 'Improvement of agricultural activities' and 'improvement of rural infrastructure' are ranked next in that order in the list of 'Approaches'.

### 3.2.5 Mahananneriya Minor Schemes (Cascade)

#### (1) Participants

At the two workshops held in the Mahananneriya minor scheme (cascade) there were 115 participants in all, 96 of them were beneficiary participants and 19 were resource persons. Of all participants 90 were men and 25 were women. There were 12 farmer leaders, which included 02 women and were office-bearers in the Farmers' Organisations. In addition, there were 53 members of the Farmers'

Organisations. 09 of them were women. There were also 07 other farmers, all men and 10 from the Women's Society. The Youth Clubs had 04 members, 02 of them being women. There were 10 local field officials, 05 of them were Farmer Animators, 04 Grama Niladaris and 01 Work Supervisor. Of the field officers, 02 of the 05 Farmer Animators were women and all others were men.

All 10 serving as resource persons were men. There were 08 from the Department of Agrarian Services, 04 from the Department of Agriculture, 03 from the Department of Irrigation and 02 each, from the Divisional Secretariat and the Irrigation Management Division.

## (2) Participatory Analysis

At the workshops there were seven categories of participants, including the resource persons. There were the farmer leaders, made up of the office-bearers of the Farmers' Organisations, and the members of the Organisations, who composed the major group. The next categories were the women and the youth, both groups were very important, in that they represent two groups which have problems and future hopes. The local field officials, being government employees, while being members of the farmer community made a special contribution at the workshop discussions. Finally, there were the resource persons who represented government agencies involved in the project and presented the official views regarding the matters discussed at the workshop.

## (3) Problem Analysis

The core problem facing the communities living within the Mahananneriya minor irrigation scheme cascade is their low socio-economic status, which is due to a stagnant economy. This is due to the low agricultural development, which in turn was due to shortage of irrigation water, lack of water management, low agricultural production, absence of additional sources of income, unemployment and the lack of amenities.

### 1) Shortage of irrigation water

There are three problems that cause this situation. First, changes in the environmental conditions in the area, such as, the destruction of forests, lack of rainfall and erosion of land, have had an impact. Second, shortcomings in the irrigation system have had a serious impact. The tanks and the canals are silted. Traditional de-silting practices are not followed, clearing of forest lead to filling up of tank the beds, and moreover, the tank beds are cultivated. The canal system too is damaged, not rehabilitated and not

maintained. The sluice gates and the anicuts are not functioning and spill-way water floods the paddy fields.

## 2) Lack of water management

Furthermore, there is no proper water management system. The villagers are not organised, they do not attend Kanna meetings and do not adhere to Kanna decisions. Farmers do not have knowledge of water management. There is no support from government officials, they take independent decisions and both Farmers' Organisations' and government officials change often.

## 3) Low agricultural production

Generally, the land is regarded as being infertile, due probably to long and continuous period of cultivation. The farmers do not receive agricultural advice in time, resulting in a lack of technology. Agricultural inputs are not received in time. The cost of production is high. Hiring costs of labour and equipment are high. Farmers do not use organic manure. Agricultural roads are not maintained well and it is difficult to take machinery to the fields. There are no market facilities to sell agricultural produce, therefore, produce is sold to middlemen at low prices. Credit facilities are inadequate and necessary money has to be borrowed from traders and shopkeepers. Finally, there is damage to crops from wild animals, mainly by wild elephants, and farmers do not have firearms to drive away the elephants.

## 4) Absence of additional sources of income

There is a general lack of opportunities to raise additional income in the village. Most common employment opportunity is that of casual labour, and end up getting addicted to alcohol. Women go in search of foreign employment, causing disunity in the families. Importance of livestock farming has decreased, because of absence of grasslands and the lack of markets for milk and other animal products.

## 5) Unemployment

Unemployment problem is especially prevalent among the young men and women. The inability to get a proper education, the lack of training facilities, thus no professional or technical knowledge, the absence of inputs infrastructure facilities and credit are the main factors leading to this situa-

tion. There are no youth organisations or youth activities. They are not interested in agriculture, because of its low income. There are no self-employment opportunities available.

#### 6) Lack of amenities

There are no toilets, drinking water facilities, health services or saving facilities. There are shortages of doctors, and health centres and clinics and no programmes on nutrition or sanitary problems, consequently, there is a general spreading of diseases. People are not used to saving and money is spent on alcohol and tobacco. In addition the rising cost of living, the absence of savings have led to indebtedness and fear.

#### (4) Objectives Analysis

The main objective, as recognised at the workshop is the improvement of the socio-economic level of the farmer community. This is to be done by providing sufficient irrigation water, setting up proper water management system, increasing agricultural productivity, providing additional income sources, providing employment opportunities and providing amenities.

##### 1) Providing sufficient irrigation water

Environmental conditions in the catchment area must be improved through reforestation, protection of forests and conservation of soil. The cultivation of tank bed has to be stopped. All tanks must be de-silted and traditional system of de-silting must be activated. Collect sufficient water by diverting water from Siyambalagama scheme to Kallanchiya. The irrigation system is to be rehabilitated by constructing the canal bunds and clearing them, improving the sluice and the anicuts so that spillway water will not damage the paddy fields by flooding.

##### 2) Set-up proper water management system

A well-structured water management system is to be installed. The distribution of water will be distributed according to Kanna decisions. Farmers will be educated and made to participate in Kanna meetings. Farmers' Organisations will be strengthened and better communication will be established between the Farmers' Organisations' office-bearers and the farmers, as well as, the officials of government agencies. Training programmes will be conducted on water management and farmers will participate on the basis of 'shramadana'.



### 3) Increase agricultural productivity

Training in modern agricultural methods will be provided, thereby increasing farmers' knowledge of new farming techniques. Proper advice will be given in time, and further, agricultural inputs, such as, seeds and fertiliser will also be provided in time. Mixed cultivation is to be promoted and also the cultivation of other field crops. The use of organic fertiliser, such as, compost and cow dung will be encouraged. Markets are to be established and quality agricultural products will be sold at reasonable prices. Selling agricultural produce to middlemen will be stopped and farmers will supply direct to the markets. Youth will be involved in agriculture, which will be done according to a plan. Arrangements will be made to provide credit, so that, farmers will not have to borrow from traders and shopkeepers. In order to the damage done by elephants and other wild animals, firearms are to be provided to farmers to protect their crops.

### 4) Provide additional income sources

Livestock farming will be improved by providing grasslands, increasing production and markets for milk and other animal products. Self-employment facilities will be established and women would stop going abroad for employment and getting into the habit of drinking and smoking. thus Unity will be restored in the family unit by establishing a strong economic base.

### 5) Create employment opportunities

Employment opportunities will be created within the scheme by developing self-employment avenues. Youth organisations would be set-up and youth activities would also be developed. Educational and training facilities, for improving skill and technical knowledge, will be established. Necessary infrastructure facilities, such as, electricity and roads, inputs, credit and markets for finished products would be provided.

### 6) Improve amenities

Drinking water facilities, toilets, saving programmes and health facilities would be developed. Particularly in the area of health, better health services would be provided, medical centres established, doctors appointed and medical supplies provided. Health clinics to improve nutritional and sanitary conditions will be conducted so as to prevent the spread of disease. Finally, a saving system will be set up. Awareness and training pro-

grammes on financial management will be conducted.

#### (5) Alternatives Analysis

There are four different alternatives or ‘Approaches’ identified at the workshop. ‘Strengthening of Farmers’ Organisations’ is ranked first, as the ‘Approach’ that needs top priority. This is followed by the ‘rehabilitation and improvement of irrigation’ and the ‘improvement of agricultural activity’ ‘Approaches’, respectively. The ‘Approach’ – ‘land development’ is ranked last in the list of alternatives.

### 3.3 Overall Results of PCM Workshops

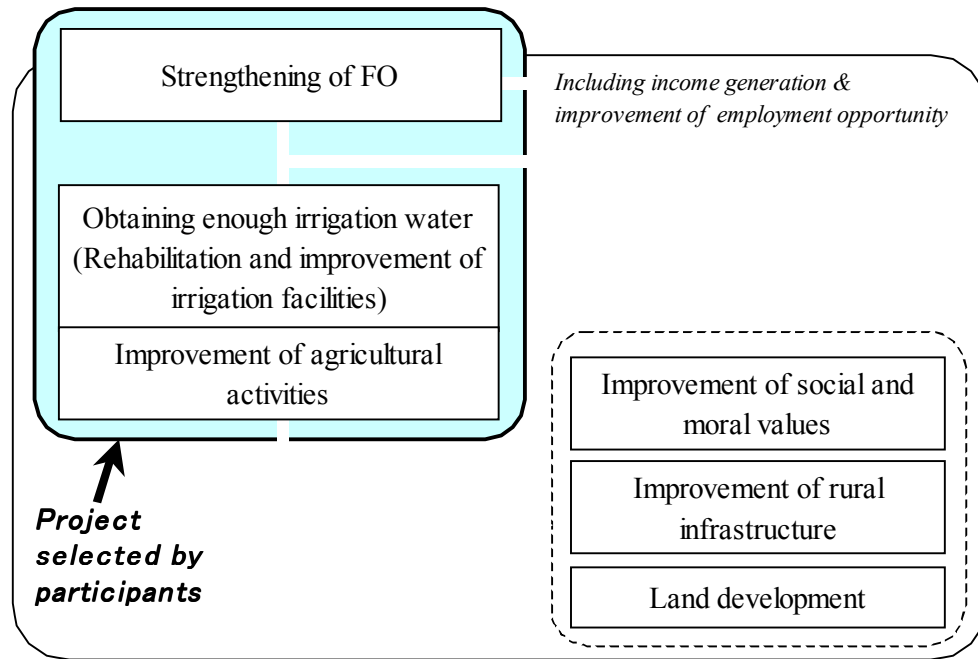
Based on the results of Objective Analyses, the Participants of most irrigation schemes identified the following six approaches.

- 1) Strengthening of FOs
- 2) Obtaining enough water supply
- 3) Improving agricultural activities
- 4) Improving social and moral values
- 5) Land development
- 6) Improving rural infrastructure

Of these, the Participants selected the following three approaches to be the main components of the development project, and they feel that since these Approaches are closely connected to each other, they should be implemented together.

1) Strengthening of FOs
2) Obtaining enough water supply
3) Improving agricultural activities

Overall, the results of the Alternative Analyses show that the economic development takes precedence over the improving living conditions in the community and the quality of life. With reference to “improving social and moral values” and “improving rural infrastructure”, the Participants that these will be automatically be resolved, once the income levels of farmers improve, with the strengthening of FOs. The emphasis was on the strengthening of FOs, which they felt was a necessary pre-requisite to solve other problems facing the communities.



Three alternative development approaches were identified through the workshops. Generally, the selection of approaches through Alternative Analysis through a complex process which uses criteria such as, the needs of local residents, technical, social and environmental aspects, and the probability of achieving the goals. However, in the workshops held in the schemes, it was not possible to carry out such a detailed analysis due to the nature of the Participants, with some having had only a few years of schooling. Therefore, the criteria adopted was limited to such factors as, the farmers needs, equal benefit to all villagers, effectiveness in improving the economic status, unity and social and moral values of the community, and the viability of the approaches. The approaches selected have been prioritised after an empirical assessment based on the above criteria.

### 3.4 Problems and Evaluation

#### 3.4.1 Problems

The application of the PCM method in Sri Lanka runs into a number of problems, unless it is modified to suit local conditions. The Logical Framework Approach (LFA) introduced by USAID and NORAD and the Objective-Oriented Project Planning (ZOPP) method used by GTZ has been used in this country before. These methods are expensive to use in a developing country, especially in rural areas. These methods have been used in the International Fund for Agricultural Development (IFAD) project in Kurunegala and the North Central Province Participatory Rural Development Project, funded by the ADB in Anuradhapura.

In Colombo the National Water Supply and Drainage Board uses the LFA method to develop water supply projects to low-income areas. The costs involved are excessive, for instance, a moderator is paid Rs.5000/= per day and the rental for two days for the special board to fix the cards is Rs. 20,000/= and LFA text, which is available in Sinhala, Tamil and English costs Rs. 200/= each. These methods are generally not used, unless special funding arrangements are available.

In the 1980's Sri Lanka developed its own participatory planning method to be used for project development in low income communities and is called the Community Action Planning (CAP) method and is this method is widely used at present.

If a Project Design Matrix (PDM) is to be developed, using the PCM method as given in the FASID (Foundation for Advanced Studies on International Development) text, it would require about a week with the farmers, since many brainstorming sessions will have to be held before an acceptable output is derived. However, such a programme could not be held, since the participants are low-income farmers who could not be away from work such a long period. Moreover, farmers find it difficult to follow the logic behind the PCM method, although they are well aware of the problems they face and the possible solutions to their problems. The farmers were also reluctant to discuss certain subjects, such as, caste, in public, although on a person to person basis they would express their views. Furthermore, most farmers, especially women are reluctant to express their views before a large, but not so in a small group.

Local field officers found it very difficult to act as participants, so different from their usual role, and it took much effort to make them realise their new role.

Many more farmers gathered at the workshop sites than expected. In fact the numbers were too large, but it was not possible to send them away without causing heartburn and also a loss of confidence about the entire program. It is impossible to conduct a 'true' PCM style workshop with such large numbers.

Consequently, it was decided to combine the CAP and PCM methods to overcome the above mentioned, problems and also to accommodate the local conditions that prevailed. In fact group discussions were effectively and extensively utilised in the workshops.

#### 3.4.2 Evaluation

As a new method in the planning process to be tried in the area, other than by the IFAD and the ADB projects, most participants, including the resource persons,

showed a keen interest in the method.

In particular, the senior officials, who were conversant with the method, were interested in obtaining a practical experience of the method.

The farmers and the other members of the community were bold to express their views before the officers whom, in some instances were confronting for the first time. This was so, because the workshops gave them the first opportunity to express their views on matters concerning them and their communities. They were proud to be involved in the planning process. In some instances some of the participants became emotional and shed tears, as at the Palukadawela Major Scheme, in the Puranagama, when they said that this was the first instance they were asked for their views before planning to develop their villages. Some cried when they present their problems. The enthusiasm shown at the workshops and how it grew as the workshop proceeded, was a clear indication of the impact it had on these communities.

## **Chapter 4 PROJECT DESIGN MATRIX**

### **4.1 General**

The Project Design Matrix (PDM) presents a development project as a causally linked sequence of events. It elaborates the major project components and plans based on the alternatives selected during the PCM workshops. The PDM presents in an easy to understand format the goal, the purpose, outputs, activities, inputs, objectively verifiable indicators, means of verification together with important assumptions and pre-conditions.

In using the PDM, it is assumed that the activities will take place if the inputs are available, performing the activities will produce the outputs, this will help achieve the project purpose and that this will lead to the fulfilment of the overall goal. The uncertainties are explained by the assumptions, which are generally outside the control of the project. Finally, there are the pre-conditions, which identify the requirements that are needed to initiate the project.

The PDM will serve as a reference document throughout the life of the project, especially in monitoring and evaluating the project.

Through the PCM workshops, the participants involving the development project in the schemes identified many alternative approaches. From these approaches, one development plan to be incorporated into the Feasibility Study was selected by the Participants. The Study Team prepares PDM for this plan.

In addition, other alternative approaches are examined by comparison against possible approach to be implemented by FOs or local governments concerned within their own funds, and some possible plans will be selected by the participants.

### **4.2 Project Design Matrix to be supported by the Government**

The five preliminary Project Design Matrices prepared for the five schemes in the Project are to a large extent similar. The different categories of participants, the problems faced and identified by the communities resident in the different schemes, the possible solutions proposed for the problems identified and the possible alternative options selected and the priorities were more or less similar. The critical 'Approaches' selected were the 'strengthening of Farmers' Organisations', 'rehabilitation and improvement of irrigation' and the 'improvement of agricultural activities'.

Based on the results of PCM workshops, PDM was prepared for each scheme, as shown in Tables W 4.1 to W 4.5.

Schemes	PCM Workshop	Core Objectives	PDMs	
			Project Title	Project Purpose
Nachchaduwa Major Scheme	Nachchaduwa-1	Increasing income among farmer community	Nachchaduwa Development Project for Irrigated Agriculture and the Community	Increasing income among farmers
	Nachchaduwa-2	Developing socio-economic level		
	Nachchaduwa-3	Promoting good social economic level		
Palukadawela Major Scheme	Palukadawela-1	Developing economy	Palukadawela Development Project for Irrigated Agriculture and the Community	Creating suitable economic level
	Palukadawela-2	Developing economic status		
	Palukadawela-3	Creating suitable economic level		
Periyakulama Medium Scheme	Periyakulama Medium	Bringing up economic status of farmer community	Periyakulama Development Project for Irrigated Agriculture and the Community	Economic status of farmer community is improved.
Mahananneriya Medium Scheme	Mahananneriya Medium	Developing socio-economic status	Mahananneriya Medium Scheme Development Project for Irrigated Agriculture and the Community	Socio-economic status is improved.
Mahananneriya Minor Schemes (Cascade)	Mahananneriya-1	Increasing economic level	Mahananneriya Minor Schemes Development Project for Irrigated Agriculture and the Community	Socio-economic status is improved.
	Mahananneriya-2	Developing socio-economy of community		

### (1) Overall Goal

The overall goal in all five schemes was the achievement of sustainable development in regional agriculture and improving agricultural productivity in the rural communities.

The planning and implementation of development activities, independently by Farmers' Organisations and farmers themselves will provide the 'Objectively Verifiable Indicators'.

The 'Means of Verification' will be the monitoring reports of the Project Office (PMU)

The important 'Assumption' in this instance will be that the agricultural policy of the government will not hinder the implementation of the project.

### (2) Project Purpose

Project purpose in all areas is the improvement of the social and economic status of the communities and increasing the income levels of the farmers.

The 'Objectively Verifiable Indicator' will be the progressive increase of the total gross income of farmers, until the end of the project.

The 'Means of Verification' will be the monitoring reports of the Project Office (PMU).

The important 'Assumption' will be that agricultural products will not have to face unreasonable competition from imported products.

### (3) Outputs

There are three main outputs identified, namely, Farmers' Organisations having multi-function, irrigation water is properly supplied according to a schedule and agricultural activities are improved. Except for the last function all schemes are in agreement with the first two outputs.

- 1) Farmers' Organisations having multi-functions: Farmers' Organisations will have a number of functions. They will cover a wide spectrum of activities and will include, irrigation, agriculture, small enterprises, income generation and the responsibility to organise and activate social services.

The 'Objectively Verifiable Indicators' are that the Farmers' Organisations provide various services, including, income generation, and committee and sub-committee meetings are held on a monthly basis, from the third year after the commencement of the project.

The 'Means of Verification' will be the minutes of the Farmers' Organisations' general, committee and sub-committee meetings and the monitoring reports of the project office (PMU).

- 2) Irrigation water is properly supplied in accordance with a schedule: There are three main activities involved. First, all irrigation facilities are to be rehabilitated and improved. Second, proper water management is to be carried out by the Farmers' Organisation. Third, irrigation facilities that are reconstructed are to be maintained.

The 'Objectively Verifiable Indicators' are that: First, the farmers are able to receive water according to a schedule until the end of the project. Second, all irrigation facilities are repaired and improved by the fifth year after commencement of the project. Third, the discharge of water will be observed by Farmers' Organisations and the Department of Irrigation, after the completion of construction work, and over 80% of farmers attend Kanna meetings from the fifth year after commencement of the project. Fourth, all facilities below the D-canal gates are maintained by Farmers' Organisations, after completion of construction work, and 80% of farmers participate in 'sramadana', from the fourth year after commencement of the project.

The 'Means of Verification' are the monitoring reports of the project office (PMU), the minutes of Kanna meetings and the records of Farmers' Organisations.



- 3) Agricultural activities are improved: All schemes are agreed that marketing of farm inputs and outputs should be improved and that access to credit services should also be improved. While in the Palukadawela Major scheme crop cultivation in general should be improved, Mahananneriya medium scheme suggests that productivity of paddy is improved, Nachchaduwa and Mahananneriya minor schemes wish that yields of both paddy and other field crops are increased. Mahananneriya medium and minor schemes and Periyakulama medium scheme feels that the cultivation of other field crops must be expanded. Nachchaduwa also feels that there should be a general diversification of crops. An anticipated output of the Palukadawela major scheme is the effective use of farm- lands. The Periyakulama medium scheme and the Mahananneriya medium and minor schemes have the reduction of deforestation of the catchment area as a common output.

There are ten 'Objectively Verifiable Indicators'. The agricultural productivity of farmers is to be improved from the third year after completion of construction work.. The extent of other field crops will be 20% of the paddy area in Yala, Nachchaduwa major scheme and Periyakulama medium scheme, and 10% of the paddy area in Yala in Mahananneriya medium and minor schemes. The quality control of other field crops will be introduced from the third year after commencement of the project and collecting points for the produce is established in the area by the fourth year after commencement of the project. The yields of crops will reach the level of 'Projected yields' from by year after completion of construction work. The group purchasing of farm input will be actively implemented by the fourth year after commencement of the project, in the Nachchaduwa and Palukadawela major schemes and by the third year after commencement of the project in all other schemes. The group loan, revolving loan and the multi-aid credit systems are established by the fourth year after commencement of the project in Nachchaduwa and the Palukadawela major schemes and by the third year in the other schemes. In the Periyakulama medium scheme products will be sold directly by farmers to the markets by the third year after commencement of the project. In the Palukadawela major scheme the utilisation of fallow land will be progressive expanded from the third year after commencement of the project. And finally, in the Periyakulama medium scheme and the Mahananneriya medium and minor schemes tree crops will be planted from the third year after com-

mencement of the project.

The means of verification will be the Farmer Animators field survey reports, the records of the Agricultural Instructor of the Department of Agrarian Services, monitoring reports of the project office (PMU), Farmers' Organisation accounts books and financial reports of the general meeting and reports of the Banks.

The important 'Assumptions under 'Outputs' are that there are no extreme natural disasters such as, droughts and heavy rains, that the government will enforce existing rules and regulations to protect the environment. Furthermore, it is assumed that other sectors of the economy will not have any drastic changes and also that the social condition will have no such changes. Finally it is assumed that the project will not have any adverse effects from other development projects, even if there are any overlaps.

#### (4) Activities

There are three main activities that are common to all schemes. There are the strengthening of a Farmers' Organisations, the supply of irrigation water according to a schedule and the improvement of agricultural activities.

- 1) Strengthening of Farmers' Organisations: In the process of strengthening the Farmers' Organisations initially, awareness and training programmes must be implement. They need to be re-organised as multi-functional units and finally income generation activities must be implemented through the Farmers' Organisations.
- 2) Supply of irrigation water according to a schedule: Initially, irrigation facilities need to be rehabilitated and improved. This has to be followed by improving water management and finally, the operation and maintenance of irrigation facilities must be strengthened.
- 3) Improving agricultural activities: There are five activities identified under this activity. First, the cultivation of other field crops must be promoted. Second, agricultural extension services need to be strengthened. Third, marketing facilities for farm inputs and outputs has to be improved. Fourth, credit services have to be improved and finally, reforestation in the catchment area has to be promoted.

There are three important assumptions, namely, that officers who are trained will stay with the project, that senior officials will positively sup-

port the project and no action will be taken to destabilise the local market.

#### (5) Inputs

##### Contribution by Foreign Donor

The foreign donor will cover the costs of mobilisation, awareness and training programmes and rehabilitation costs. Vehicles, operation and maintenance equipment, and extension equipment will also be provided by the foreign donor. Facilities for extension, including provincial seed farms and farmer centres, capital funds for the improvement of credit services, costs of monitoring and engineering services will also be provided by the foreign donor.

##### Contributions by the Government of Sri Lanka

The Sri Lankan Government will provide the necessary manpower, such as, local engineers, experts, administrative officers and support staff. It will also provide facilities for the Project Management Unit.

Farmers will contribute 10% of the rehabilitation and improvement costs of distributory and field canals.

Non-Governmental Organisations will contribute in the implementation of awareness and training programmes.

#### (6) Pre-conditions

The Sri Lankan government will raise all project funds, including the foreign currency portion, local currency portion and the recurrent costs of the Project Management Unit.

The Ministry of Irrigation and Power and the other concerned agencies will establish the necessary organisation to implement the project.

The Ministry of Irrigation and Power and the other concerned agencies will provide the necessary personnel and the physical facilities to operate the project.

### **4.3 Project Design Matrix to be implemented by the Farmers**

#### **4.3.1 Re-establishing Unity in the Community through Youth Activities (Palukadawela Major Irrigation Scheme)**

During the PCM workshops held in the Palukadawela Major Irrigation Scheme one of the main problems identified is the absence of unity amongst the people, which it was felt was the result of a number of other problems facing the commu-

nities. Unemployment, especially among the youth, the decline of moral and social and moral values, addiction to alcohol and drugs and to a significant extent the alienation of youth from community affairs are some of the problems. The PCM workshop, gave the youth an opportunity to air their grievances in the open and realise that they could take the initiative and change the social and economic environment of the community for the better. What was more heartening was the positive reaction of the community elders. This PDM is the result of the enthusiasm shown by the youth at the end of the PCM workshop and the determination to start immediately.

The overall goal of is to develop strong unity among the community. The objectively verifiable indicator is the regaining of unity among elders in the community in three years. The means of verification will be the number of members in the Farmers' Organisation and other community based organisations and interviews with the community. The important assumption is that other sectors will not have drastic and sudden change of attitude towards youth activities.

The project purpose is the strengthening of youth organisations through community development activities. The objectively verifiable indicators would be the increase in membership and funds of the organisation and develop a long-term plan of activities. The means of verification will be the registration of members, bank accounts of the organisation and the minutes of the general meetings. The assumption will be that there will be no drastic changes in the social conditions of the community.

The outputs would be the setting up of the Youth Organisation, preparing an action plan with cost estimates, implement pre-school education in the village with female groups, implement a road development programme with the Farmers' Organisation, develop the school playground and establish a group loan scheme. The objectively verifiable indicators are, registration of the Youth Organisation, the relevant institutions would agree and approve the plan, register the pre-school in the year 2000, main roads in the village are improved through contracts in the year 2000. Further, the playground is to be improved and extended, improve tree planting and increase the organisation's funds. The means of verification will be the registration, applications and approvals of the different organisations, contract documents, minutes of general meetings, interviews with the Principal, reports of NGOs and records of loans issued and the bank accounts. The assumptions are that preferential external support to sections of the community will not take place and religious leaders will not influence.

The activities are to hold a meeting with village elders, enact a constitution,

organise seminars to plan action plan, conduct joint survey of village, set up co-ordinating committee, prepare action plan with cost estimates. Other activities are to improve pre-school building and train teacher, get contracts and construct road, develop playground, organise training in loan management and issue loans to youth. The important assumption is the relevant governmental agencies, on which the implementation of the action plan depends, will accept the plan.

By way of inputs, external organisations, such as, the Divisional secretariat, NYSC and the NGOs will provide training and workshop costs, part of the costs of improvement work, a monthly allowance for the pre-school teacher, capital funds or loan to obtain contracts reporting and travelling costs. The internal organisations, such as, the FOs, CBOs and the Women's Society will bear the costs of food and lodging for volunteers in the village and the travelling costs and day allowances to representatives of organisations.

A pre-condition is that the ASC accepts the participatory approach, increased community involvement and the bottom-up flow of communication.

#### 4.3.2 Development of Crop Diversification (Arthikulama Minor Irrigation Scheme)

Consequent to the PCM workshop held in Arthikulama, the participants felt that they need to organise themselves, and do the preparatory work before the project begins. It is to further this objective that a Project Design Matrix was prepared.

The overall goal of the project is to improve the agricultural productivity in the rural community. The objectively verifiable indicator will be the diversification of income sources in agricultural activities. The means of verification will be the monitoring reports of the Farmer Animator and an interview survey of the FO and the farmer families. The important assumption would be that the agricultural policy of the government will not hinder the implementation of the project.

The project purpose will be to diversify crop cultivation. The objectively verifiable indicators will be the continuous cultivation of OFCs in the paddy fields in Yala, the area cultivated with OFCs and permanent crops in the highlands will be increased and in general OFC cultivation will be increased. The means of verification are the minutes of the Kanna meetings and monitoring reports of the Farmer Animator. The assumption is that agricultural products will not have to face unreasonable competition from imported products.

The outputs are that the FO will prepare an annual plan for OFC cultivation, OFCs will be cultivated in the paddy fields in Yala, permanent crops will be planted in unused lands in the village. Other outputs are to improve soil conservation, util-

ise tank water for Yala cultivation and a marketing route is established in the Galgamuwa area. The objectively verifiable indicators will be that a plan is prepared by the FO and the CBOs, Bethma style land allocation and method of water management for OFCs will be discussed at the Kanna meeting. Further, cultivation groups and FO will plant permanent crops according to schedule, organic fertiliser produced by farmers, farmers are given training and appropriate techniques are used and sell products at a fixed place and a reasonable price. The means of verification will be the FO minutes of meetings and record of attendance, Yala Kanna meeting minutes, minutes of community resources management committee, reports of farmer animator and interviews of traders and farmers. The important assumptions are that there will be no extreme natural disasters, other sectors will not have any drastic and sudden changes and social conditions in the community will be stable.

The activities will include the holding a participatory planning workshop, set up a community resources management committee, conduct joint survey, prepare action plan for OFC cultivation. Further, training and educational programmes on organic fertiliser, soil improvement and water management are to be conducted. Co-operative buying of farm inputs for OFC cultivation, plant fruit and other trees and OFCs in paddy fields and group selling to traders in the Galgamuwa area are other activities. An important assumption is that relevant governmental institutions whose support is needed will accept the action plan.

Inputs by external organisations, such as, ASC, District Secretariat and NGOs are the provision of training and workshop costs, plants and other inputs for demonstrations, loans for trial co-operative purchasing of farm inputs and selling of OFC products and reporting and travelling costs. Internal organisations, such as, FOs CBOs and Women's groups, will provide food and lodging to volunteers, travelling costs and day allowances for representatives of the community.

The acceptance and support of relevant governmental institutions to increased community involvement, participatory planning and the bottom – up flow of communication will be the pre-conditions.

## **Chapter 5 CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Conclusions**

The use of PCM workshops provided an opportunity of getting a clear insight of the problems facing the rural communities in the intermediate and zones of Sri Lanka. Disunity among people was the basic problem, leading to weak Farmers Organisations, which again leads to other serious problems, such as, defective irrigation system, low agricultural production and the decline of social and moral values. Of course there are numerous other reasons which create the major problems as was seen in the discussions of the problems. Nevertheless, the re-establishment of unity, which was the key to the tranquillity that existed in the traditional Sinhala villages was accepted by almost everyone participating in the workshops.

The commitment and dedication of farmers, farmer leaders and the officials was also regarded as an important pre-requisite for sustainable development to take place. Similarly, the commitment and the genuine interest of the government to understand the problems of these people, and to find suitable solutions, were felt essential. The PCM method, with the active participation of the community, has provided a useful means of getting to know the problems faced by the people and the solutions they anticipate.

### **5.2 Recommendations**

It is recommended that the project be implemented on the basis of the Project Design Matrix prepared at the end of the PCM workshops. It is recommended that all inputs needed are provided and the three main activities identified, the strengthening of Farmers' Organisations, the provision of irrigation water according to a schedule and improving agricultural activities are implemented. This would enable the outputs to be achieved and the project purpose of increasing farmer incomes, and the overall goal of achieving sustainable development of regional agriculture and improving agricultural productivity of the rural communities, to be reached.

A series of similar workshops, conducted in 1987, had identified problems and proposed solutions almost identical the results of the PCM workshops. In spite of the attempts made by the government the problems seem to persist. It is therefore stressed that the situation be treated with the seriousness it deserves and make an earnest attempt to solve the problems faced by the rural community.

# TABLES



**Table W 2.1 Socio-economic Indicators of the Project Area**

	Nachcha- duwa Major Scheme	Palukada- wela Major Scheme	Periya- kulama Medium Scheme	Mahanan- neriya Medium Scheme	Mahanan- neriya Minor Schemes (Cascade)	Total
<b>1. Villages</b>						
(1) Number of villages (No.)	35	18	1	7	10	71
(2) Historical background of villages						
Traditional (No.)	13	6	1	1	9	30
Settlement (No.)	9	6	-	-	-	15
<b>2. Demographic Feature</b>						
(1) Population (No.)	21,860	7,220	1,000	2,200	2,810	35,090
(2) Household (No.)	6,860	2,170	210	510	730	10,480
(3) Family size (Person/household)	3.2	3.3	4.8	4.3	3.8	3.3
(4) Ethnic group						
Sinhalese (%)	90.0	87.4	100	98.0	100	86.1
Tamil (%)	0.1	1.0	-	-	-	0.1
Muslim (%)	9.9	11.6	-	2.0	-	13.7
Other (%)	-	-	-	-	-	0.1
(5) Farm household						
• Irrigated Paddy Field						
Idam Himi Govi (No.)	2,380	840	140	360	240	3,960
Anda Govi (No.)	660	210	30	-	190	1,090
Badu (No.)	190	50	10	150	20	420
Total (No.)	3,230	1,100	180	510	450	5,470
• Highland						
Idam Himi Govi (No.)	3,160	780	10	1,500	470	5,920
Anda Govi (No.)	-	-	-	-	-	-
Badu (No.)	-	-	-	-	30	30
Total (No.)	3,160	780	10	1,500	440	5,890
<b>3. Farmers' Organization (FO)</b>						
(1) Number of FO (No.)	14	7	1	1	5	28
(2) Number of member						
Total member (No.)	2,558	927	52	186	301	4,024
Average member per FO (No.)	183	132	52	186	60	144
(3) Member by land tenure						
Idam Himi Govi (%)	85.0	96.6	*	69.9	77.1	*
Anda Govi (%)	10.6	3.4	*	-	22.9	*
Badu (%)	4.4	-	*	30.1	-	*
Others (%)	-	-	*	-	-	*
(4) Year established (Year)	1982-1990	1970-1990	1984	1982	1988-1996	1970-1996
(5) Average joining ratio (%)	70	72	25	10	56	43
<b>4. Total Farm Land</b>						
(1) Irrigated paddy field	2,540	956	91	158	117	3,862
(2) Rainfed paddy field (ha)	413	10	-	10	66	499
(3) Highland field (ha)	957	615	81	809	541	3,003
<b>5. Marketing and Processing Facilities</b>						
(1) Pola (Yes/No)	Yes	Yes	No	Yes	Yes	-
(2) Rice Mill (No.)	60	19	3	10	6	98
(3) Grinding mills (No.)	22	3	2	1	2	30
(4) Storage House - Paddy (No.)	2	3	-	-	1	6
(5) Storage House - Fertilisers (No.)	6	1	-	1	1	9

Sources: Data obtained from FOs.

\* : No data is available.

**Table W 3.1 Attendance of PCM Workshops**

No.	Date	Name of Scheme and FO	Workshop Participants																			Resources Person											Grand Total						
			FO/FC Leader		Members		Community		Women's Society		Youth Club		Farmer Animators		Grama Niladari		IDO/FO Manager		IDO/WS		Samurdhi Development		Total Participants for WS			DAS		DOA		DOI		D. Secretary		IMD		Total - Resources Person			
			M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total	M	F	M	F	M	F	M	F	M		F	Total				
1	27 & 28 Nov.	<b>Nachchaduwa - 1</b> (Mahanama FO, Parakrama FO, Mahasen FO, Sena Samagi FO)	5	-	9	2	-	-	-	-	-	-	4	1	4	-	1	1	1	-	-	1	24	5	29	-	1	1	1	1	1	-	2	-	5	3	8	37	
2	27 & 28 Nov.	<b>Nachchaduwa - 2</b> (Ruwanweli FO, 26 & 27 DC FO, Ranketha FO, Thissa FO)	12	-	-	1	-	-	-	-	-	1	2	2	-	-	1	1	-	-	-	16	4	20	1	-	2	-	3	-	1	-	1	-	8	-	8	28	
3	4,5 & 11 Dec.	<b>Nachchaduwa - 3</b> (Isuru FO, Eksath FO, Gemunu FO, Al - Aksha FO, Ranamayura FO, Wijaya FO)	11	-	9	12	-	-	-	1	-	-	3	2	3	3	2	2	1	-	-	1	29	21	50	-	-	2	-	3	-	-	-	2	-	7	-	7	57
4	5 & 6 Dec.	<b>Palukadawala (Track 1-3)</b> (Track-1 FO, Track-2 FO, Track-3 FO)	7	-	31	11	-	-	-	8	-	-	1	5	2	3	-	-	1	-	-	-	42	27	69	-	-	4	-	3	-	2	-	5	-	14	-	14	83
5	7 & 8 Dec.	<b>Palukandawa (Purangama)</b> (Puranagama Walagamba FO)	5	-	30	8	14	-	-	-	-	-	1	4	1	-	1	-	1	-	-	-	53	12	65	-	-	5	-	4	-	3	-	4	-	16	-	16	81
6	11 & 12 Dec.	<b>Palukandawa (Track 4-6)</b> (Track-4 FO, Track-5 FO, Track-6 FO)	6	-	50	9	8	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	67	9	76	-	-	4	-	2	-	2	-	4	-	12	-	12	88
7	21 & 22 Nov.	<b>Periyakulama</b> (Ekamuthu FO)	3	-	20	12	-	-	-	2	2	3	-	1	2	1	1	-	1	-	1	-	30	19	49	2	-	1	-	2	1	2	-	1	-	8	1	9	58
8	1 & 2 Dec.	<b>Mahananneriya Medium</b> (Ekabaddha FO)	11	-	2	2	-	-	-	9	-	-	1	3	5	1	-	1	1	-	-	-	20	16	36	1	-	2	-	3	-	-	-	1	-	7	-	7	43
9	23 & 24 Nov.	<b>Mahananneriya - Minor</b> (Kallanchiya/Nidahas FO, Aththikulama/ Samagi FO, Palumailawa/Ekamutha FO)	5	-	25	3	7	-	-	7	2	-	2	1	2	-	-	-	1	-	-	-	44	11	55	6	-	2	-	2	-	1	-	1	-	12	-	12	67
10	25 & 26 Nov.	<b>Mahananneriya - Minor</b> (Ihalagama/Eksath FO, Tambarewewa/ Samagi FO, Ihalananneriya/Eksath FO)	5	2	19	6	-	-	-	3	-	2	1	1	2	-	-	-	-	-	-	-	27	14	41	2	-	2	-	1	-	1	-	1	-	7	-	7	48
			70	2	195	66	29	-	-	30	4	5	14	20	25	8	5	5	9	-	1	2	352	138	490	12	1	25	1	24	2	13	-	22	-	96	4	100	590

**Table W 4.1 Project Design Matrix: Nachchaduwa Major Irrigation Scheme**

Name of Project : Nachchaduwa Development Project for Irrigated Agriculture and the Community		Duration : 7 years		Date : 18 January 2000
Project Area : Nachchaduwa Major Irrigation Scheme		Target Group : Farmers, youth, and women in the Nachchaduwa Scheme		
Executing Agency : Ministry of Irrigation and Power (MIP)				
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions	
<b>Overall Goal</b>				
1.1 Achieving sustainable development of regional agriculture	1.1 Development activities are planned and implemented independently by FOs and farmers themselves.	1.1 Monitoring reports of the project office (PMU)	Agricultural policy of the Government not hinder implementation of the project.	
1.2 Improving agricultural productivity of the rural community	1.2 Agriculture is economically feasible.	1.2 Monitoring reports of PMU		
<b>Project Purpose</b>				
2.1 Increasing income among farmers	2.1 Total gross income of farmers increase progressively by the end of the project.	2.1 Monitoring reports of PMU	Agricultural products do not have to face unreasonable competition from imported products.	
<b>Outputs</b>				
3.1 FOs having multi functions relating to irrigation, agriculture, small enterprises, income generations, social services are established and activated.	3.1.1 FOs provide various services including income generation, etc. from the 3rd year after commencement of the project.	3.1.1 Minutes of FOs' general meeting and monitoring reports of PMU	There is no extreme natural disaster (drought, heavy rain, etc.). Government enforces existing rules and regulations to protect environment. Other sectors have no drastic and sudden change in the economic activities. Social conditions in the community have no drastic change. The project has no adverse effect from the other development projects, even if they overlapped.	
3.2 Irrigation water is properly supplied in accordance with a schedule.	3.1.2 Committee and sub-committee meetings are held monthly by the 3rd year after commencement of the project.	3.1.2 Minutes of FOs' committee and sub-committee meetings		
3.2.1 Irrigation facilities are rehabilitated and improved.	3.2 Farmers are able to receive water in accordance with a schedule by the end of the project.	3.2 Monitoring reports of PMU		
3.2.2 Proper water management is done by FOs.	3.2.1 Facilities necessary for proper water supply are repaired and improved by the 5th year after commencement of the project.	3.2.1 Records of RPM's office		
3.2.3 Irrigation facilities are maintained.	3.2.2 Discharge is observed by FOs and DOI after completion of construction works.	3.2.2 Records of DOI		
3.3 Agricultural activities are improved.	3.2.3 All facilities below gates of D-canal are maintained by FOs after completion of construction works.	3.2.3 Monitoring reports of PMU		
3.3.1 Crop cultivation is diversified.	3.3 Agricultural productivity of farmers is improved from the 3rd year after completion of construction works.	3.3 Animators' field survey reports and records of ASC (AI)		
3.3.2 Yields of paddy and OFC are increased.	3.3.1 Extent of OFC occupies about 20% of paddy area in Yala by the end of the project.	3.3.1 Animators' field survey reports		
3.3.3 Marketing of farm inputs and outputs is improved.	3.3.2 Yields of crops reach the level of "projected yields" by the 3rd year after completion of construction works.	3.3.2 Animators' field survey reports		
3.3.4 Access to credit services is improved.	3.3.3 (1) Group purchasing of farm inputs is implemented actively by the 4th year after commencement of the project.	3.3.3 (1) FOs' account books and financial reports in FOs' general meeting		
	3.3.3 (2) Collecting point for OFC is established in the area by the 4th year after commencement of the project.	3.3.3 (2) Animators' field survey reports		
	3.3.4 Group loan, revolving loan and multi-aid credit systems are established by the 4th year after commencement of the project.	3.3.4 Reports of Banks, monitoring reports of PMU		
<b>Activities</b>	<b>Inputs</b>			
4.1 Strengthening FOs.	<b>Foreign Donor</b>	<b>Sri Lankan Side</b>	Trained Officers stay with the project. Local government and front line officers positively support the project. No action will be taken by government to destabilize local market.	
4.1.1 Implement awareness and training programmes.	Mobilization, awareness and training costs	(1) Sri Lankan Government		
4.1.2 Reorganize FOs to have multi function.	Rehabilitation and improvement cost	Manpower	<b>Pre-conditions</b> The Sri Lankan Government raises all project funds including foreign currency portion, local currency portion and recurrent cost of PMU. MIP and agencies concerned establishes organization to implement project. To operate the project, necessary officers and physical facilities are provided by MIP and agencies concerned.	
4.1.3 Implement income generation through FOs.	Equipment	- Local engineers/experts		
4.2 Supplying irrigation water in accordance with schedule.	- Vehicles	- Administrative officers		
4.2.1 Rehabilitate and improve irrigation facilities.	- O&M equipment	- Supporting staff		
4.2.2 Improve water management.	- Equipment for agri. extension	Facilities of PMU		
4.2.3 Strengthen O&M of irrigation facilities.	Facilities	Recurrent cost for project implementation		
4.3 Improving agricultural activities.	- Facilities for improvement of agri. extension	(2) Farmers		
4.3.1 Promote crop diversification.	- Farmer centers	10% of rehabilitation and improvement cost of D- and F-canals		
4.3.2 Strengthen agricultural extension services.	Capital funds for improvement of credit services	(3) NGO for implementing awareness and training programmes		
4.3.3 Improve marketing of farm inputs and outputs.	Monitoring cost			
4.3.4 Improve credit services for purchase of farm inputs and equipment.	Cost for engineering services			

**Table W 4.2 Project Design Matrix: Palukadawela Major Irrigation Scheme**

Name of Project : Palukadawela Development Project for Irrigated Agriculture and the Community		Duration : 6 years	Date : 18 January 2000
Project Area : Palukadawela Major Irrigation Scheme		Target Group : Farmers, youth, and women in the Palukadawela Scheme	
Executing Agency : Ministry of Irrigation and Power (MIP)			
Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b>			
1.1 Achieving sustainable development of regional agriculture	1.1 Development activities are planned and implemented independently by FOs and farmers themselves.	1.1 Monitoring reports of the project office (PMU)	Agricultural policy of the Government not hinder implementation of the project.
1.2 Improving agricultural productivity of the rural community	1.2 Agriculture is economically feasible.	1.2 Monitoring reports of PMU	
<b>Project Purpose</b>			
2.1 Creating suitable economic level	2.1 Total gross income of farmers increase progressively by the end of the project.	2.1 Monitoring reports of PMU	Agricultural products do not have to face unreasonable competition from imported products.
<b>Outputs</b>			
3.1 FOs having multi functions relating to irrigation, agriculture, small enterprises, income generations, social services are established and activated.	3.1.1 FOs provide various services including income generation, etc. from the 3rd year after commencement of the project.	3.1.1 Minutes of FOs' general meeting and monitoring reports of PMU	There is no extreme natural disaster (drought, heavy rain, etc.). Government enforces existing rules and regulations to protect environment. Other sectors have no drastic and sudden change in the economic activities. Social conditions in the community have no drastic change. The project has no adverse effect from the other development projects, even if they overlapped.
3.2 Irrigation water is properly supplied in accordance with a schedule.	3.1.2 Committee and sub-committee meetings are held monthly by the 3rd year after commencement of the project.	3.1.2 Minutes of FOs' committee and sub-committee meetings	
3.2.1 Irrigation facilities are rehabilitated and improved.	3.2 Farmers are able to receive water in accordance with a schedule by the end of the project.	3.2 Monitoring reports of PMU	
3.2.2 Proper water management is done by FOs.	3.2.1 Facilities necessary for proper water supply are repaired and improved by the 5th year after commencement of the project.	3.2.1 Records of RPM's office	
3.2.3 Irrigation facilities are maintained.	3.2.2 Discharge is observed by FOs and DOI after completion of construction works.	3.2.2 Records of DOI	
3.3 Agricultural activities are improved.	3.2.3 All facilities below gates of D-canal are maintained by FOs after completion of construction works.	3.2.3 Monitoring reports of PMU	
3.3.1 Farm lands are used effectively.	3.3 Agricultural productivity of farmers is improved from the 3rd year after completion of construction works.	3.3 Animators' field survey reports and records of ASC (AI)	
3.3.2 Productivity of crop cultivation is improved.	3.3.1 Utilization of fallow land is expanded progressively from the 3rd year after commencement of the project.	3.3.1 Animators' field survey reports	
3.3.3 Marketing of farm inputs and outputs is improved.	3.3.2 Yields of crops reach the level of "projected yields" by the 3rd year after completion of construction works.	3.3.2 Animators' field survey reports	
3.3.4 Access to credit services is improved.	3.3.3 (1) Group purchasing of farm inputs is implemented actively by the 4th year after commencement of the project.	3.3.3 (1) FOs' account books and financial reports in FOs' general meeting	
	3.3.3 (2) Collecting point for OFC is established in the area by the 4th year after commencement of the project.	3.3.3 (2) Animators' field survey reports	
	3.3.4 Group loan, revolving loan and multi-aid credit systems are established by the 4th year after commencement of the project.	3.3.4 Reports of Banks, monitoring reports of PMU	
<b>Activities</b>	<b>Inputs</b>		
4.1 Strengthening FOs.	<u>Foreign Donor</u>	<u>Sri Lankan Side</u>	Trained Officers stay with the project. Local government and front line officers positively support the project. No action will be taken by government to destabilize local market.
4.1.1 Implement awareness and training programmes.	Mobilization, awareness and training costs	(1) Sri Lankan Government	<b>Pre-conditions</b> The Sri Lankan Government raises all project funds including foreign currency portion, local currency portion and recurrent cost of PMU. MIP and agencies concerned establishes organization to implement project. To operate the project, necessary officers and physical facilities are provided by MIP and agencies concerned.
4.1.2 Reorganize FOs to have multi function.	Rehabilitation and improvement cost	Manpower	
4.1.3 Implement income generation through FOs.	Equipment	- Local engineers/experts	
4.2 Supplying irrigation water in accordance with schedule.	- Vehicles	- Administrative officers	
4.2.1 Rehabilitate and improve irrigation facilities.	- O&M equipment	- Supporting staff	
4.2.2 Improve water management.	- Equipment for agri. extension	Facilities of PMU	
4.2.3 Strengthen O&M of irrigation facilities.	Facilities	Recurrent cost for project implementation	
4.3 Improving agricultural activities.	- Facilities for improvement of agri. extension (including provincial seed farm of Galugamwa)	(2) Farmers	
4.3.1 Promote crop cultivation in unused lands.	- Farmer centers	10% of rehabilitation and improvement cost of D- and F-canals	
4.3.2 Strengthen agricultural extension services.	Capital funds for improvement of credit services	(3) NGO for implementing awareness and training programmes	
4.3.3 Improve marketing of farm inputs and outputs.	Monitoring cost		
4.3.4 Improve credit services for purchase of farm inputs and equipment.	Cost for engineering services		

**Table W 4.3 Project Design Matrix: Periyakulama Medium Irrigation Scheme**

Name of Project : Periyakulama Development Project for Irrigated Agriculture and the Community

Project Area : Periyakulama Medium Irrigation Scheme

Duration : 5 years

Date : 18 January 2000

Executing Agency : Ministry of Irrigation and Power (MIP)

Target Group : Farmers, youth, and women in the Periyakulama Scheme

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b>			
1.1 Achieving sustainable development of regional agriculture	1.1 Development activities are planned and implemented independently by FO and farmers themselves.	1.1 Monitoring reports of the project office (PMU)	Agricultural policy of the Government not hinder implementation of the project.
1.2 Improving agricultural productivity of the rural community	1.2 Agriculture is economically feasible.	1.2 Monitoring reports of PMU	
<b>Project Purpose</b>			
2.1 Economic status of farmer community is brought up.	2.1 Total gross income of farmers increase progressively by the end of the project.	2.1 Monitoring reports of PMU	Agricultural products do not have to face unreasonable competition from imported products.
<b>Outputs</b>			
3.1 FO having multi functions relating to irrigation, agriculture, small enterprises, income generations, social services is established and activated.	3.1.1 FO provides various services including income generation, etc. from the 3rd year after commencement of the project.	3.1.1 Minutes of FO's general meeting and monitoring reports of PMU	There is no extreme natural disaster (drought, heavy rain, etc.). Government enforces existing rules and regulations to protect environment. Other sectors have no drastic and sudden change in the economic activities. Social conditions in the community have no drastic change. The project has no adverse effect from the other development projects, even if they overlapped.
3.2 Irrigation water is properly supplied in accordance with a schedule.	3.1.2 Committee and sub-committee meetings are held monthly by the 3rd year after commencement of the project.	3.1.2 Minutes of FO's committee and sub-committee meetings	
3.2.1 Irrigation facilities are rehabilitated and improved.	3.2 Farmers are able to receive water in accordance with a schedule by the end of the project.	3.2 Monitoring reports of project office	
3.2.2 Proper water management is done by FO.	3.2.1 Facilities necessary for proper water supply are repaired and improved by the 3rd year after the commencement of the project.	3.2.1 Monitoring reports of PMU	
3.2.3 Irrigation facilities are maintained.	3.2.2 Discharge is observed by FO after completion of construction works.	3.2.2 Records of FO	
3.3 Agricultural activities are improved.	3.2.3 All facilities are maintained by FO after completion of construction works.	3.2.3 Monitoring reports of PMU	
3.3.1 OFC cultivation is expanded.	3.3 Agricultural productivity of farmers is improved from the 3rd year after completion of the construction works.	3.3 Animator's field survey reports and records of ASC (AI)	
3.3.2 Agricultural extension services are strengthened.	3.3.1 Extent of OFC occupies about 20% of paddy area in Yala by the end of the project.	3.3.1 Animator's field survey reports	
3.3.3 Marketing of farm inputs and outputs is improved.	3.3.2 Yields of crops reach the level of "projected yields" by the 3rd year after completion of construction works.	3.3.2 Animator's field survey reports	
3.3.4 Access to credit services is improved.	3.3.3 (1) Group purchasing of farm inputs is implemented actively by the 3rd year after commencement of the project.	3.3.3 (1) FO's account books and financial reports in FO's general meeting	
3.3.5 Deforestation in the catchment area is reduced.	3.3.3 (2) Products are sold directly from farmers to markets from the 3rd year after commencement of the project.	3.3.3 (2) Monitoring reports of PMU	
	3.3.4 Group loan, revolving loan and multi-aid credit systems are established by the 3rd year after commencement of the project.	3.3.4 Reports of Banks, monitoring reports of PMU	
	3.3.5 Tree crops are planted in the catchment area from the 3rd year after commencement of the project.	3.3.5 Animator's field survey reports	
<b>Activities</b>	<b>Inputs</b>		
4.1 Strengthening FO.	<b>Foreign Donor</b>	<b>Sri Lankan Side</b>	Trained Officers stay with the project. Local government and front line officers positively support the project. No action will be taken by government to destabilize local market.
4.1.1 Implement awareness and training programmes.	Mobilization, awareness and training costs	(1) Sri Lankan Government	<b>Pre-conditions</b> The Sri Lankan Government raises all project funds including foreign currency portion, local currency portion and recurrent cost of PMU. MIP and agencies concerned establishes organization to implement project. To operate the project, necessary officers and physical facilities are provided by MIP and agencies concerned.
4.1.2 Reorganize FOs to have multi function.	Rehabilitation and improvement cost	Manpower	
4.1.3 Implement income generation through FO.	Equipment	- Local engineers/experts	
4.2 Supplying irrigation water in accordance with schedule.	- Vehicles	- Administrative officers	
4.2.1 Rehabilitate and improve irrigation facilities.	- O&M equipment	- Supporting staff	
4.2.2 Improve water management.	- Equipment for agri. extension	Facilities of PMU	
4.2.3 Strengthen O&M of irrigation facilities.	Facilities	Recurrent cost for project implementation	
4.3 Improving agricultural activities.	- Facilities for improvement of agri. extension		
4.3.1 Promote OFC cultivation.	- Farmer center	(2) Farmers	
4.3.2 Strengthen agricultural extension services.	Capital funds for improvement of credit services	10% of rehabilitation and improvement cost of all irrigation facilities	
4.3.3 Improve marketing of farm inputs and outputs.	Monitoring cost		
4.3.4 Improve credit services	Cost for engineering services	(3) NGO for implementing awareness and training programmes	
4.3.5 Promote reforestation in the catchment area.			

**Table W 4.4 Project Design Matrix: Mahananneriya Medium Irrigation Scheme**

Name of Project : Mahananneriya Medium Scheme Development Project for Irrigated Agriculture and the Community  
 Project Area : Mahananneriya Medium Irrigation Scheme Duration : 5 years Date : 18 January 2000  
 Executing Agency : Ministry of Irrigation and Power (MIP) Target Group : Farmers, youth, and women in the Mahananneriya Medium Scheme

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b> 1.1 Achieving sustainable development of regional agriculture 1.2 Improving agricultural productivity of the rural community	1.1 Development activities are planned and implemented independently by FO and farmers themselves. 1.2 Agriculture is economically feasible.	1.1 Monitoring reports of the project office (PMU) 1.2 Monitoring reports of PMU	Agricultural policy of the Government not hinder implementation of the project.
<b>Project Purpose</b> 2.1 Socio-economic status is improved.	2.1 Total gross income of farmers increase progressively by the end of the project.	2.1 Monitoring reports of PMU	Agricultural products do not have to face unreasonable competition from imported products.
<b>Outputs</b> 3.1 FO having multi functions relating to irrigation, agriculture, small enterprises, income generations, social services is established and activated. 3.2 Irrigation water is properly supplied in accordance with a schedule. 3.2.1 Irrigation facilities are rehabilitated and improved. 3.2.2 Proper water management is done by FO. 3.2.3 Irrigation facilities are maintained. 3.3 Agricultural activities are improved. 3.3.1 OFC cultivation is expanded. 3.3.2 Productivity of paddy is improved. 3.3.3 Marketing of farm inputs and outputs is improved. 3.3.4 Access to credit services is improved. 3.3.5 Deforestation in the catchment area is reduced.	3.1.1 FO provides various services including income generation, etc. from the 3rd year after commencement of the project. 3.1.2 Committee and sub-committee meetings are held monthly by the 3rd year after the commencement. 3.2 Farmers are able to receive water in accordance with a schedule by the end of the project. 3.2.1 Facilities necessary for proper water supply are repaired and improved by the 3rd year after commencement of the project. 3.2.2 Farmers are able to receive water in accordance with a schedule after completion of construction works. 3.2.3 All facilities are maintained by FO after completion of construction works. 3.3 Agricultural productivity of farmers is improved from the 3rd year after completion of construction works. 3.3.1 Extent of OFC occupies about 10% of paddy area in Yala by the end of the project. 3.3.2 Yield of paddy reaches the level of "projected yields" by the 3rd year after completion of construction works. 3.3.3 (1) Group purchasing of farm inputs is implemented actively by the 3rd year after commencement of the project. 3.3.3 (2) Quality control of OFC products are introduced from 3rd year after commencement of the project. 3.3.4 Group loan, revolving loan and multi-aid credit systems are established by the 3rd year after commencement of the project. 3.3.5 Tree crops are planted in the catchment area from the 3rd year after commencement of the project.	3.1.1 Minutes of FO's general meeting and monitoring reports of PMU 3.1.2 Minutes of FO's committee and sub-committee meetings 3.2 Monitoring reports of project office 3.2.1 Monitoring reports of PMU 3.2.2 Monitoring reports of PMU 3.2.3 Monitoring reports of PMU and minutes of FO's general meeting 3.3 Animator's field survey reports and records of ASC (AI) 3.3.1 Animator's field survey reports 3.3.2 Animator's field survey reports 3.3.3 (1) FO's account books and financial reports in FO's general meeting 3.3.3 (2) Monitoring reports of PMU 3.3.4 Reports of Banks, monitoring reports of PMU 3.3.5 Animator's field survey reports	There is no extreme natural disaster (drought, heavy rain, etc.). Government enforces existing rules and regulations to protect environment. Other sectors have no drastic and sudden change in the economic activities. Social conditions in the community have no drastic change. The project has no adverse effect from the other development projects, even if they overlapped.
<b>Activities</b> 4.1 Strengthening FO. 4.1.1 Implement awareness and training programmes. 4.1.2 Reorganize FOs to have multi function. 4.1.3 Implement income generation through FO. 4.2 Supplying irrigation water in accordance with schedule. 4.2.1 Rehabilitate and improve irrigation facilities. 4.2.2 Improve water management. 4.2.3 Strengthen O&M of irrigation facilities. 4.3 Improving agricultural activities. 4.3.1 Promote OFC cultivation. 4.3.2 Strengthen agricultural extension services. 4.3.3 Improve marketing of farm inputs and outputs. 4.3.4 Improve credit services 4.3.5 Promote reforestation in the catchment area.	<b>Inputs</b> <b>Foreign Donor</b> Mobilization, awareness and training costs Rehabilitation and improvement cost Equipment - Vehicles - O&M equipment - Equipment for agri. extension Facilities - Facilities for improvement of agri. extension (including provincial seed farm of Galugamwa) - Farmer center Capital funds for improvement of credit services Monitoring cost Cost for engineering services	<b>Sri Lankan Side</b> (1) Sri Lankan Government Manpower - Local engineers/experts - Administrative officers - Supporting staff Facilities of PMU Recurrent cost for project implementation (2) Farmers 10% of rehabilitation and improvement cost of all irrigation facilities (3) NGO for implementing awareness and training programmes	Trained Officers stay with the project. Local government and front line officers positively support the project. No action will be taken by government to destabilize local market. <b>Pre-conditions</b> The Sri Lankan Government raises all project funds including foreign currency portion, local currency portion and recurrent cost of PMU. MIP and agencies concerned establishes organization to implement project. To operate the project, necessary officers and physical facilities are provided by MIP and agencies concerned.

**Table W 4.5 Project Design Matrix: Mahanannneriya Minor Irrigation Schemes (Cascade)**

Name of Project	: Mahanannneriya Minor Schemes Development Project for Irrigated Agriculture and the Community		
Project Area	: Mahanannneriya Minor Irrigation Schemes (Cascade)	Duration	: 5 years
Executing Agency	: Ministry of Irrigation and Power (MIP) / Provincial Engineering Department	Target Group	: Farmers, youth, and women in the Mahanannneriya Minor Schemes
			Date : 18 January 2000

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b>			
1.1 Achieving sustainable development of regional agriculture	1.1 Development activities are planned and implemented independently by FOs and farmers themselves.	1.1 Monitoring reports of the project office (PMU)	Agricultural policy of the Government not hinder implementation of the project.
1.2 Improving agricultural productivity of the rural community	1.2 Agriculture is economically feasible.	1.2 Monitoring reports of PMU	
<b>Project Purpose</b>			
2.1 Socio-economic status is improved.	2.1 Total gross income of farmers increase progressively by the end of the project.	2.1 Monitoring reports of PMU	Agricultural products do not have to face unreasonable competition from imported products.
<b>Outputs</b>			
3.1 FOs having multi functions relating to irrigation, agriculture, small enterprises, income generations, social services are established and activated.	3.1.1 FOs provide various services including income generation, etc. from the 3rd year after commencement of the project.	3.1.1 Minutes of FOs' general meeting and monitoring reports of PMU	There is no extreme natural disaster (drought, heavy rain, etc.). Government enforces existing rules and regulations to protect environment. Other sectors have no drastic and sudden change in the economic activities. Social conditions in the community have no drastic change. The project has no adverse effect from the other development projects, even if they overlapped.
3.2 Irrigation water is properly supplied in accordance with a schedule.	3.1.2 Committee and sub-committee meetings are held monthly by the 3rd year after commencement of the project.	3.1.2 Minutes of FOs' committee and sub-committee meetings	
3.2.1 Irrigation facilities are rehabilitated and improved.	3.2 Farmers are able to receive water in accordance with a schedule by the end of the project.	3.2 Monitoring reports of PMU	
3.2.2 Proper water management is done by FOs.	3.2.1 Facilities necessary for proper water supply are repaired and improved by the 3rd year after commencement of the project.	3.2.1 Monitoring reports of PMU	
3.2.3 Irrigation facilities are maintained.	3.2.2 Over 80% of farmers attend Kanna meeting from 4th year after commencement of the project.	3.2.2 Minutes of Kanna meeting	
3.3 Agricultural activities are improved.	3.2.3 Over 80% of farmers participate "Shramadana" from 4th year after commencement of the project.	3.2.3 Records of FOs.	
3.3.1 OFC cultivation is expanded.	3.3 Agricultural productivity of farmers is improved from the 3rd year after completion of construction works.	3.3 Animators' field survey reports and records of ASC (AI)	
3.3.2 Yield of paddy and OFC are increased.	3.3.1 Extent of OFC occupies about 10% of paddy area in Yala by the end of the project.	3.3.1 Animators' field survey reports	
3.3.3 Marketing of farm inputs and outputs is improved.	3.3.2 Yields of crops reach the level of "projected yields" by the 3rd year after completion of construction works.	3.3.2 Animators' field survey reports	
3.3.4 Access to credit services is improved.	3.3.3 (1) Group purchasing of farm inputs is implemented actively by the 3rd year after commencement of the project.	3.3.3 (1) FOs' account books and financial reports in FOs' general meeting	
3.3.5 Deforestation in the catchment area is reduced.	3.3.3 (2) Collecting point for OFC is established in the area by the 3rd year after commencement of the project.	3.3.3 (2) Animator's field survey reports	
	3.3.4 Group loan, revolving loan and multi-aid credit systems are established by the 3rd year after commencement of the project.	3.3.4 Reports of Banks, monitoring reports of PMU	
	3.3.5 Tree crops are planted in the catchment area from the 3rd year after commencement of the project.	3.3.5 Animator's field survey reports	
<b>Activities</b>	<b>Inputs</b>		
4.1 Strengthening FOs.	<b>Foreign Donor</b>	<b>Sri Lankan Side</b>	Trained Officers stay with the project. Local government and front line officers positively support the project. No action will be taken by government to destabilize local market.
4.1.1 Implement awareness and training programmes.	Mobilization, awareness and training costs	(1) Sri Lankan Government	<b>Pre-conditions</b> The Sri Lankan Government raises all project funds including foreign currency portion, local currency portion and recurrent cost of PMU. MIP and agencies concerned establishes organization to implement project. To operate the project, necessary officers and physical facilities are provided by MIP and agencies concerned.
4.1.2 Reorganize FOs to have multi function.	Rehabilitation and improvement cost	Manpower	
4.1.3 Implement income generation through FOs.	Equipment	- Local engineers/experts	
4.2 Supplying irrigation water in accordance with schedule.	- Vehicles	- Administrative officers	
4.2.1 Rehabilitate and improve irrigation facilities.	- O&M equipment	- Supporting staff	
4.2.2 Improve water management.	- Equipment for agri. extension	Facilities of PMU	
4.2.3 Strengthen O&M of irrigation facilities.	Facilities	Recurrent cost for project implementation	
4.3 Improving agricultural activities.	- Facilities for improvement of agri. extension (including provincial seed farm of Galugamwa)	(2) Farmers	
4.3.1 Promote OFC cultivation.	- Farmer centers	10% of rehabilitation and improvement cost of all irrigation facilities	
4.3.2 Strengthen agricultural extension services.	Capital funds for improvement of credit services	(3) NGO for implementing awareness and training programmes	
4.3.3 Improve marketing of farm inputs and outputs.	Monitoring cost		
4.3.4 Improve credit services	Cost for engineering services		
4.3.5 Promote reforestation in the catchment area.			

**Table W 4.6 Project Design Matrix - Reorganizing Unity of the Community through Youth Activities**

Name of Project : Reorganizing Unity of the Community through Youth Activities

Project Area : Palukadawela Major Irrigation Scheme (Puranagama)

Duration : 3 years

Date: 15 Jan, 2000

Executing Agency : Puranagama Youth Club (Tentative name)

Target Group : Youth, community in Puranagama














Narrative Summary	Objectively verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b> 1.1 Develop strong unity among community	1.1 Regain the unity of elders in the community within 3years	1.1.1 No. of members of FO and other CBOs 1.1.2 Interview the community	● Other sectors have no drastic and sudden change in attitude towards youth activities.
<b>Project Purpose</b> 2.1 Strengthen youth organization through community development activities	2.1.1 Increase members of the organization 2.1.2 Increase funds of the organization 2.1.3 Have a long term plan for the organization	2.1.1 Registration of members 2.1.2 Bank accounts of the organization 2.1.3 Minutes of general meeting	● Social conditions in the community have no drastic change.
<b>Outputs</b> 3.1 Setting up Youth Organization 3.2 Making action plan with cost estimations  3.3 Implement pre-school education in the village with female groups. 3.5 Implement road development with FO  3.6 Development of school ground  3.7 Group loan system is established	3.1.1 The youth organization is registered. 3.2.1 Relevant organizations agree and approve the implementation of their plan.  3.3.1 Register the preschool at the provincial council in the year 2000. 3.5.1 Main roads in the village are improved through contract by the organization in 2000. 3.6.1 Area of the ground is improved and extended. 3.6.2 Remove rocks in the ground 3.6.3 Implementing tree planting  3.7.1 Increase organization's own funds	3.1.1 Register 3.2.1 Record of application and approval in each organization 3.2.2 Contract documents 3.3.1 Register  3.5.1 Minutes of general meeting 3.5.2 Contract documents 3.6.1 Interview the principal 3.6.2 Interview the principal 3.6.3 Minutes of general meeting 3.6.4 Reports of NGO 3.7.1 Record of loan issues and bank account	● Preferential external approach to a section of the community is not implemented. ● Religious leaders do not intervene the community.
<b>Activities</b> 4.1.1 Hold a meeting with senior villagers 4.1.2 Enact the constitution of the organization 4.2.1 Organize seminars to make action plan 4.2.2 Implement joint survey in the village 4.2.3 Setting up of an community coordinating committee 4.2.4 Making a detail action plan with cost estimation 4.3.1 Improvement to the pre-school building 4.3.2 Provide training to the teacher 4.5.1 Obtain contracts from relevant institutions 4.5.2 Implementation of road construction 4.6.1 Implement development to the school ground 4.7.1. Organize training on loan management 4.7.2 Issuing loans to youth	<b>Inputs</b> External Organizations (Divisional Secretariat, NYSC, NGOs, etc.) ● Training and workshop costs ● Part of cost for improvement work ● A monthly allowance for the pre-school teacher ● Capital funds or loan to obtain contracts ● Reporting costs for relevant organizations ● Travelling costs	Internal organizations (Community) (FO, CBOs, Women group etc.) ● Costs of food and lodging for the voluntary officers / persons at the village ● Traveling costs and day allowance for the representatives of the organization/ community	● Appropriate action is accepted in relevant governmental institutions in the area depended on the action plan. <b>Pre-conditions</b> ● A participatory approach and to support a "bottom-up" flow of communication towards increased community involvement is understanding by ASC.



**Table W 4.7 Plan of Operations - Development of Crop Diversification**

Name of Project : Development of Crop Diversification

Project Area : Arthikulama Minor Irrigation Scheme

Activities	Objectives	1	2	3	4	5	6	7	8	9	10	11	#	How to	Assistance	By whom	Equipment	Cost Estimation	Remarks
4.1.1 Holding participatory planning workshop	1) Discussion about problems in the community regarding to farm income													Invite facilitator to lead workshop	NGOs	FO committee members	Stationary	3,500	
	2) Making draft action plan to increase OFC cultivation													by community's ideas	NGOs, ASC	FO committee members			
	3) Preparing progress report													Typing in Sinhala and English	Do.	NGOs, ASC		500	
4.1.2 Setting up community resources management	1) All CBO's secretary forming the committee													Voluntary base	CBOs leaders	FO chairman	Nil	Nil	
	2) Making rules and purpose													by discussion	NGOs, Field officers	Leaders of CBOs	Nil	Nil	
4.1.3 Implement a joint survey with community participation.	1) Find out unutilized common lands & Private lands													walk through the village with resources persons	DS/land officer, GN, ASC/DO, AI	FO, CBOs and community	Map	Food and tea	
	2) Making map													by hand writing	Farmer animator	CRMC	Stationary	500	
4.1.4 Making community action plan for OFC cultivation	Plan for OFC cultivation with community participation													invite DS/land officer, GN, ASC/DO, AI	NGO, CBOs leaders	FO and CRMC	Farmer animator's data book	Food and Tea, Stationary	
4.1.5 The plan is handed over to the relevant organization to take necessary cooperation	1) To know officials and function in necessary section													Visiting relevant office	Farmer animator, GN, Samudri animator, NGO	FO and CRMC		Travelling fees and day allowance	
	2) Receiving advice and taking budgetary steps													Discuss with officers in the section		FO and CRMC			
4.1.6 Implementing an education and training program	Obtain necessary techniques and knowledge													Invite AI and present seminars	ASC, Farmer animator	FO		Food and Tea	
4.2.1 Implemented cooperative purchasing of farm inputs for the OFC cultivation	to understanding the cooperative purchasing procedure													Group loan system in kind	ASC, Farmer animator, GN, DS	FO	Lorry to transport	Cost of travelling, rental fees of lorry	
4.2.2 Implementing OFC cultivation in the paddy fields	All farmers present OFC cultivation with Attam system													Start with all farmers with small plot as trial	ASC, Farmer animator	FO		Food and Tea	
4.3.1 Planting of fruits and other trees	Establishment of group work													Group working by shramadana	AI, Farmer animator, DS	FO, CBOs and community		Tea	
4.4.1 Training on organic fertilizers and ways of improving soil.	Understanding soil conservation													Invite AI and present seminars	ASC, Farmer animator	FO, CBOs and community		Food and Tea, travelling cost	
4.5.1 Holding practical training on proper water management.	Efficient water management for OFC cultivation													Invite officials to village and implement at field	DAS, ASC	FO		Food and Tea	
4.6.1 Group selling to the traders in Galugamuwa area.	1) Selling products with reasonable price													by group	DS, ASC, Farmer animator	FO, CBOs and community	Weighing balance		
	2) Selling products at the village													call traders to the village		FO, CRMC			

**Table W 4.8 Project Design Matrix - Development of Crop Diversification**

Name of Project : Development of Crop Diversification  
 Project Area : Arthikulama Minor Irrigation Scheme  
 Executinf Agency : Arthikulama FO

Duration : 2 years  
 Target Group : Farm community living in the Village

Date: 15 Jan 2000

	Narrative Summary	Objectively verifiable Indicators	Means of Verification	Important Assumptions
<b>Overall Goal</b>				
1.1	Improving agricultural productivity of the rural community	1.1 Diversify income resources in agricultural activities	1.1 Monitoring report of the farmers animator. 1.2 Interview survey to FO and farm families.	● Agricultural policy of the government not to hinder implementation of the project.
<b>Project Purpose</b>				
2.1	Crop cultivation is diversified	2.1.1 Cultivating OFC in the paddy field in Yala continuously 2.1.2 Area of cultivating high land with OFC and permanent crops are increased. 2.1.3 OFC cultivators are increased.	2.1.1 Minutes of the Kanna meeting 2.1.2 Monitoring reports of the farmers animator 2.1.3 Monitoring reports of the farmers animator	● Agricultural products do not have to face face unreasonable competition from imported products.
<b>Outputs</b>				
3.1	FO make an annual plan with regard to OFC cultivation in the community.	3.1.1 The plan is made through discussion with FO members and relevant CBOs.	3.1.1 Minutes of the FO, committee meeting and record of attendance.	● There is no extreme natural disaster (drought, heavy rain etc.). ● Other sectors have no drastic and sudden change in economic activities. Social conditions in the community have no drastic change.
3.2	OFC is cultivated in the paddy fields during Yala season.	3.2.1 Bethma style land allocations and means of water management are discussed in the Kanna meeting for OFC cultivation.	3.2.1 Minutes of the Yala Kanna meeting.	
3.3	Permanent crops are cultivated in the unutilized common lands by the community within the village.	3.3.1 Each cultivation group and FO plant permanent crops as schedule	3.3.1 Minutes of community resources management committee and each group and FO.	
3.4	Improvement of soil conservation activities	3.4.1 Organic fertilizers are produced by farmers. 3.4.2 Farmers receive relevant training.	3.4.1 Monitoring report of the farmers animator.	
3.5	Utilize tank water for Yala cultivation.	3.5.1 Appropriate technique is implemented.	3.5.1 Minutes of the Kanna meeting.	
3.6	Marketing route is established in the Galgamuwa area.	3.6.1 Selling products at permanent place at a reasonable price.	3.6.1 Interview survey with traders and farmers 3.6.2 Recording of selling price by farmers.	
<b>Activities</b>				
4.1.1	Holding participatory planning workshop	<b>Inputs</b> External Organizations (ASC, Divisional Secretariat, NGOs, etc.) <ul style="list-style-type: none"><li>● Training and workshop costs</li><li>● Permanents crop plants and other farm inputs for demonstrations.</li><li>● Loan for trial cooperative purchasing of farm inputs and cooperative selling of OFC products.</li><li>● Reporting costs for relevant organizations</li><li>● Travelling costs</li><li>●</li></ul>	Internal organizations (Community) (FO, CBOs, Women group etc.) <ul style="list-style-type: none"><li>● Costs of food and logging for voluntary officers / persons at the village</li><li>● Traveling costs and day allowance for the representatives of the community</li></ul>	● Appropriate action is accepted in relevant governmental institutions in the area depend on the community action plan.
4.1.2	Setting up community resources management committee			
4.1.3	Implement a joint survey with community participation.			
4.1.4	Making community action plan for OFC cultivation			
4.1.5	The plan is handed over to the relevant organization.			
4.1.6	Implementing an education and training program			
4.2.1	Implemented cooperative purchasing of farm inputs for the OFC cultivation.			
4.2.2	Implementing OFC cultivation in the paddy fields			
4.3.1	Planting of fruits and other trees			
4.4.1	Training on organic fertilizers and ways of improving soil.			
4.5.1	Holding practical training on proper water management.			
4.6.1	Group selling to the traders in Galugamuwa area.			
<b>Pre-conditions</b>				
● A participatory approach to support a "bottom to top" flow of communication communication towards increase community involvement as understood by relevant government institutions.				

## **ATTACHMENTS**

*Attachment-1*  
*PCM Workshop*  
*Nachchaduwa Major Scheme*

## NACHCHADUWA MAJOR SCHEME - 1

### 1. Participants

- (1) Place of Workshop : RMP Office, IMD
- (2) Date : 27 & 28 November 1999
- (3) FOs relating to Workshop : Mahanama FO, Parakrama FO, Mahasen FO, Sena Samagi FO
- (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	5	-	5
FO Members	9	2	11
Community (DDA, community people)	-	-	-
Women's Society	-	-	-
Youth Club	-	-	-
Farmer Animator	4	1	5
Grama Niladari	4	-	4
IDO (IMD) / FO Manager (DOI)	1	1	2
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	1	1
<b>Total</b>	<b>24</b>	<b>5</b>	<b>29</b>
<b>Resources Persons</b>			
DO (DAS)	-	1	1
DOA	1	1	2
DOI	1	1	2
Divisional Secretariat	1	-	1
IMD	2	-	2
<b>Total</b>	<b>5</b>	<b>3</b>	<b>8</b>
<b>Grand Total</b>	<b>29</b>	<b>8</b>	<b>37</b>

### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Irrigation Management Division</li> <li>● Department of Agriculture</li> <li>● Department of Agrarian Services</li> <li>● National Housing Development Authority (NHDA)</li> <li>● Department of Education</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers</li> <li>● Traders</li> </ul>	<ul style="list-style-type: none"> <li>● Federation of Farmers Organisation</li> <li>● Farmers Organisation</li> <li>● Death Donation Society</li> <li>● Women's Society</li> <li>● Project Management Committee</li> </ul>	<ul style="list-style-type: none"> <li>● Private companies</li> <li>● Mahaweli Authority</li> </ul>	<ul style="list-style-type: none"> <li>● (Land owner living in outside)</li> </ul>

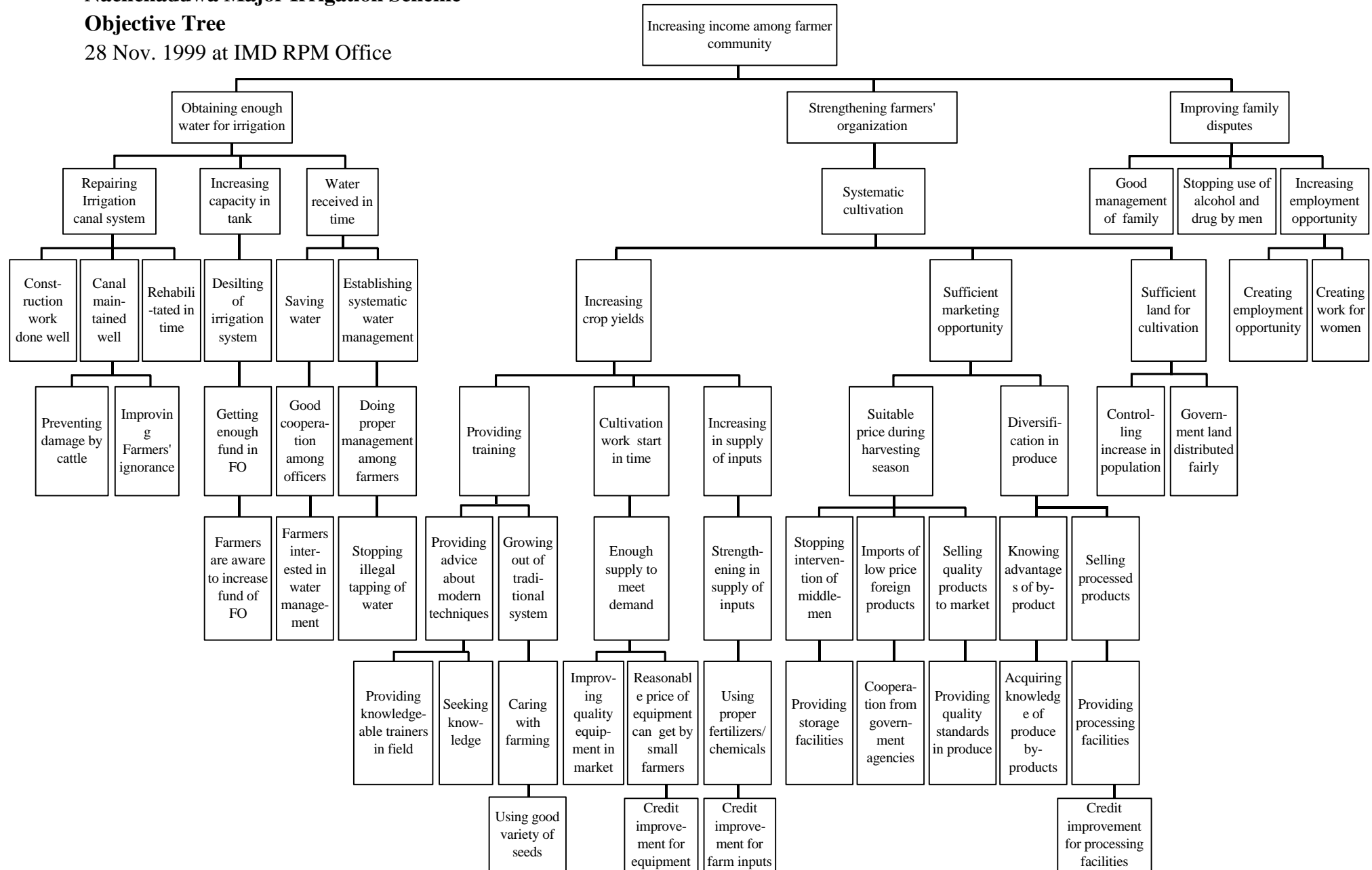
27 Nov. 1999 at IMD RPM Office



# Nachchaduwa Major Irrigation Scheme

## Objective Tree

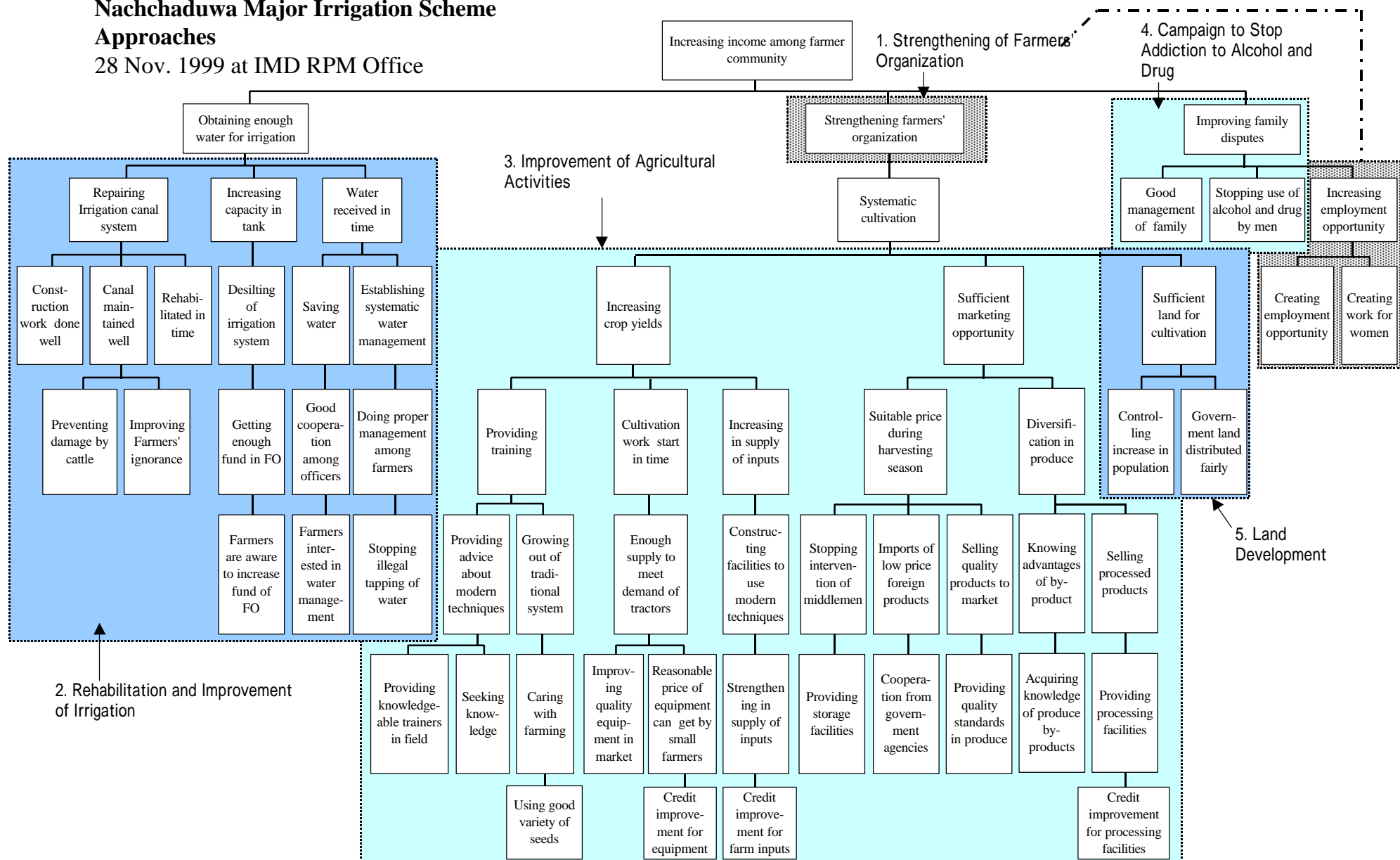
28 Nov. 1999 at IMD RPM Office



# Nachchaduwa Major Irrigation Scheme

## Approaches

28 Nov. 1999 at IMD RPM Office





## NACHCHADUWA MAJOR SCHEME - 2

### 1. Participants

- (1) Place of Workshop : Swastipura School  
 (2) Date : 27 & 28 November 1999  
 (3) FOs relating to Workshop : Ruwanweli FO, 26 & 27 DC FO, Ranketha FO, Tissa FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	12	-	12
FO Members	-	1	1
Community (DDA, community people)	-	-	-
Women's Society	-	-	-
Youth Club	-	-	-
Farmer Animator	1	2	3
Grama Niladari	2	-	2
IDO (IMD) / FO Manager (DOI)	-	1	1
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	-	-
<b>Total</b>	<b>16</b>	<b>4</b>	<b>20</b>
<b>Resources Persons</b>			
DO (DAS)	1	-	1
DOA	2	-	2
DOI	3	-	3
Divisional Secretariat	1	-	1
IMD	1	-	1
<b>Total</b>	<b>8</b>	<b>-</b>	<b>8</b>
<b>Grand Total</b>	<b>24</b>	<b>4</b>	<b>28</b>

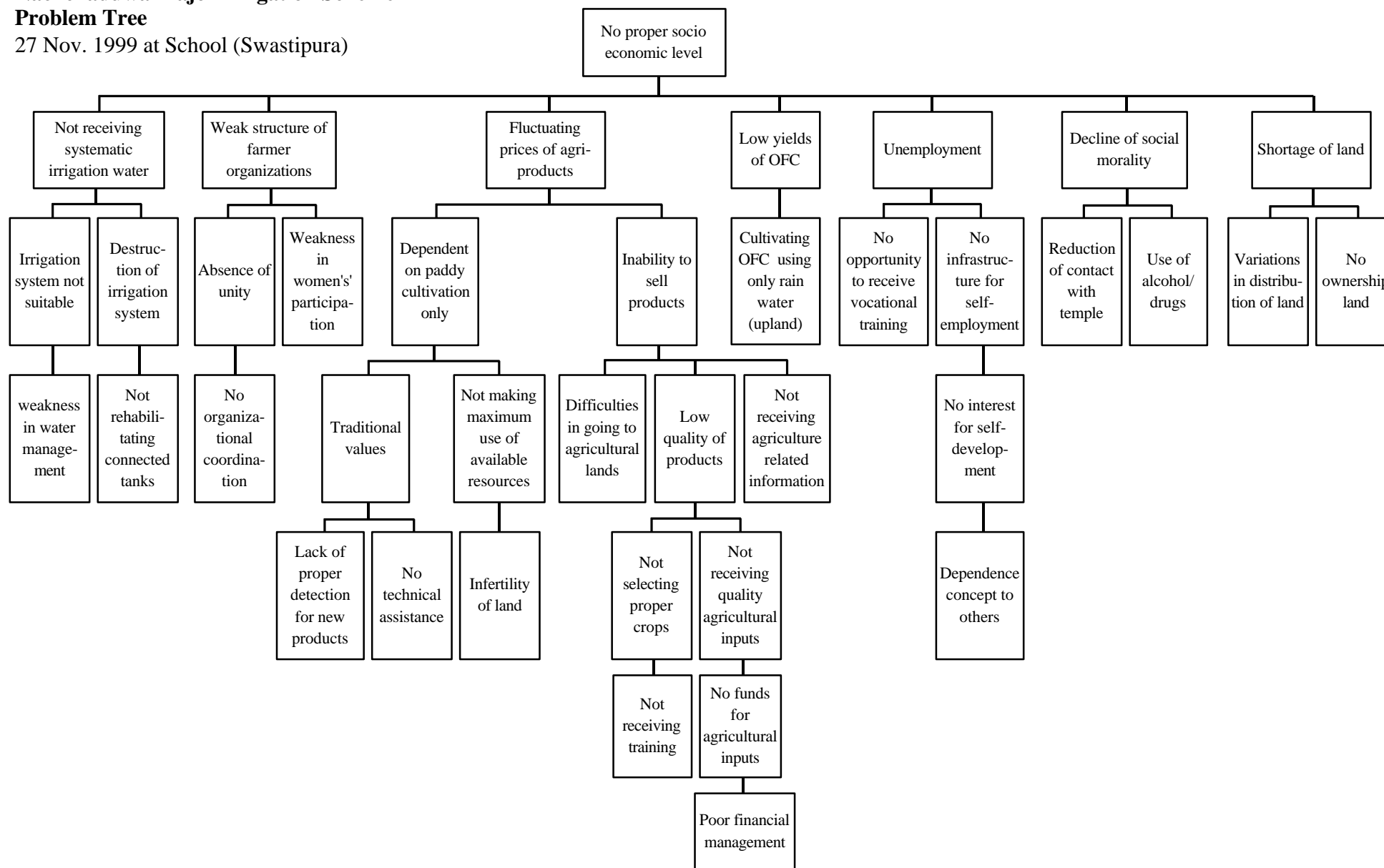
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Irrigation Management Division</li> <li>● Department of Agriculture</li> <li>● Department of Agrarian Services</li> <li>● Agrarian Services Centre</li> <li>● Agriculture Development Authority</li> <li>● Survey Department</li> <li>● National Youth Services Council (NYSC)</li> <li>● Provincial Council</li> <li>● District Secretariat</li> <li>● Divisional Secretariat</li> <li>● RPM office</li> <li>● State Banks</li> <li>● SATOSA</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers</li> <li>● Farm families</li> <li>● Community</li> </ul>	<ul style="list-style-type: none"> <li>● Federation of Farmers Organisation</li> <li>● Farmers Organisation</li> <li>● Death Donation Society</li> <li>● Women's Organisation</li> <li>● Project Management Committee</li> </ul>	<ul style="list-style-type: none"> <li>● Private Company</li> <li>● Mahaweli Water Management Committee</li> <li>● Religious organisation</li> <li>● Political Authority</li> <li>● Midwife</li> <li>● Social animator</li> <li>● Financial organisation</li> <li>● Police</li> </ul>	<ul style="list-style-type: none"> <li>● (Land owner living in outside)</li> </ul>

## Nachchaduwa Major Irrigation Scheme

### Problem Tree

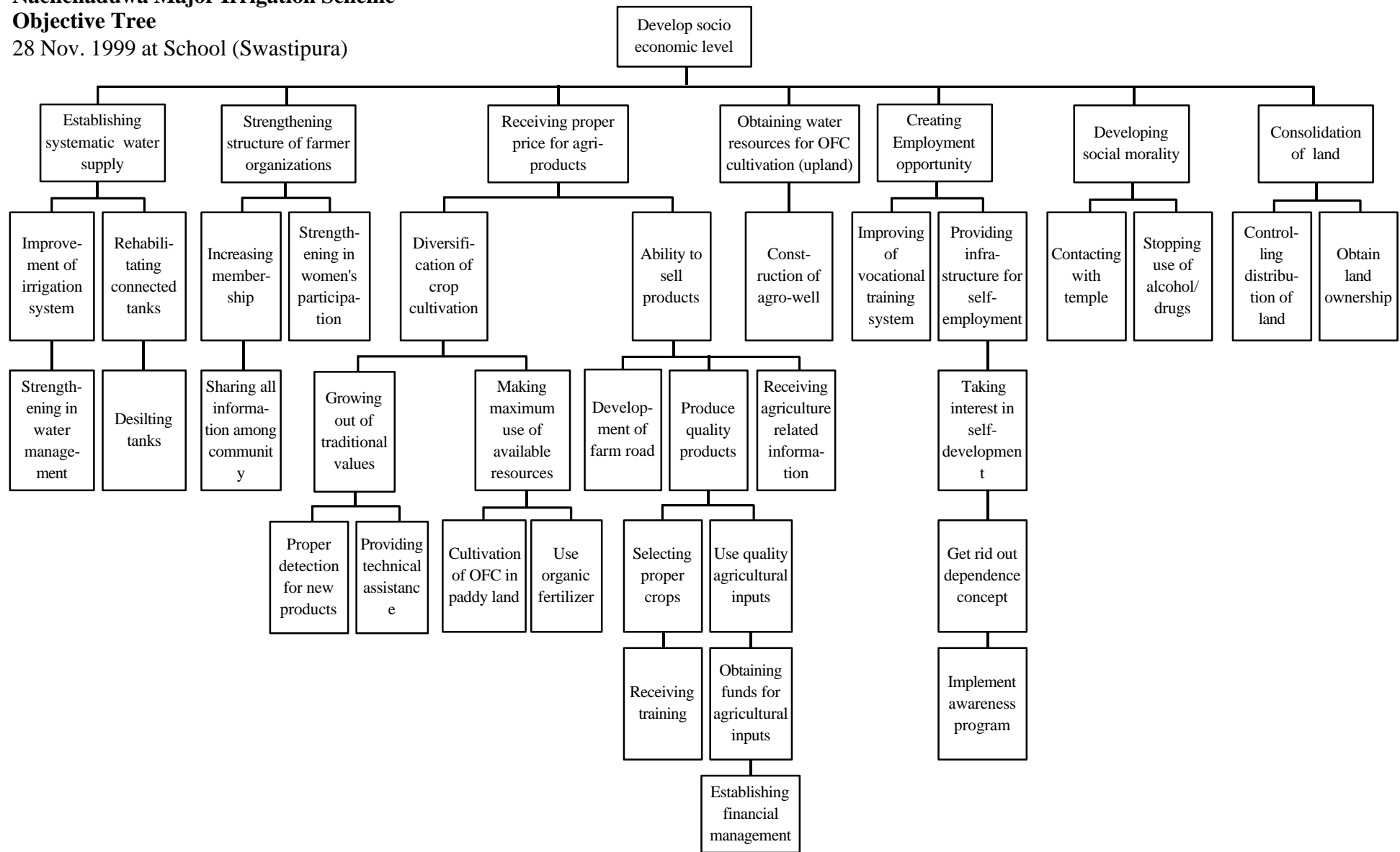
27 Nov. 1999 at School (Swastipura)



## Nachchaduwa Major Irrigation Scheme

### Objective Tree

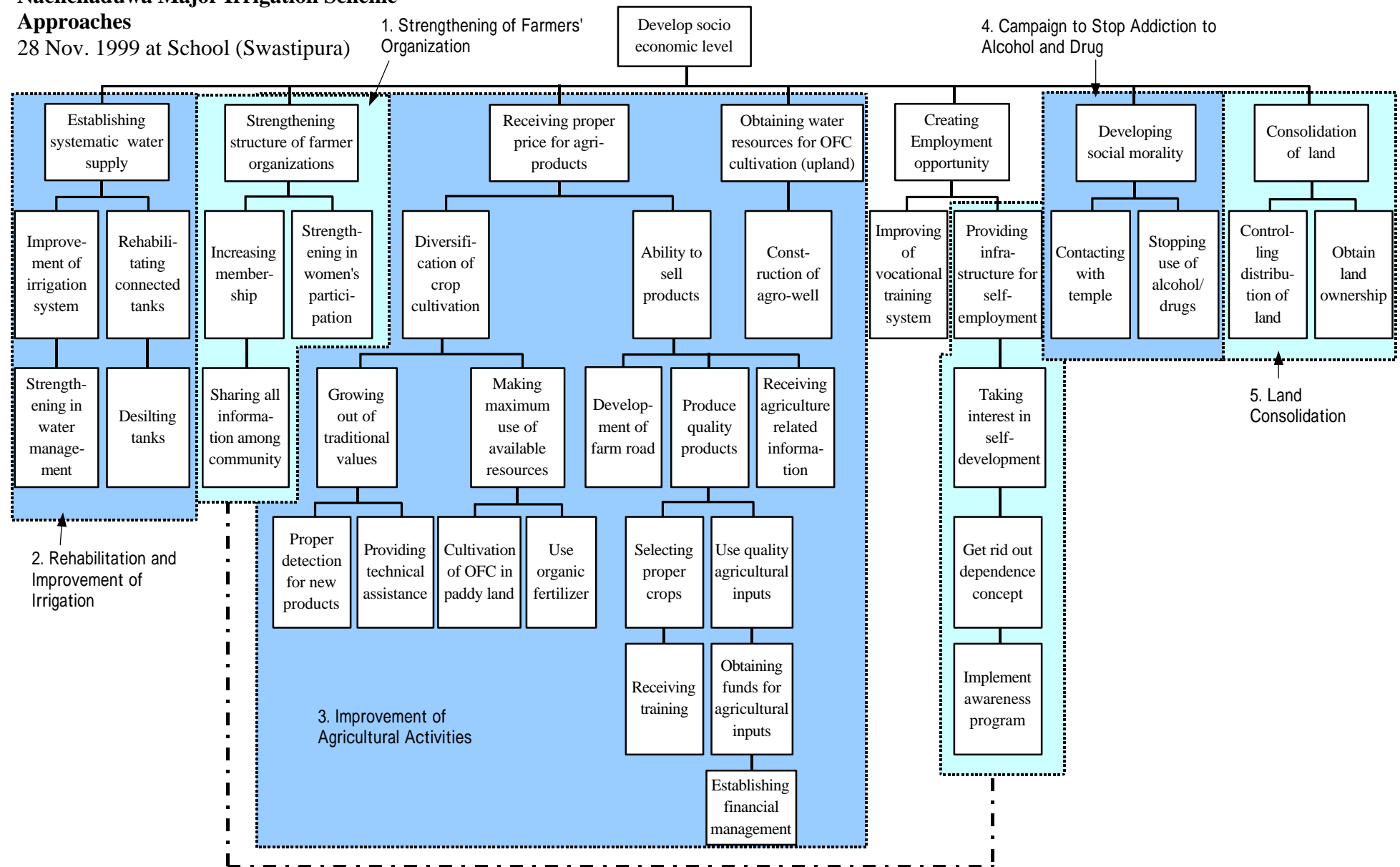
28 Nov. 1999 at School (Swastipura)



# Nachchaduwa Major Irrigation Scheme

## Approaches

28 Nov. 1999 at School (Swastipura)



## NACHCHADUWA MAJOR SCHEME - 3

### 1. Participants

- (1) Place of Workshop : RMP Office, IMD
- (2) Date : 04, 05 & 11 December 1999
- (3) FOs relating to Workshop : Isuru FO, Eksath FO, Gemunu FO, Al - Aksha FO, Ranamayura FO, Wijaya FO
- (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	11	-	11
FO Members	9	12	21
Community (DDA, community people)	-	-	-
Women's Society	-	1	1
Youth Club	-	-	-
Farmer Animator	3	2	5
Grama Niladari	3	3	6
IDO (IMD) / FO Manager (DOI)	2	2	4
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	1	1
<b>Total</b>	<b>29</b>	<b>21</b>	<b>50</b>
<b>Resources Persons</b>			
DO (DAS)	-	-	-
DOA	2	-	2
DOI	3	-	3
Divisional Secretariat	-	-	-
IMD	2	-	2
<b>Total</b>	<b>7</b>	<b>-</b>	<b>7</b>
<b>Grand Total</b>	<b>36</b>	<b>21</b>	<b>57</b>

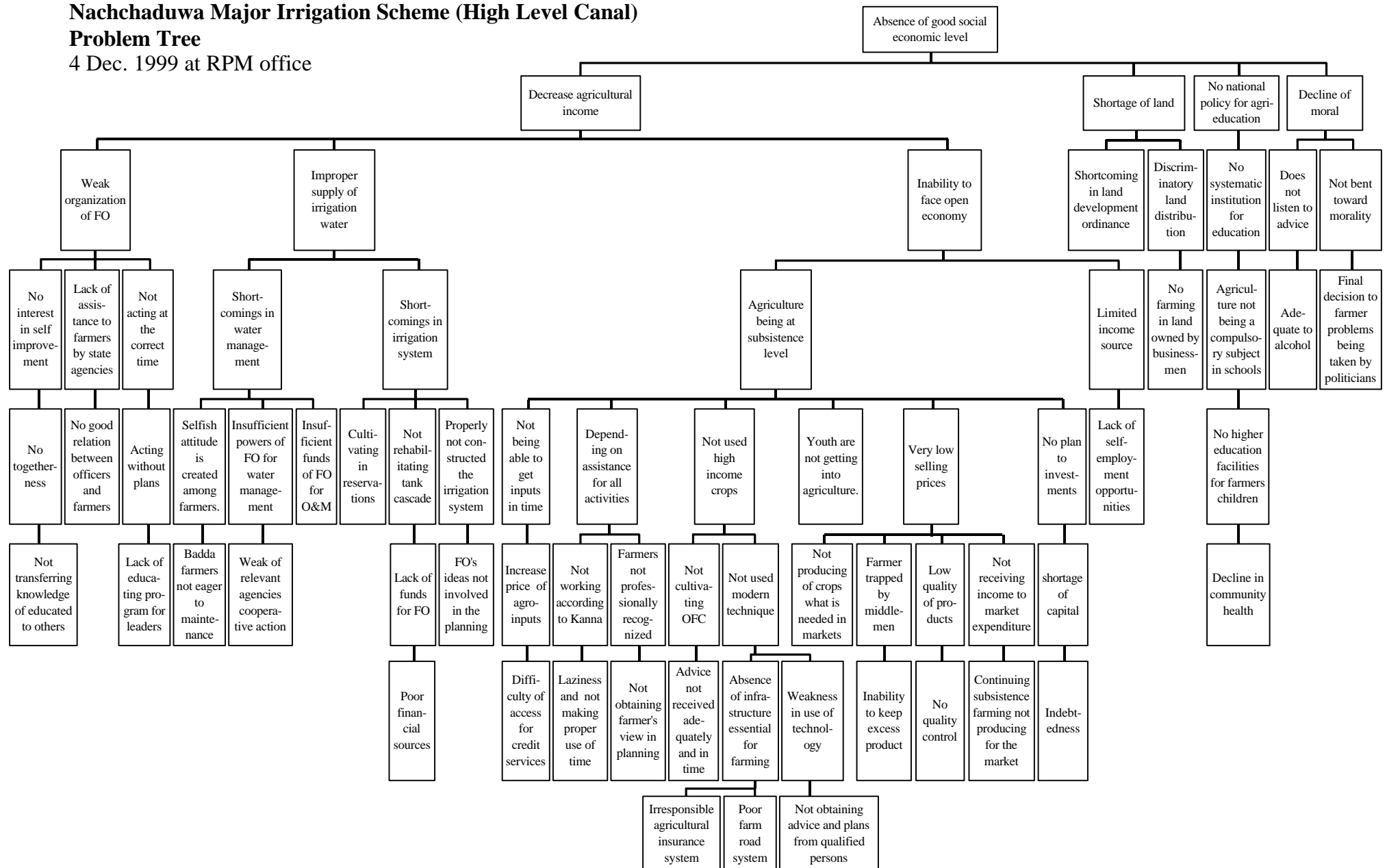
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Irrigation Management Division</li> <li>● Department of Agriculture</li> <li>● Department of Agrarian Services</li> <li>● Agrarian Services Centre</li> <li>● District Secretariat</li> <li>● Divisional Secretariat</li> <li>● Ministry of trade and commerce</li> <li>● Live Stock Development Board</li> <li>● RPM office</li> <li>● Project Authority</li> <li>● State and Private Banks</li> <li>● National Youth Services Council</li> <li>● Vocational Training Agencies</li> <li>● FO DS manager (RPM)</li> <li>● Farmer Animator</li> <li>● NGO</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers</li> <li>● Irrigation water users</li> <li>● Community Organisation</li> <li>● Government Agencies in Nachchaduwa Scheme</li> </ul>	<ul style="list-style-type: none"> <li>● Federation of Farmers Organisation</li> <li>● Farmers Organisation</li> <li>● Project Management Committee</li> <li>● Samurdhi Societies</li> <li>● Community organisation</li> <li>● Community small group</li> </ul>	<ul style="list-style-type: none"> <li>● Private Company</li> <li>● Farmer company</li> <li>● Religious organisation</li> <li>● Political Authority</li> <li>● Legal advisor</li> <li>● Financial organisation</li> <li>● Police</li> <li>● Religious and social culture institutes</li> </ul>	<ul style="list-style-type: none"> <li>● (Land owner living in outside)</li> </ul>

# Nachchaduwa Major Irrigation Scheme (High Level Canal)

## Problem Tree

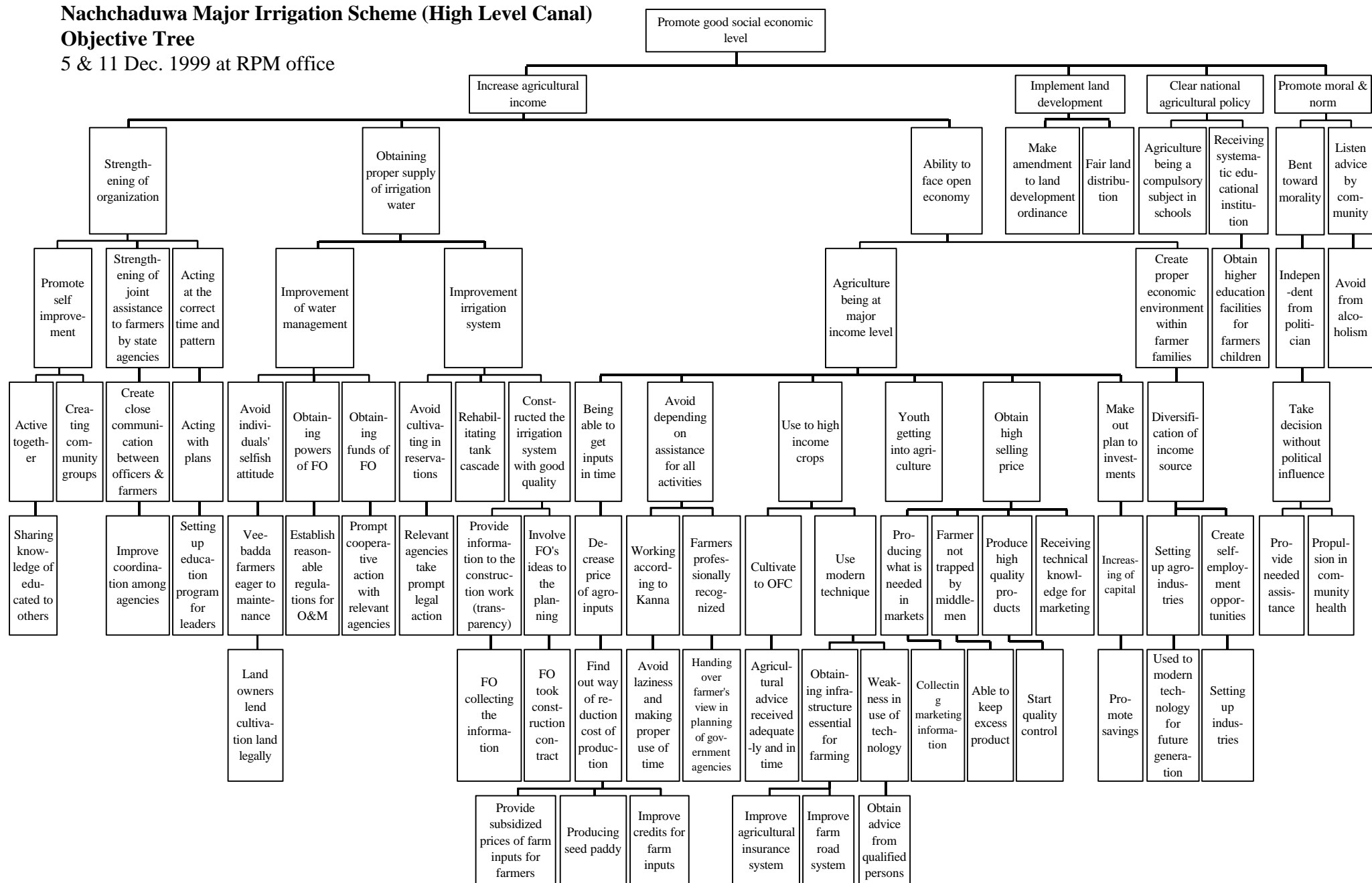
4 Dec. 1999 at RPM office



# Nachchaduwa Major Irrigation Scheme (High Level Canal)

## Objective Tree

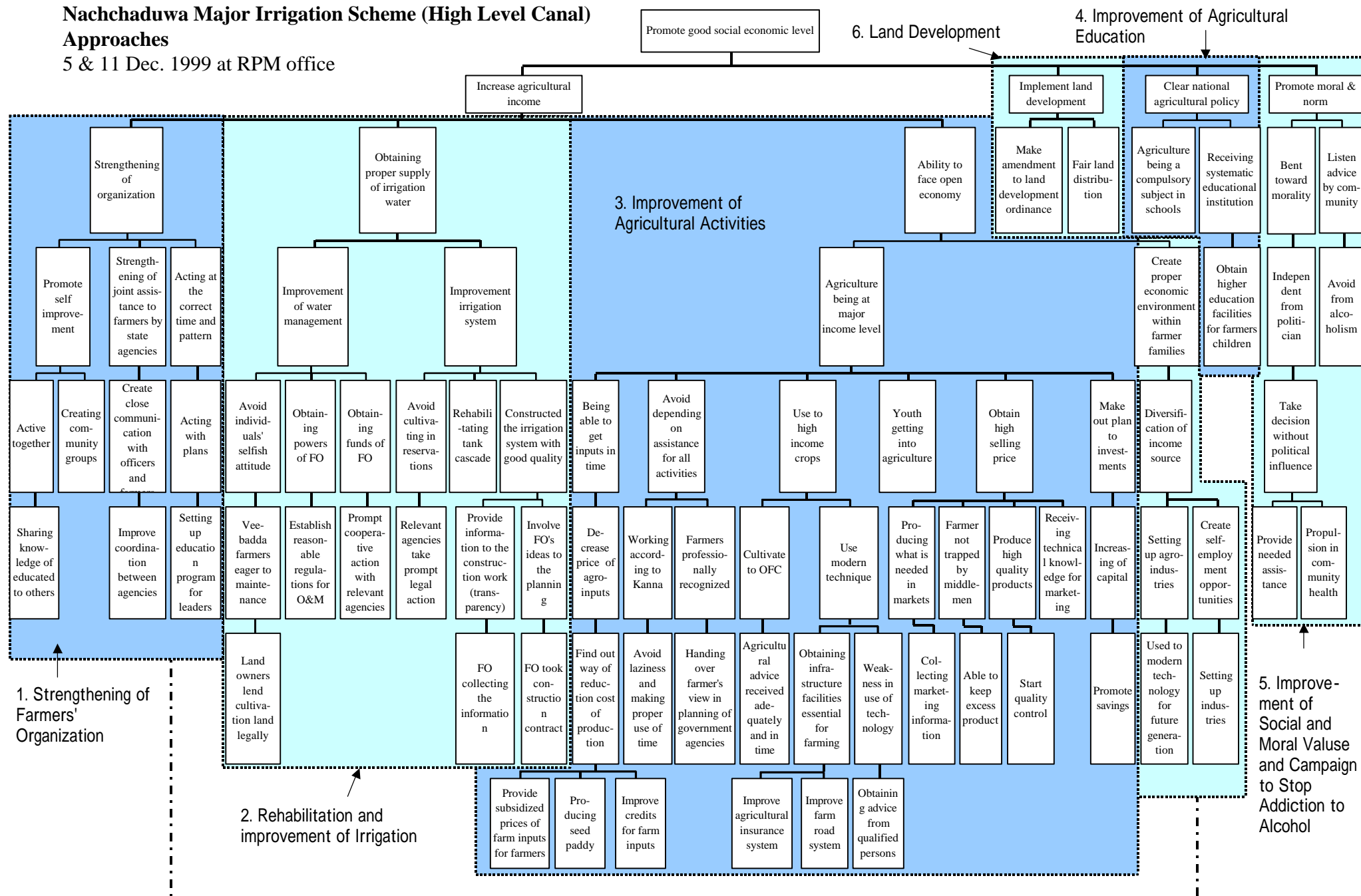
5 & 11 Dec. 1999 at RPM office



# Nachchaduwa Major Irrigation Scheme (High Level Canal)

## Approaches

5 & 11 Dec. 1999 at RPM office





***Attachment-2***  
***PCM Workshop***  
***Palukadawela Major Scheme***

## PALUKADAWELA MAJOR SCHEME - 1

### 1. Participants

- (1) Place of Workshop : Wadugama School  
 (2) Date : 05 & 06 December 1999  
 (3) FOs relating to Workshop : Track-1 FO, Track-2 FO, Track-3 FO  
 (4) Attendance

	Male	Female	Total
Workshop Participants			
FO/FC Leaders	7	-	7
FO Members	31	11	42
Community (DDA, community people)	-	-	-
Women's Society	-	8	8
Youth Club	-	-	-
Farmer Animator	1	5	6
Grama Niladari	2	3	5
IDO (IMD) / FO Manager (DOI)	-	-	-
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	-	-
Total	42	27	69
Resources Persons			
DO (DAS)	-	-	-
DOA	4	-	4
DOI	3	-	3
Divisional Secretariat	2	-	2
IMD	5	-	5
Total	14	-	14
Grand Total	56	27	83

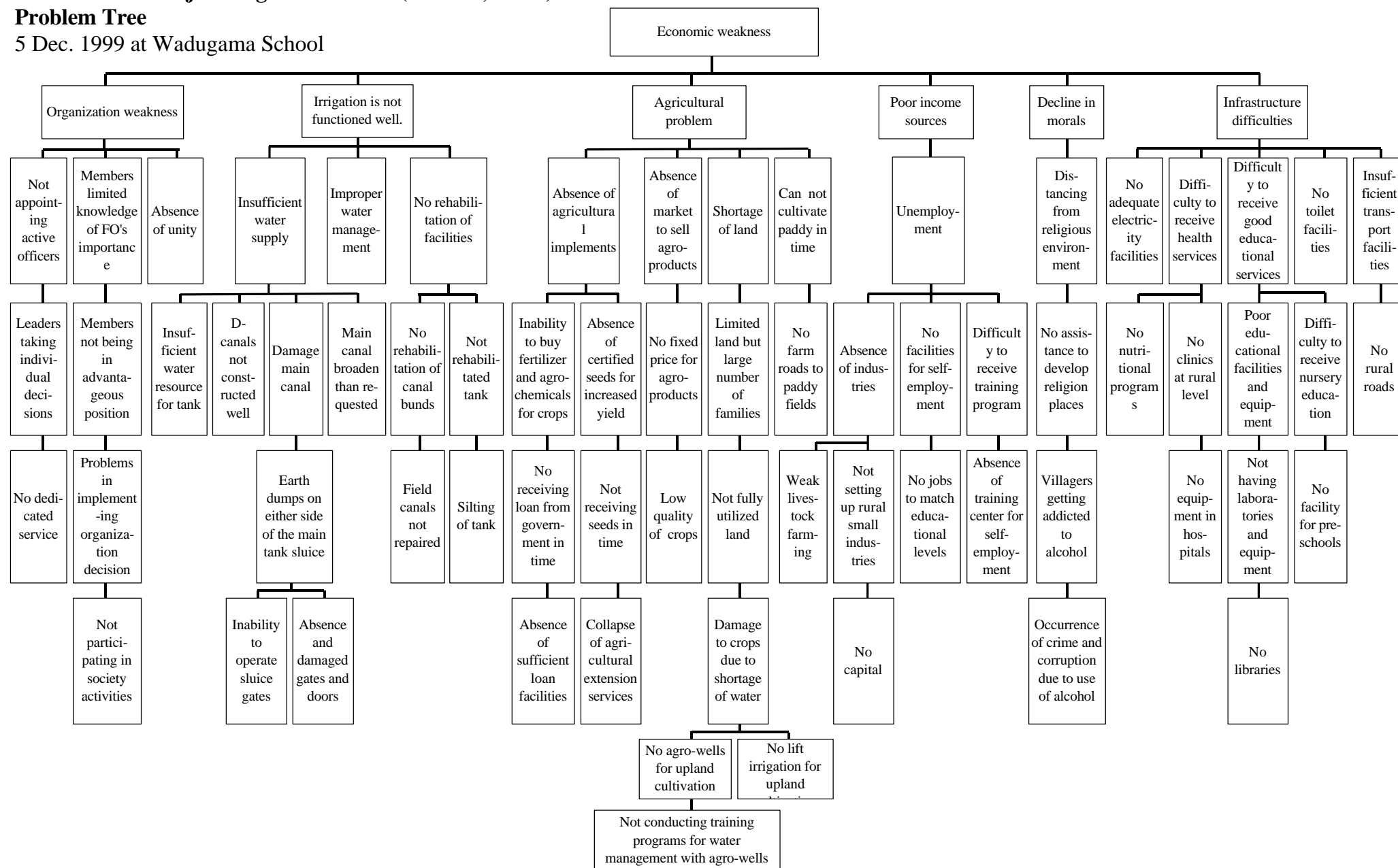
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agriculture</li> <li>● Department of Agrarian Services</li> <li>● Provincial Council</li> <li>● Divisional Secretariat</li> <li>● Agrarian Services Centre</li> <li>● Pradeshiya Sabha</li> <li>● State and Private Banks</li> <li>● Training Institutions</li> <li>● Department of Small Industries</li> <li>● Youth Club (NYSC)</li> <li>● Agricultural Animators</li> <li>● NGO</li> </ul>	<ul style="list-style-type: none"> <li>● Rural communities</li> <li>● Farmers Organisation</li> <li>● Member of farmers Organisation</li> <li>● Farmers</li> <li>● Unemployed youth</li> <li>● Youth club</li> <li>● Members of community</li> </ul>	<ul style="list-style-type: none"> <li>● Project Management Committee</li> <li>● Federation of Farmers Organisation</li> <li>● Farmers Organisation</li> <li>● Village Development Organisation</li> <li>● Women's' Organisation</li> </ul>	<ul style="list-style-type: none"> <li>● Ministry of Industries</li> <li>● Jalapalaka</li> <li>● Public and Private transport</li> <li>● Department of Education</li> <li>● Department of Health</li> <li>● Funding Agencies</li> <li>● International Agencies</li> <li>● Voluntary Organisation</li> </ul>	

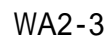
# Palukadawela Major Irrigation Scheme (Track 1, 2 & 3)

## Problem Tree

5 Dec. 1999 at Wadugama School



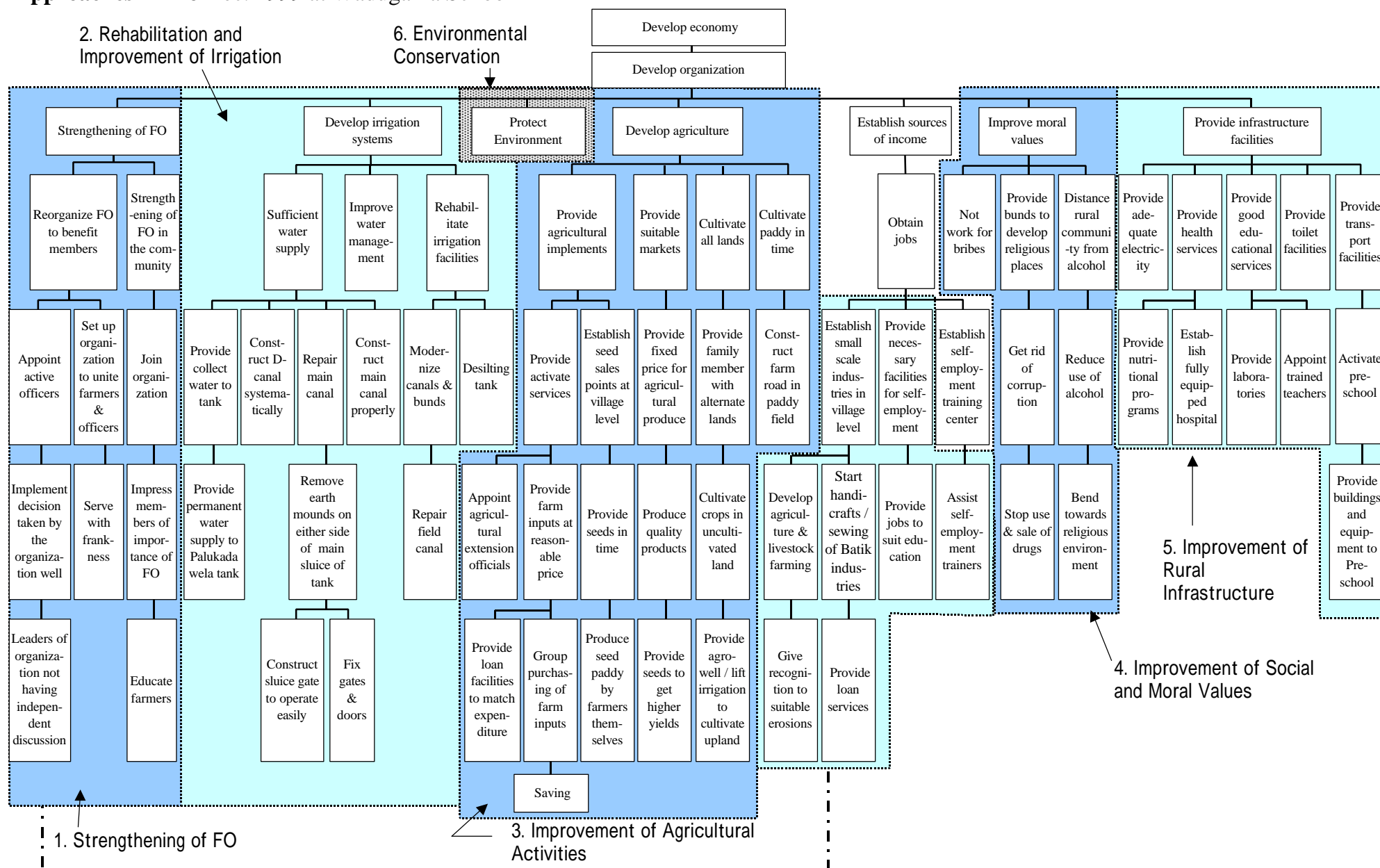
6 Dec. 1999 at Wadugama School



# Palukadawela Major Irrigation Scheme (Track 1, 2 & 3)

## Approaches

6 Dec. 1999 at Wadugama School



## PALUKADAWELA MAJOR SCHEME - 2

### 1. Participants

- (1) Place of Workshop : Walaganba School  
 (2) Date : 07 & 08 December 1999  
 (3) FOs relating to Workshop : Puranagama Walagamba FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	5	-	5
FO Members	30	8	38
Community (DDA, community people)	14	-	14
Women's Society	-	-	-
Youth Club	-	-	-
Farmer Animator	1	4	5
Grama Niladari	1	-	1
IDO (IMD) / FO Manager (DOI)	1	-	1
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	-	-
<b>Total</b>	<b>53</b>	<b>12</b>	<b>65</b>
<b>Resources Persons</b>			
DO (DAS)	-	-	-
DOA	5	-	5
DOI	4	-	4
Divisional Secretariat	3	-	3
IMD	4	-	4
<b>Total</b>	<b>16</b>	<b>-</b>	<b>16</b>
<b>Grand Total</b>	<b>69</b>	<b>12</b>	<b>81</b>

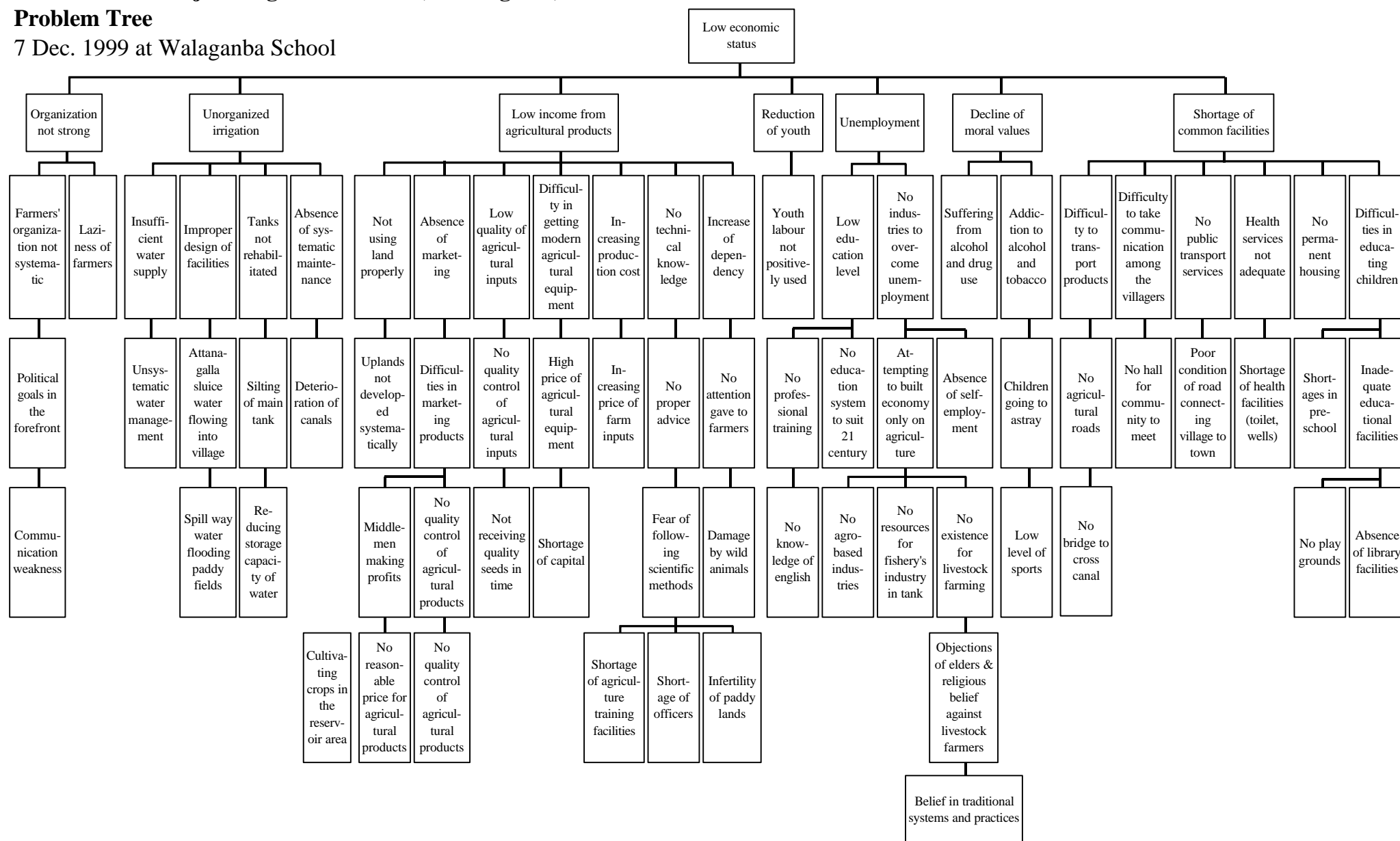
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agrarian Services</li> <li>● Department of Agriculture</li> <li>● Central government</li> <li>● Divisional Secretariat</li> <li>● Training Institutions</li> <li>● Youth Club (NYSC)</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers Organisation</li> <li>● Farmers</li> <li>● Members of community</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers Organisation</li> <li>● Death Donation Society</li> </ul>	<ul style="list-style-type: none"> <li>● Mahaweli Authority</li> <li>● Marketing</li> </ul>	

# Palukadawela Major Irrigation Scheme (Puranagama)

## Problem Tree

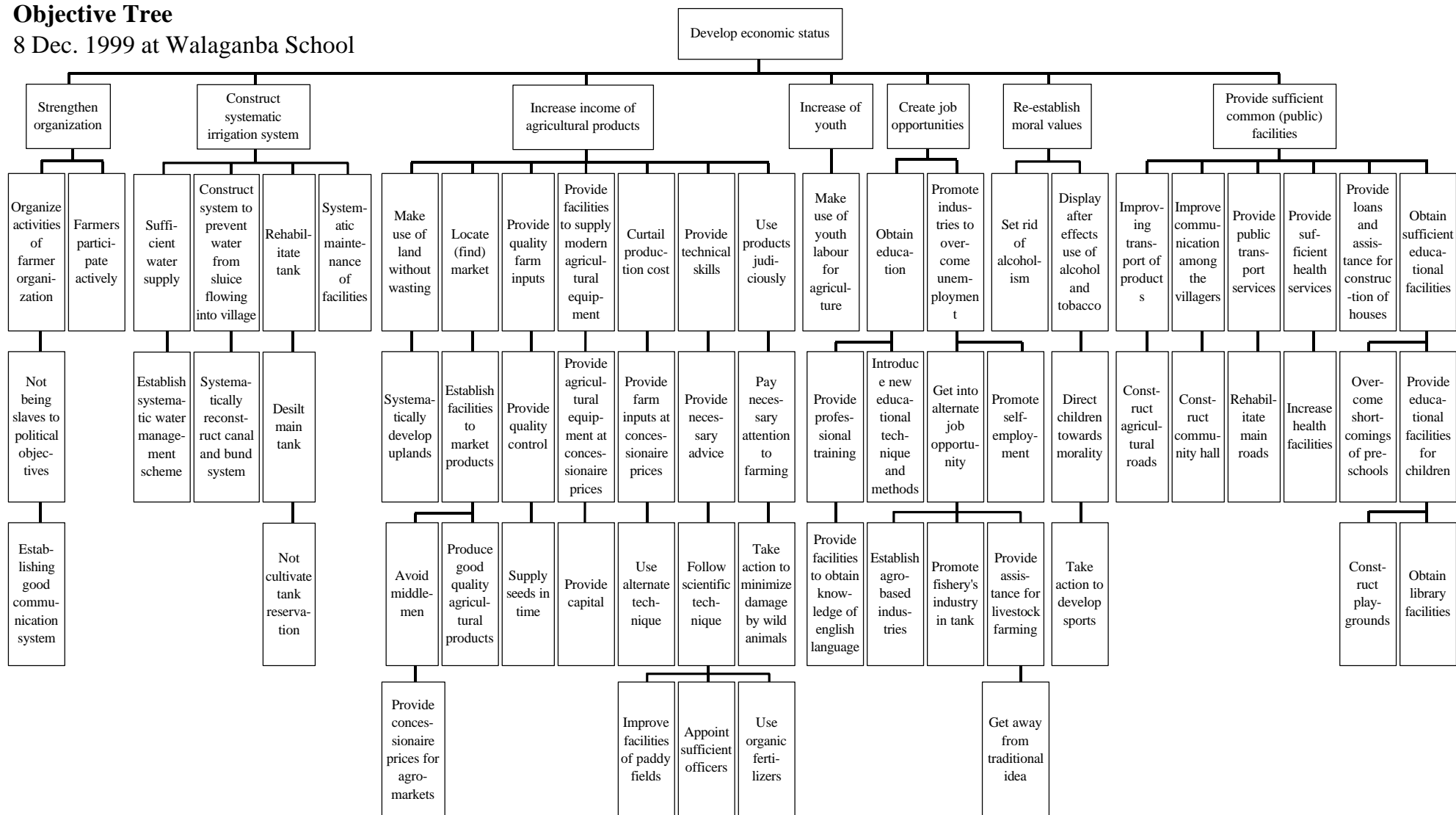
7 Dec. 1999 at Walaganba School



# Palukadawela Major Irrigation Scheme (Puranagama)

## Objective Tree

8 Dec. 1999 at Walaganba School

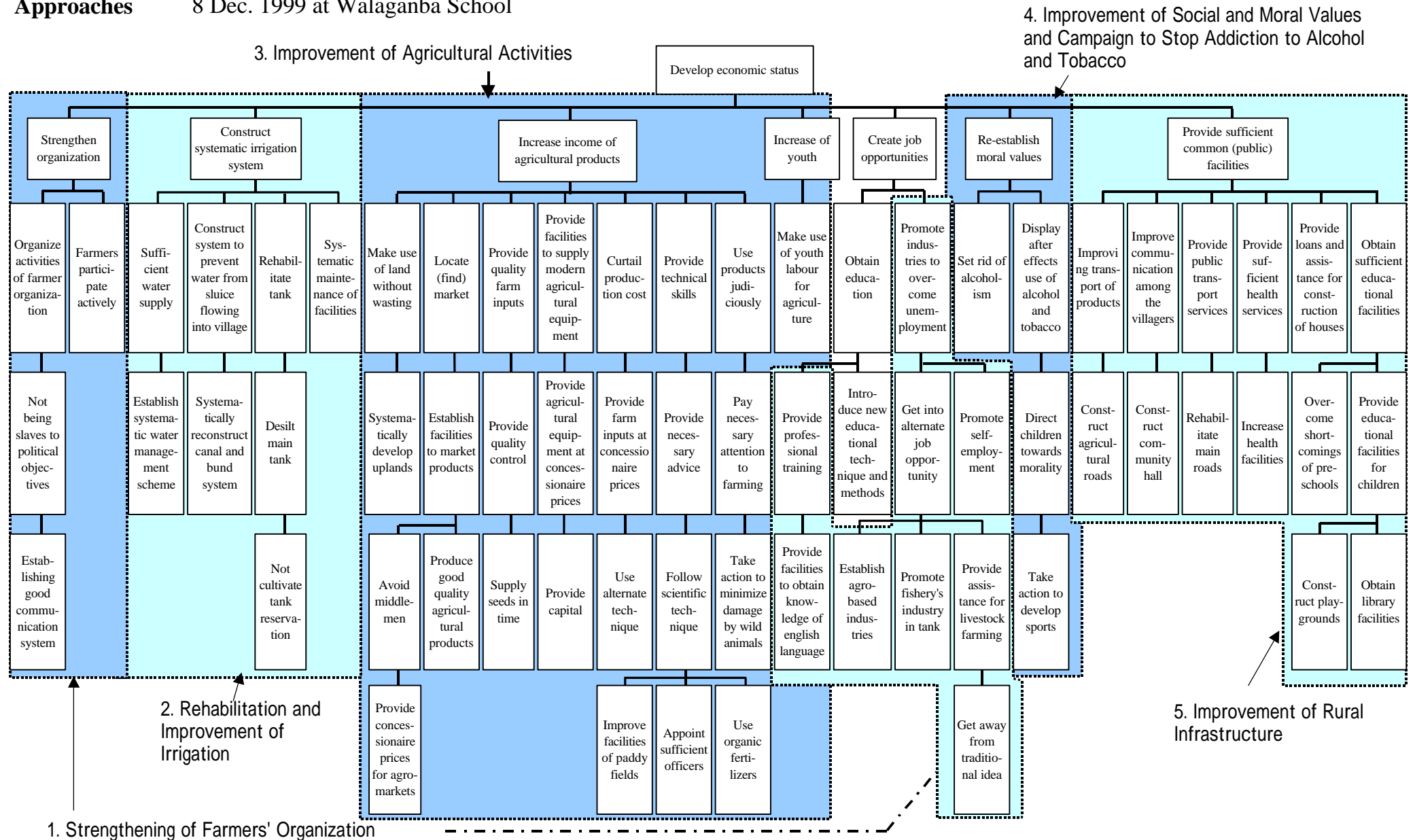




# Palukadawela Major Irrigation Scheme (Puranagama)

## Approaches

8 Dec. 1999 at Walaganba School



## PALUKADAWELA MAJOR SCHEME - 3

### 1. Participants

- (1) Place of Workshop : Jaya-boomi School  
 (2) Date : 11 & 12 December 1999  
 (3) FOs relating to Workshop : Track-4 FO, Track-5 FO, Track-6 FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	6	-	6
FO Members	50	9	59
Community (DDA, community people)	8	-	8
Women's Society	-	-	-
Youth Club	-	-	-
Farmer Animator	-	-	-
Grama Niladari	2	-	2
IDO (IMD) / FO Manager (DOI)	-	-	-
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	-	-
<b>Total</b>	<b>67</b>	<b>9</b>	<b>76</b>
<b>Resources Persons</b>			
DO (DAS)	-	-	-
DOA	4	-	4
DOI	2	-	2
Divisional Secretariat	2	-	2
IMD	4	-	4
<b>Total</b>	<b>12</b>	<b>-</b>	<b>12</b>
<b>Grand Total</b>	<b>79</b>	<b>9</b>	<b>88</b>

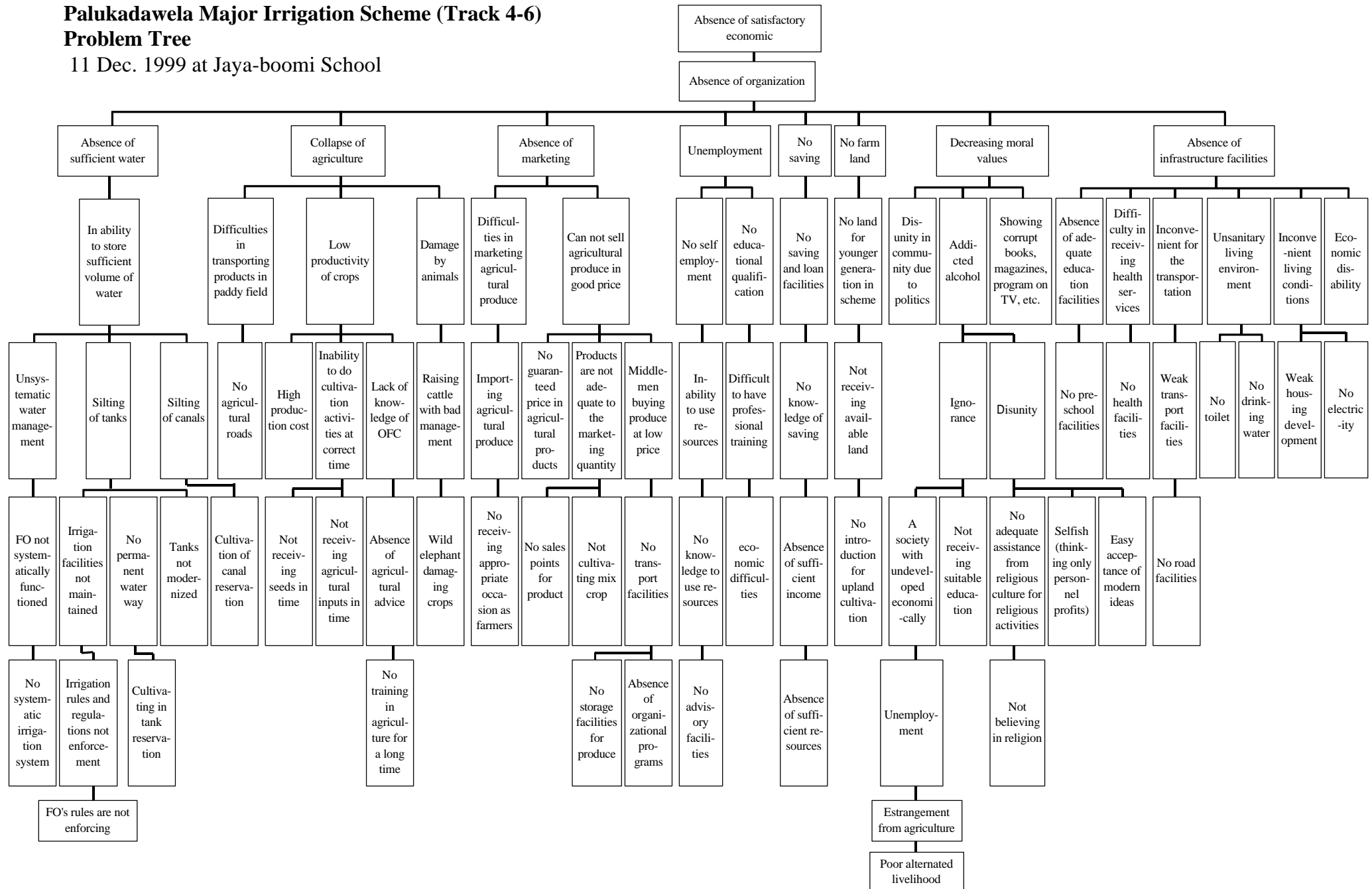
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agrarian Services</li> <li>● Department of Agriculture</li> <li>● Agrarian Service Centre</li> <li>● Livestock Development Board</li> <li>● District Secretary</li> <li>● Divisional Secretariat</li> <li>● Department of Wildlife</li> <li>● Road Development Authority</li> <li>● Training Institutions</li> <li>● Youth Club (NYSC)</li> <li>● Banks</li> <li>● Grama Niladari</li> <li>● Farmer Animators</li> <li>● RPM Office</li> <li>● Mee Oya Project Office</li> <li>● Co-operative Department</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers Organisation</li> <li>● Farmers</li> <li>● Members of community</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers Organisation</li> <li>● Community Organisation</li> <li>● Women's Society</li> </ul>	<ul style="list-style-type: none"> <li>● School Principal</li> <li>● Religious leaders</li> <li>● Priest</li> <li>● Parents</li> <li>● Elders</li> <li>● Department of Education</li> <li>● Samurdhi</li> <li>● Public Health Inspector</li> <li>● NHDA</li> <li>● Ceylon Electricity Board</li> </ul>	

# Palukadawela Major Irrigation Scheme (Track 4-6)

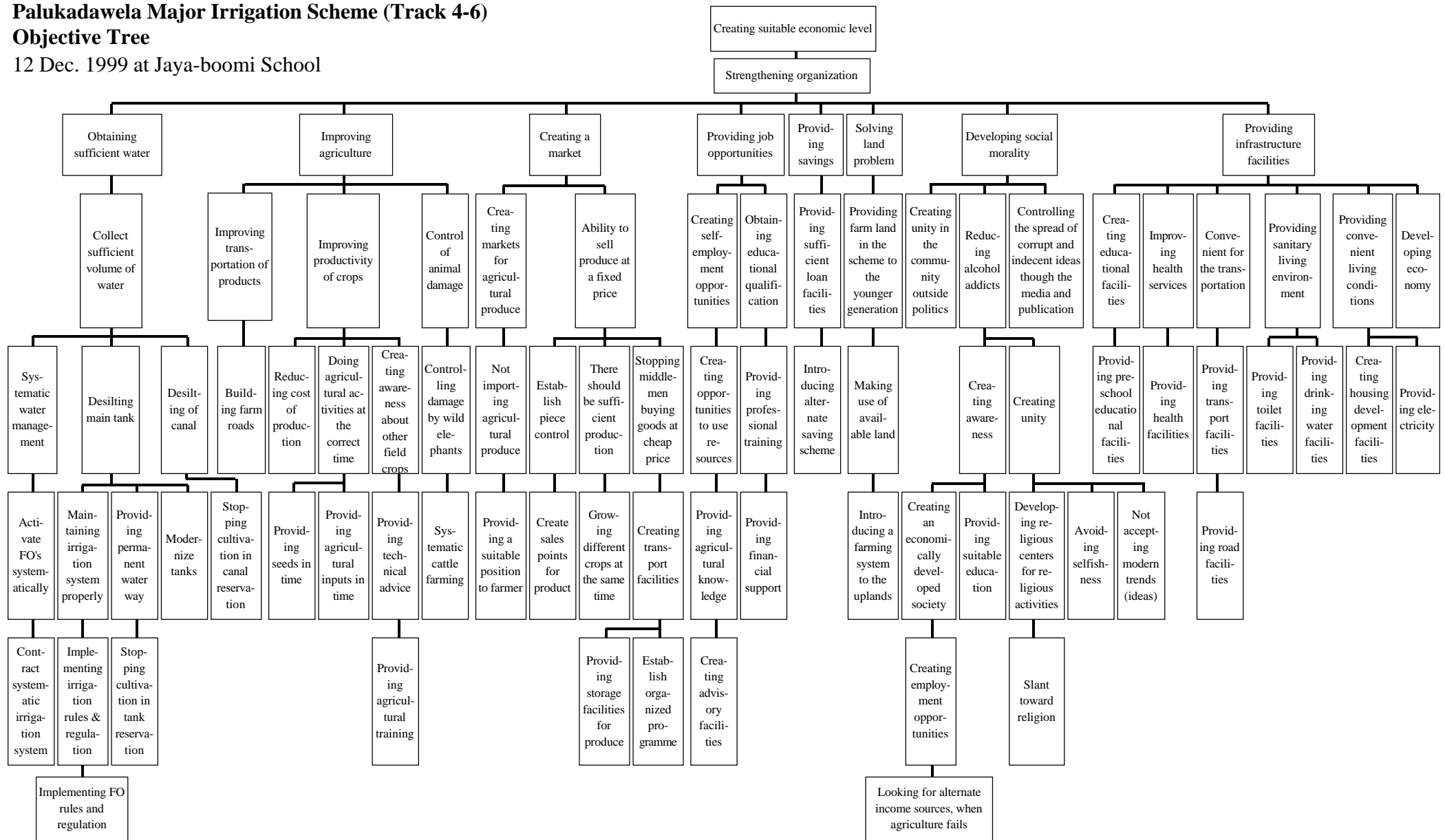
## Problem Tree

11 Dec. 1999 at Jaya-boomi School



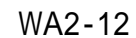
## Objective Tree

12 Dec. 1999 at Jaya-boomi School



## Approaches

### 3. Improvement of Agricultural Activities



***Attachment-3***  
***PCM Workshop***  
***Periyakulama Medium Scheme***

## PERIYAKULAMA MEDIUM SCHEME

### 1. Participants

- (1) Place of Workshop : Periyakulama School  
 (2) Date : 21 & 22 November 1999  
 (3) FOs relating to Workshop : Ekamuthu FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	3	-	3
FO Members	20	12	32
Community (DDA, community people)	-	-	-
Women's Society	-	2	2
Youth Club	2	3	5
Farmer Animator	-	1	1
Grama Niladari	2	1	3
IDO (IMD) / FO Manager (DOI)	1	-	1
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	1	-	1
<b>Total</b>	<b>30</b>	<b>19</b>	<b>49</b>
<b>Resources Persons</b>			
DO (DAS)	2	-	2
DOA	1	-	1
DOI	2	1	3
Divisional Secretariat	2	-	2
IMD	1	-	1
<b>Total</b>	<b>8</b>	<b>1</b>	<b>9</b>
<b>Grand Total</b>	<b>38</b>	<b>20</b>	<b>58</b>

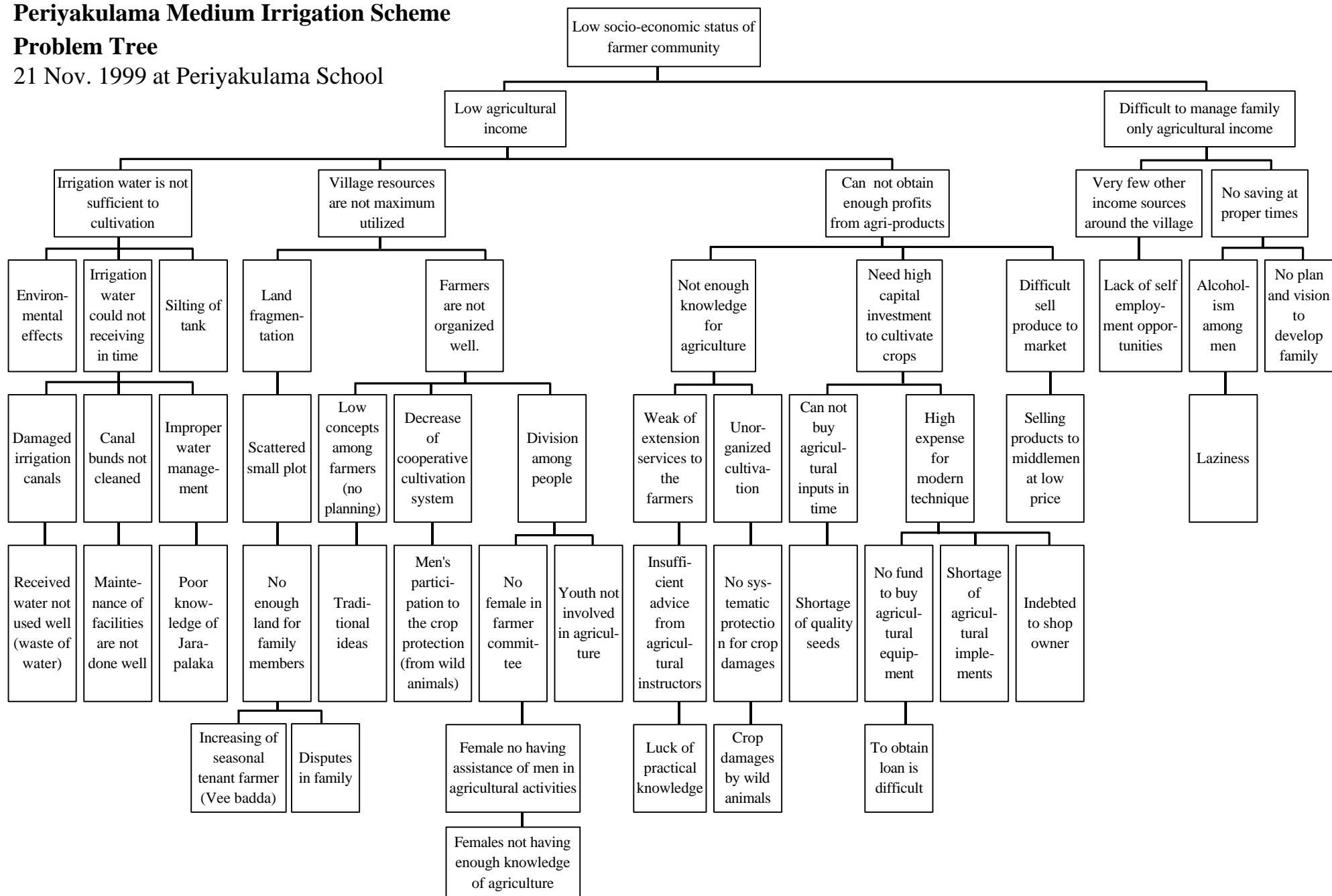
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agriculture</li> <li>● Agrarian Services Centre</li> <li>● Grama Niladari</li> <li>● Department of Wildlife</li> <li>● NGO</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Family Members</li> <li>● All community members</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers Committee</li> <li>● Death donation Society</li> <li>● Women's Society</li> <li>● Village Temple</li> </ul>	<ul style="list-style-type: none"> <li>● Priests in the temple</li> </ul>	<ul style="list-style-type: none"> <li>● Landed class - Purana paddy field</li> </ul>

# Periyakulama Medium Irrigation Scheme

## Problem Tree

21 Nov. 1999 at Periyakulama School

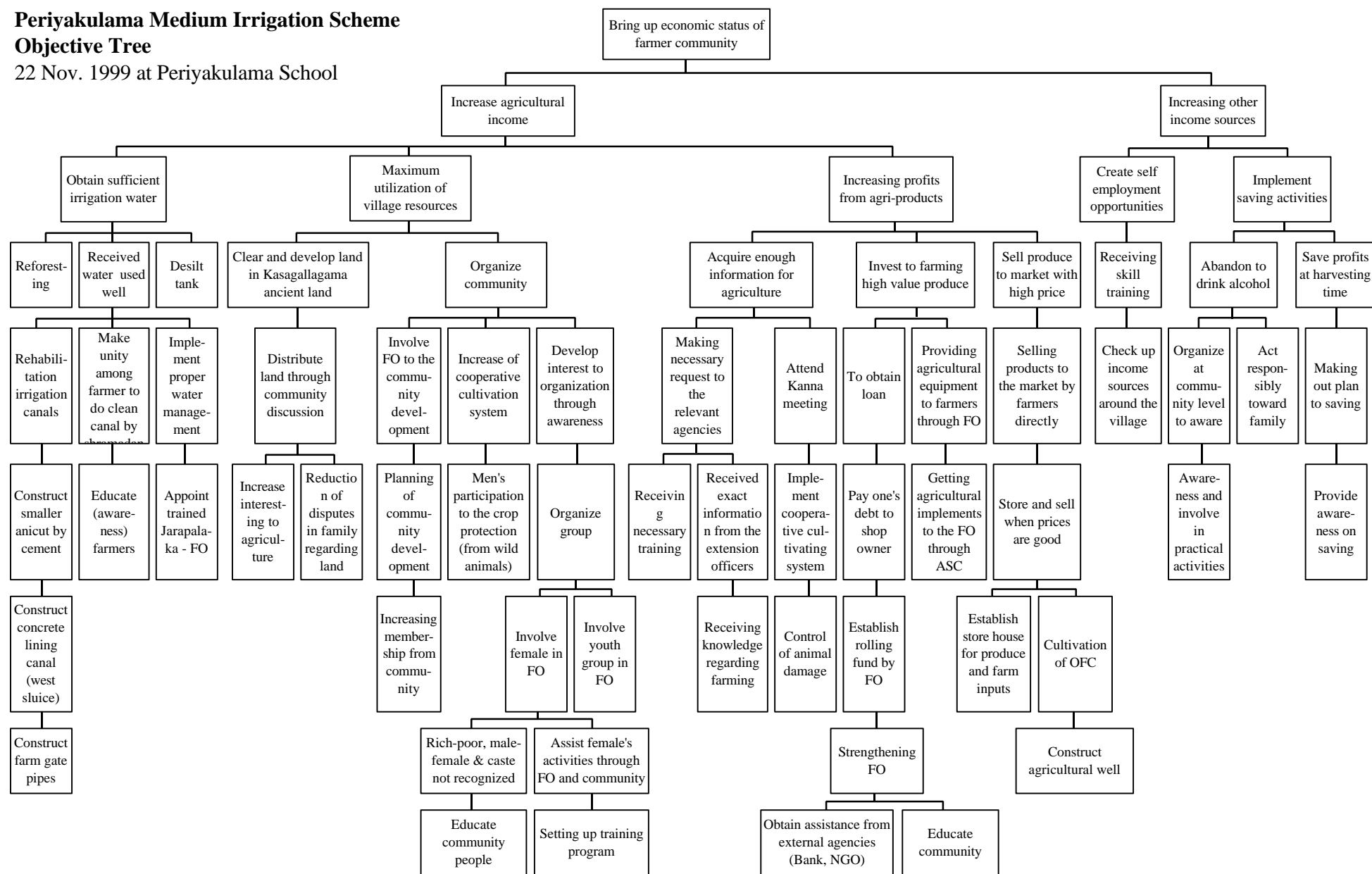




# Periyakulama Medium Irrigation Scheme

## Objective Tree

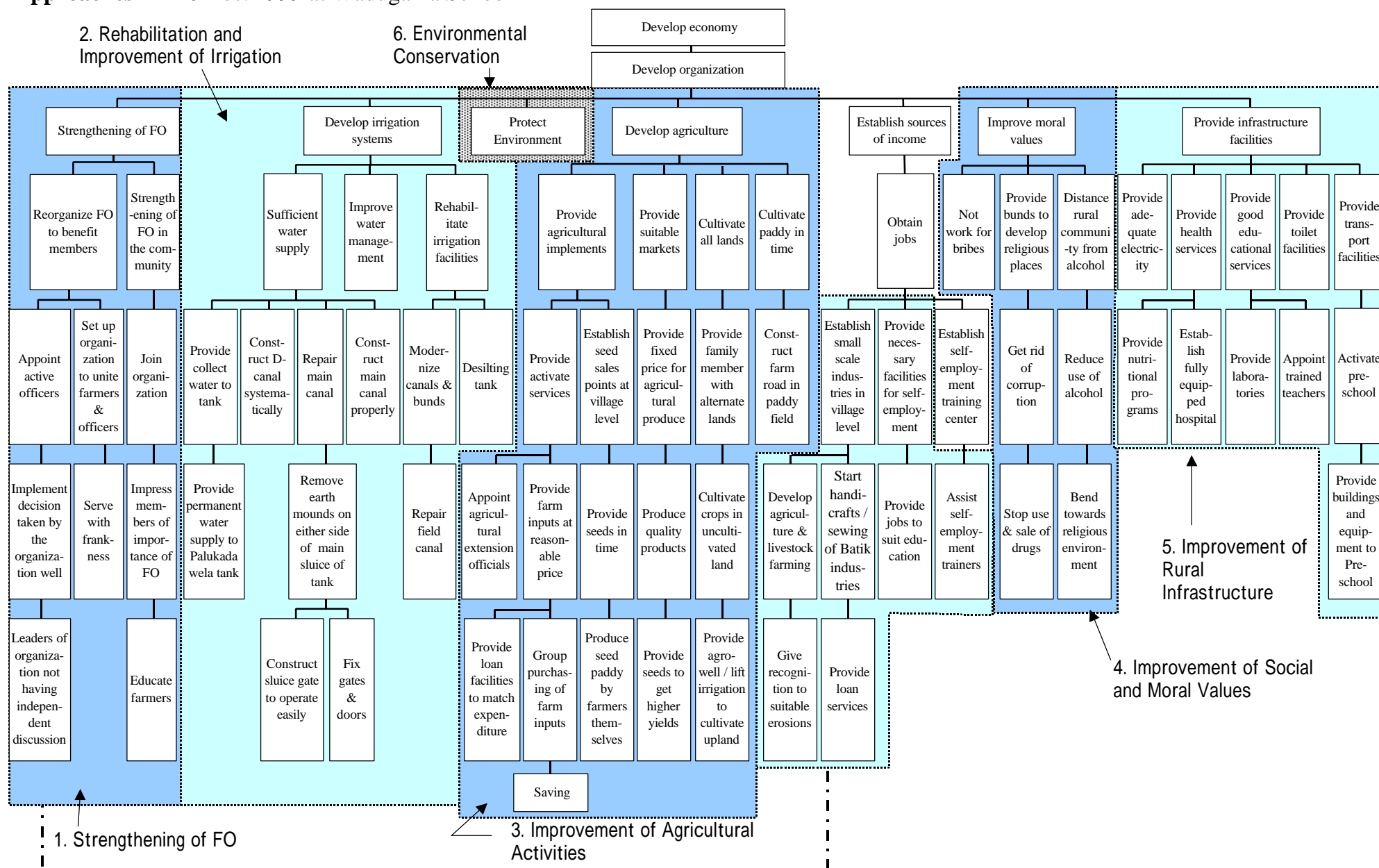
22 Nov. 1999 at Periyakulama School



# Palukadawela Major Irrigation Scheme (Track 1, 2 & 3)

## Approaches

6 Dec. 1999 at Wadugama School



***Attachment-4***  
***PCM Workshop***  
***Mahananneriya Medium Scheme***

## MAHANANNERIYA MEDIUM SCHEME

### 1. Participants

- (1) Place of Workshop : Galtanpithiya Temple  
 (2) Date : 01 & 02 December 1999  
 (3) FOs relating to Workshop : Ekabaddha FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	11	-	11
FO Members	2	2	4
Community (DDA, community people)	-	-	-
Women's Society	-	9	9
Youth Club	-	-	-
Farmer Animator	1	3	4
Grama Niladari	5	1	6
IDO (IMD) / FO Manager (DOI)	-	1	1
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	-	-
<b>Total</b>	<b>20</b>	<b>16</b>	<b>36</b>
<b>Resources Persons</b>			
DO (DAS)	1	-	1
DOA	2	-	2
DOI	3	-	3
Divisional Secretariat	-	-	-
IMD	1	-	1
<b>Total</b>	<b>7</b>	<b>-</b>	<b>7</b>
<b>Grand Total</b>	<b>27</b>	<b>16</b>	<b>43</b>

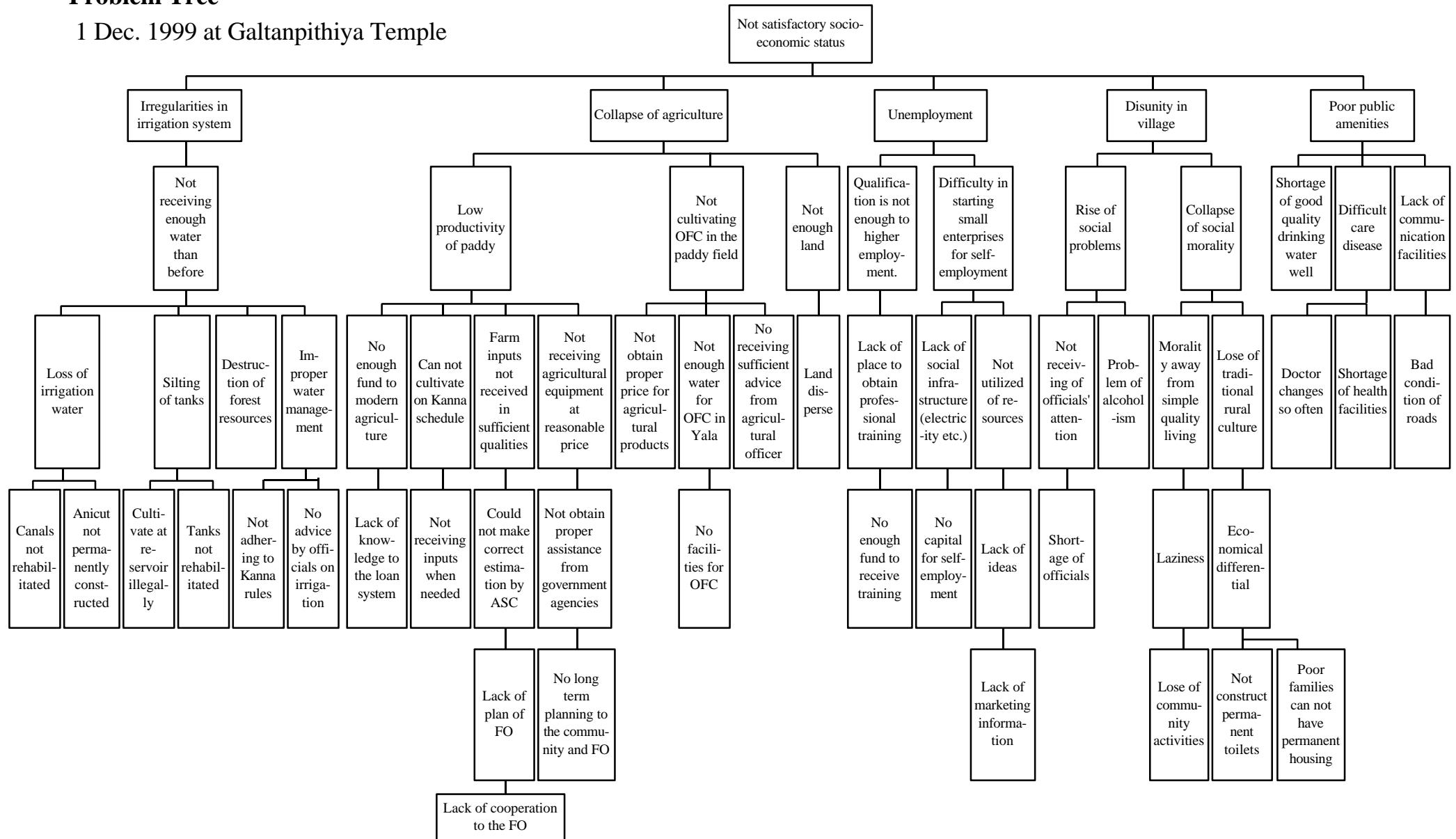
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agriculture</li> <li>● Department of Agrarian Services</li> <li>● Agrarian Services Centre</li> <li>● Department of Wildlife</li> <li>● NW Provincial Council</li> <li>● Industrial Development Board</li> <li>● Pradeshiya Sabha</li> <li>● Divisional Secretariat</li> <li>● Voluntary Organisation (JOCV)</li> <li>● Grama Niladari</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers</li> <li>● All community</li> </ul>	<ul style="list-style-type: none"> <li>● Village organisation</li> <li>● Farmers Organisation</li> <li>● Death Donation Society</li> <li>● Women's Organisation</li> <li>● Project Management Committee</li> <li>● Farmer Animator</li> </ul>	<ul style="list-style-type: none"> <li>● Chief medical officer</li> <li>● Colonisation officer</li> <li>● Department of Social Services</li> <li>● PTA</li> <li>● NHDA</li> <li>● School Principal</li> <li>● Priest</li> </ul>	

# Mahannaneriya Medium Irrigation Scheme

## Problem Tree

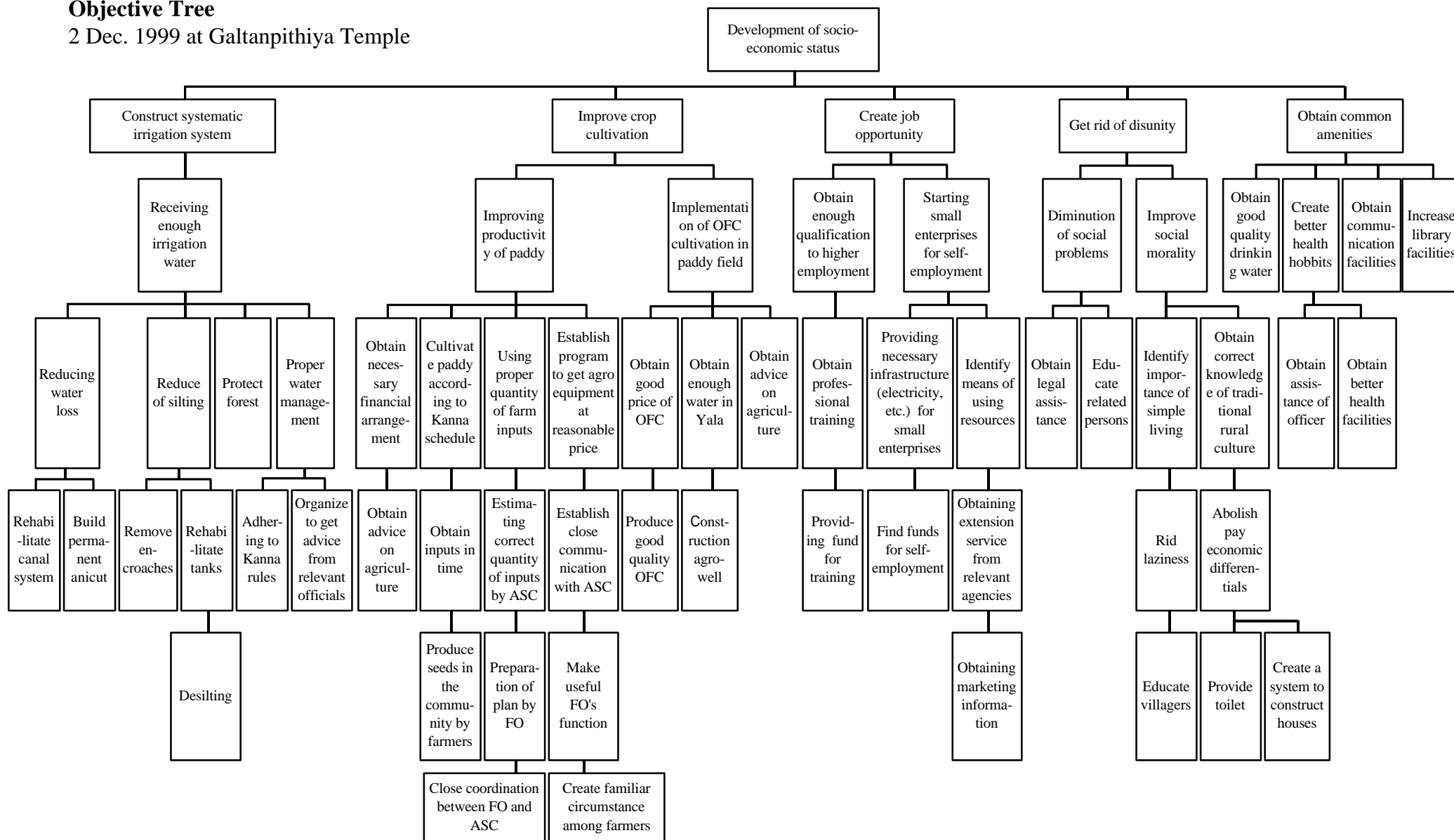
1 Dec. 1999 at Galtanpithiya Temple



## Mahannaneriya Medium Irrigation Scheme

### Objective Tree

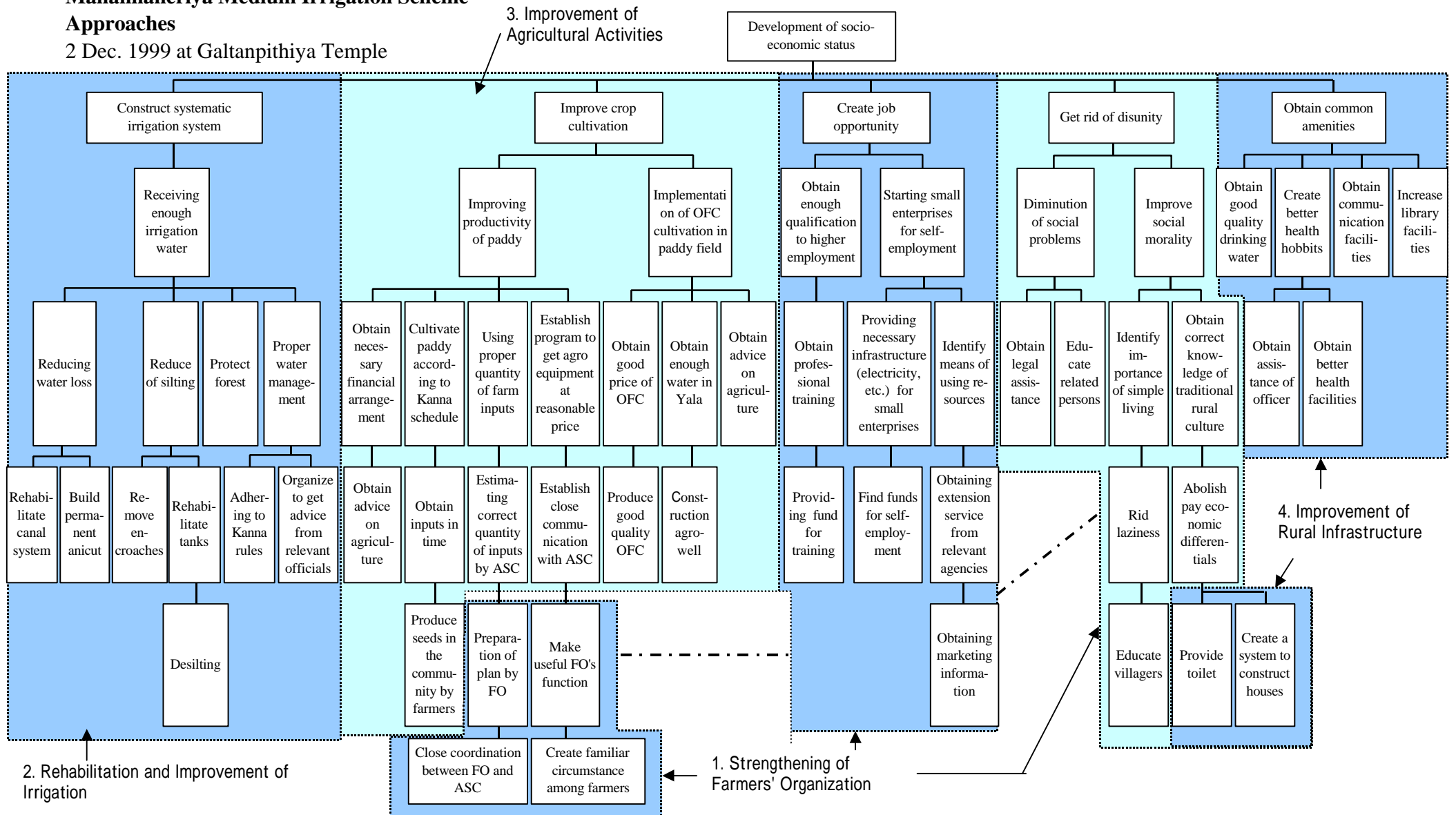
2 Dec. 1999 at Galtanpithiya Temple



# Mahannaneriya Medium Irrigation Scheme

## Approaches

2 Dec. 1999 at Galtanpithiya Temple



***Attachment-5***  
***PCM Workshop***  
***Mahananneriya Minor Schemes***  
***(Cascade)***



## MAHANANNERIYA MINOR SCHEMES (CASCADE) - 1

### 1. Participants

- (1) Place of Workshop : Arthikulama Temple  
 (2) Date : 23 & 24 November 1999  
 (3) FOs relating to Workshop : Kallanchiya/Nidahas FO, Arthikulama/ Samagi FO, Palumailawa/Eksath FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	5	-	5
FO Members	25	3	28
Community (DDA, community people)	7	-	7
Women's Society	-	7	7
Youth Club	2	-	2
Farmer Animator	2	1	3
Grama Niladari	2	-	2
IDO (IMD) / FO Manager (DOI)	-	-	-
Work Supervisor (DOI)	1	-	1
Samurdhi Animator	-	-	-
<b>Total</b>	<b>44</b>	<b>11</b>	<b>55</b>
<b>Resources Persons</b>			
DO (DAS)	6	-	6
DOA	2	-	2
DOI	2	-	2
Divisional Secretariat	1	-	1
IMD	1	-	1
<b>Total</b>	<b>12</b>	<b>-</b>	<b>12</b>
<b>Grand Total</b>	<b>56</b>	<b>11</b>	<b>67</b>

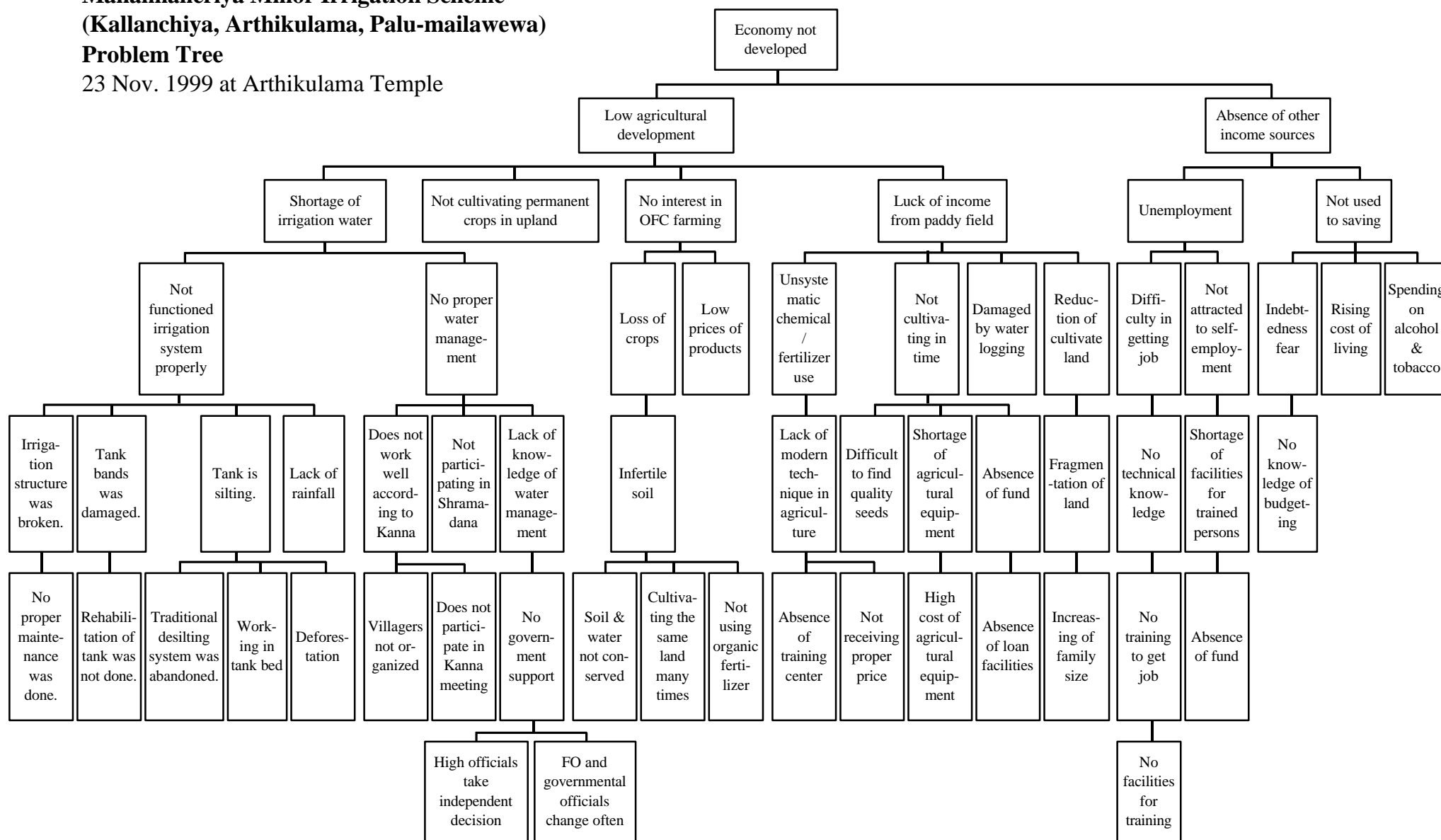
### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agriculture</li> <li>● Veterinary Surgeon Office</li> <li>● Agrarian Services Centre</li> <li>● Divisional Secretariat</li> <li>● Grama Niladari</li> <li>● Bank</li> <li>● NGO</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers</li> <li>● All Villagers</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Temple Development Societies</li> <li>● Death Donation Society</li> <li>● Women's Society</li> </ul>	<ul style="list-style-type: none"> <li>● Village Temple</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers at neighbouring tank</li> </ul>

**Mahannaneriya Minor Irrigation Scheme  
(Kallanchiya, Arthikulama, Palu-mailawewa)**

**Problem Tree**

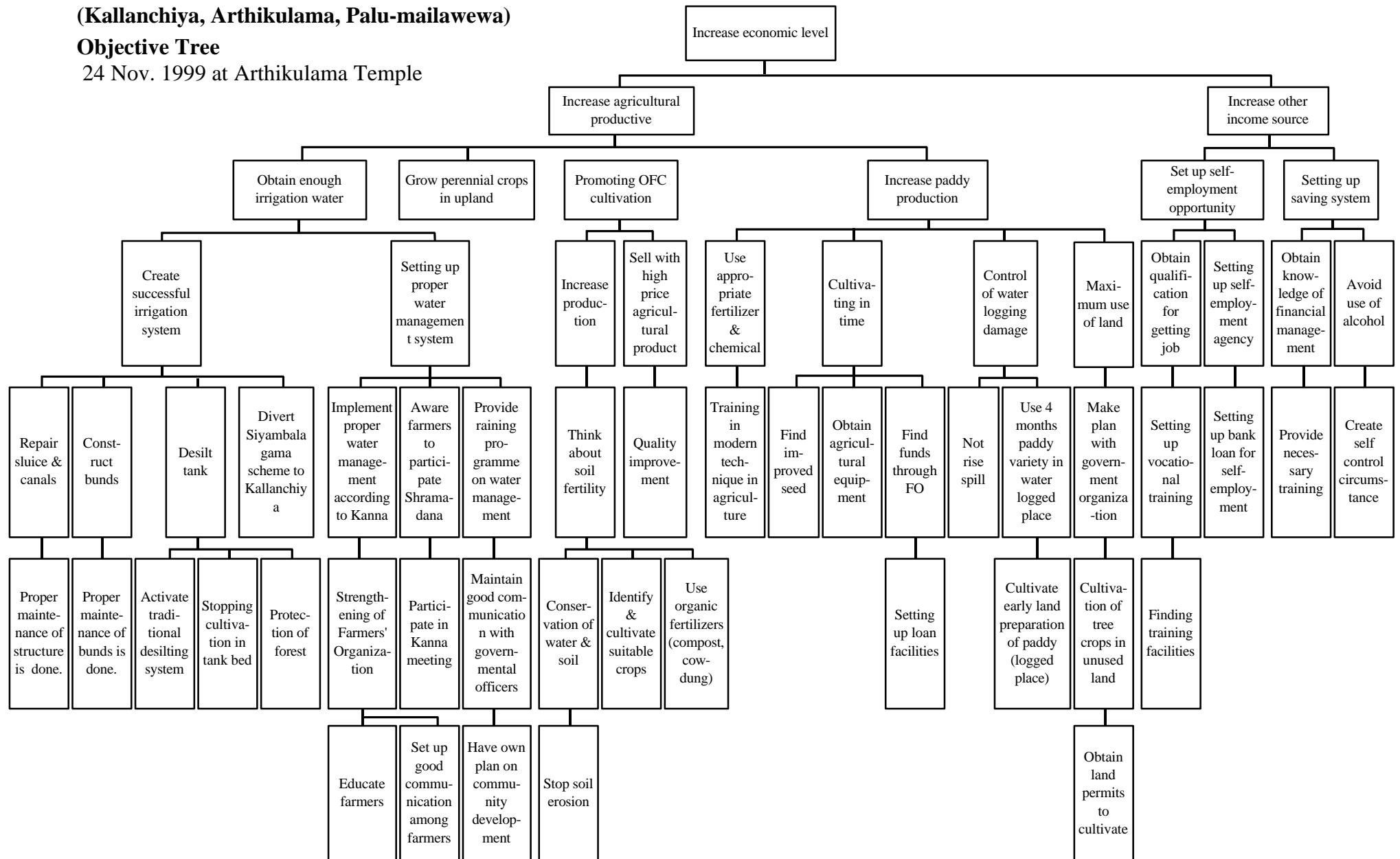
23 Nov. 1999 at Arthikulama Temple



**Mahannaneriya Minor Irrigation Scheme  
(Kallanchiya, Arthikulama, Palu-mailawewa)**

**Objective Tree**

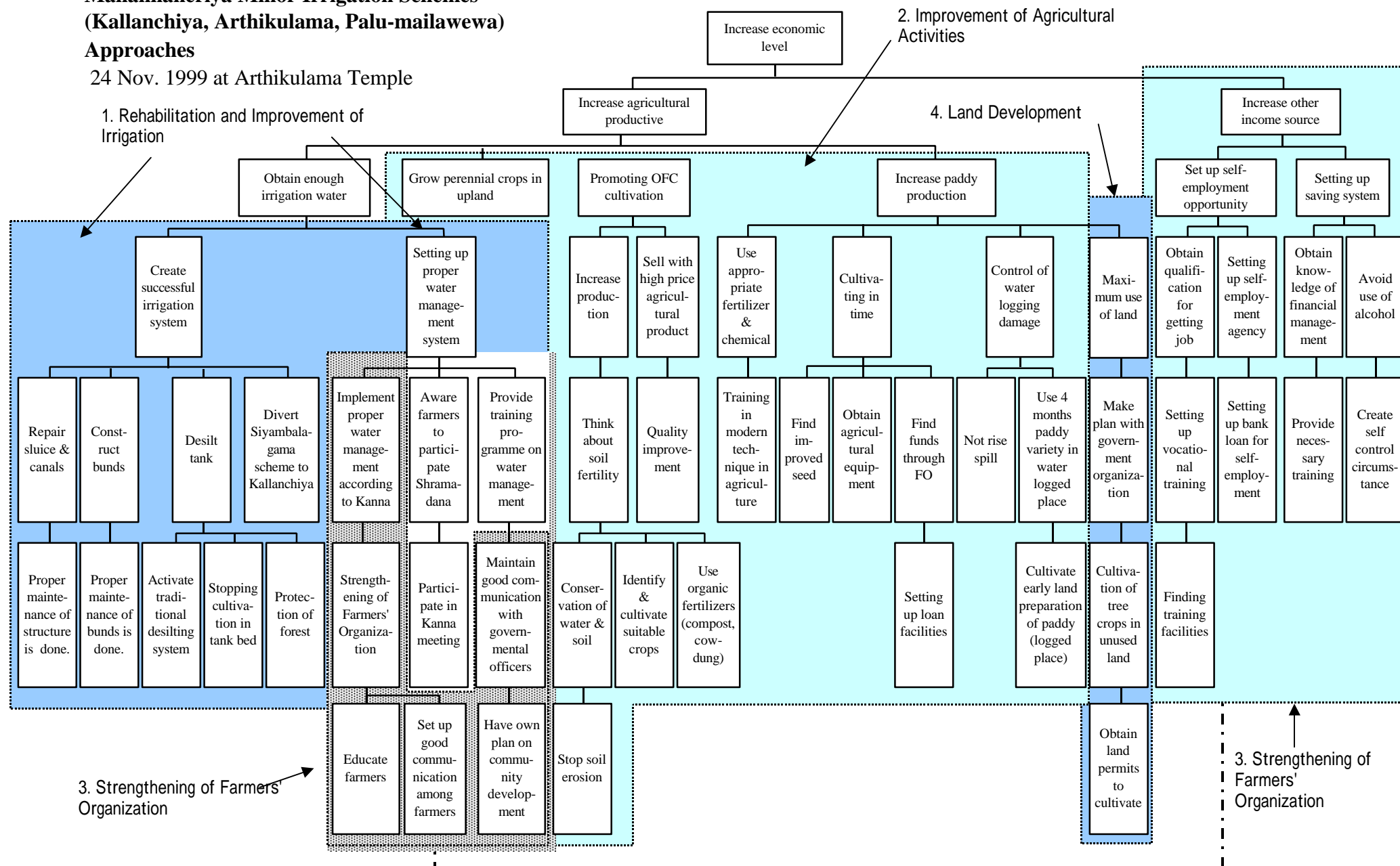
24 Nov. 1999 at Arthikulama Temple



# Mahannaneriya Minor Irrigation Schemes (Kallanchiya, Arthikulama, Palu-mailawewa)

## Approaches

24 Nov. 1999 at Arthikulama Temple



## MAHANANNERIYA MINOR SCHEMES (CASCADE) - 2

### 1. Participants

- (1) Place of Workshop : Death Donation Society Hall  
 (2) Date : 25 & 26 November 1999  
 (3) FOs relating to Workshop : Ihalagama/Eksath FO, Tambarewewa/ Samagi FO, Ihalananneriya/Eksath FO  
 (4) Attendance

	Male	Female	Total
<b>Workshop Participants</b>			
FO/FC Leaders	5	2	7
FO Members	19	6	25
Community (DDA, community people)	-	-	-
Women's Society	-	3	3
Youth Club	-	2	2
Farmer Animator	1	1	2
Grama Niladari	2	-	2
IDO (IMD) / FO Manager (DOI)	-	-	-
Work Supervisor (DOI)	-	-	-
Samurdhi Animator	-	-	-
<b>Total</b>	<b>27</b>	<b>14</b>	<b>41</b>
<b>Resources Persons</b>			
DO (DAS)	2	-	2
DOA	2	-	2
DOI	1	-	1
Divisional Secretariat	1	-	1
IMD	1	-	1
<b>Total</b>	<b>7</b>	<b>-</b>	<b>7</b>
<b>Grand Total</b>	<b>34</b>	<b>14</b>	<b>48</b>

### 2. Participatory Analysis

External Organisation	Beneficiaries	Internal Organisation	Others	Potential Opponents
<ul style="list-style-type: none"> <li>● Department of Irrigation</li> <li>● Department of Agriculture</li> <li>● Department of Agrarian Services</li> <li>● Pradeshiya Sabha</li> <li>● Land Development Authority</li> <li>● Grama Niladari</li> <li>● Farmer Animator</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> <li>● Farmers</li> <li>● Villagers</li> </ul>	<ul style="list-style-type: none"> <li>● Farmers' Organisation</li> </ul>	<ul style="list-style-type: none"> <li>● GN</li> <li>● Health Department</li> </ul>	

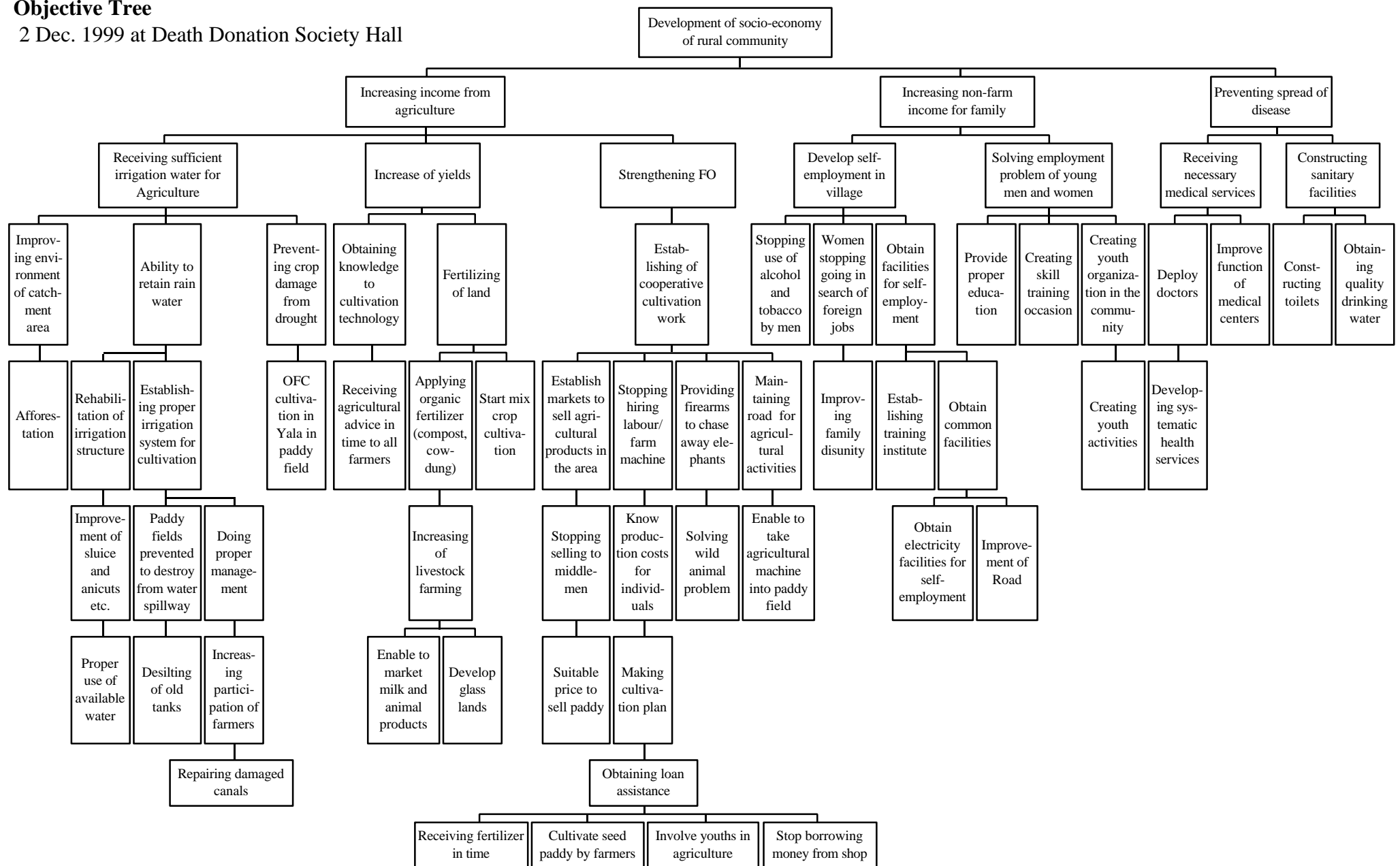
1 Dec. 1999 at Death Donation Society Hall



# Mahananneriya Minor Irrigation Scheme (Ihalagama, Tambarewewa, Ihalananneriya)

## Objective Tree

2 Dec. 1999 at Death Donation Society Hall



# Mahananneriya Minor Irrigation Schemes (Ihalagama, Tambarewewa, Ihalananneriya)

## Approaches

2 Dec. 1999 at Death Donation Society Hall

## 2. Strengthening of Farmers' Organization

