

11. Reports

11. Reports

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11.1 Participatory Approach for the Master Plan

11.1.1 PCM Workshop Report (16 TAOs)

February 2003

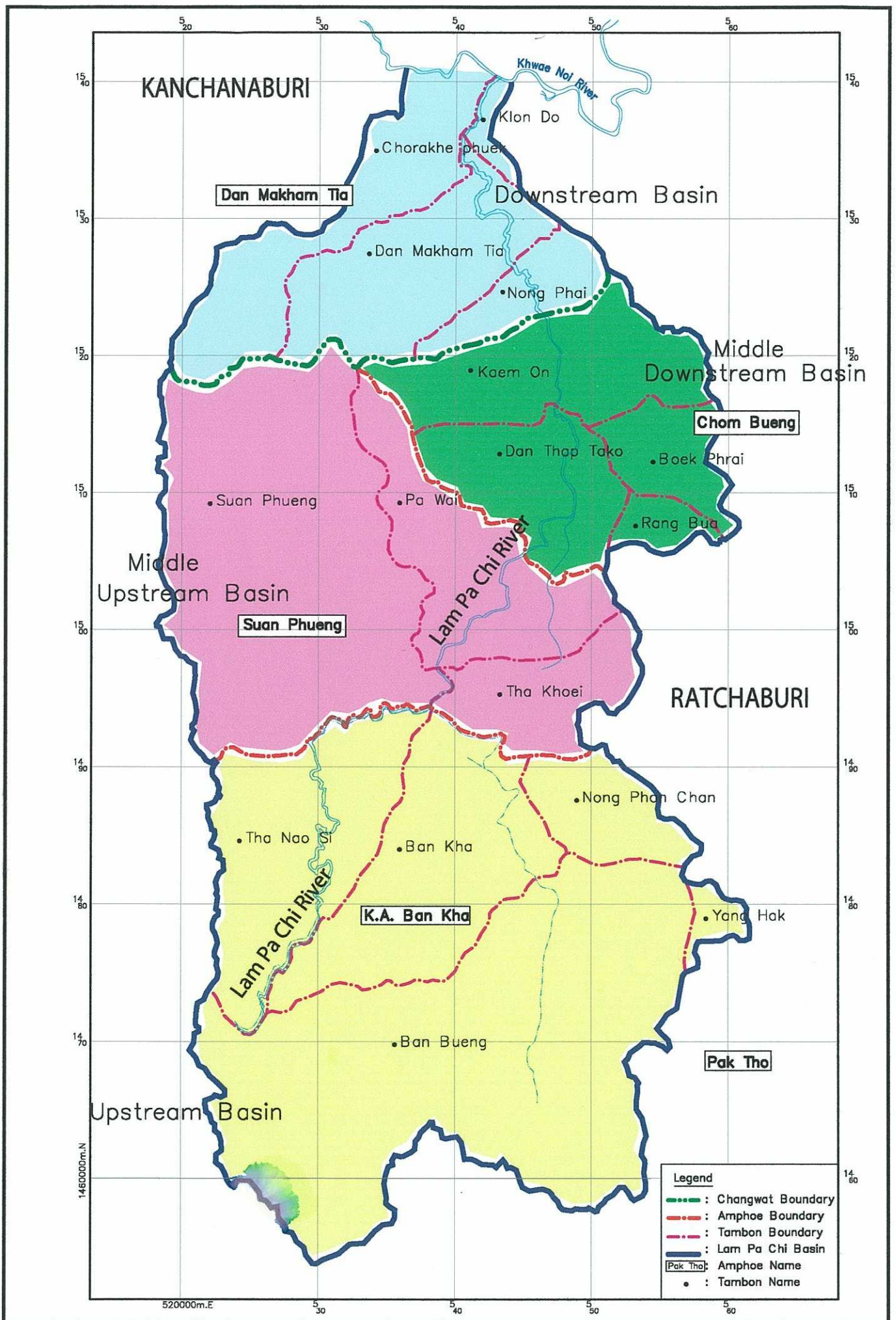
Japan International Cooperation Agency (JICA)
Royal Irrigation Department (RID)

**Study on Application of Participatory Planning
in Rural and Agriculture Development Project
in the Lam Pa Chi River Basin**

PCM WORKSHOP REPORT
(16 TAOs)

February 2003

Sanyu Consultants Inc.



Location Map of the Study Area

Summary

HOW CAN THE PCM METHOD BE INCORPORATED INTO THE CURRENT DEVELOPMENT PROCESS

Under the same Project framework (Study on Application of Participatory Planning in Rural and Agriculture Development Project in the Lam Pa Chi River Basin and after the completion of the **Rapid Rural Appraisal (RRA)** by the Study Team comprising senior staff from the Royal Irrigation Department (RID), JICA experts and local consultants from the TEAM Consulting Engineering and Management Co., Ltd. (TEAM), **Project Cycle Management (PCM)** workshops were carried out in all the 16 Tambons of the Basin. PCM is a study method that through workshops/meetings, enabled the Study Team to work in a close collaboration and participatory manner with the prospective beneficiaries in the project area and to obtain such important knowledge and feedback on the following:

- Village profile;
- Key stakeholders;
- Problems faced by the villages (using Problem-Tree Technique); and
- Potential solutions to the problems (using Objective-Tree and such other related techniques as the Activities Matrix Analysis).

Similarly, after the exercise, strength and weaknesses of the PCM were reviewed, with an aim of its future application at RID. Application of PCM in the work of RID may need also a process to go through as it relates to both aspects of new procedure issue and staff involved. From the experiences gained and on the basis of the suggestions obtained from the PCM team members, it was advised that a group of staff responsible for PCM should also be specifically established within RID. The team members made also several other suggestions that should be considered by RID and other related Government Offices, should PCM be adopted as a tool for future planning.

HOW CAN PCM METHOD BE INCORPORATED INTO THE CURRENT DEVELOPMENT PROCESS

1. Background/What is PCM?

PCM is a study method that through organization of workshops/meetings, enables planners to work in a close collaboration and participatory manner with the prospective beneficiaries to obtain effectively important knowledge on the project area and first hand information on views and/or needs of the local people. Such the information includes, but not limited to, the following:

- Profile of the project area;
- Key stakeholders;
- Problems faced by the beneficiaries (using Problem-Tree Technique); and
- Potential solutions to the problems (using Objective-Tree and such other related techniques as the Activities Matrix Analysis).

Following the completion of the Rapid Rural Appraisal (RRA) made at the selected two Tambons, the PCM Team comprising senior staff from the Royal Irrigation Department (RID), JICA experts

and local consultants from TEAM Consulting Engineering and Management Co., Ltd. (TEAM) carried out the PCM workshops in all the 16 Tambons of the project area during December 2002 and January 2003. The outcome was comprehensive and useful. It was used subsequently by the JICA Study Team to formulate an initial development proposal for sub-basins which will eventually form a comprehensive plan for the development of the whole Lam Pa Chi River Basin.

To the questions of “whether” PCM should be used further by RID and “how” can it be incorporated in to the current development of this organization, the PCM team members met on 7 February 2003 (at RID), to appraise this specific planning tool with a view to making relevant recommendation and/or suggestions, based on the experiences that they have gained from the exercises just completed. A brief account of their conclusion, per items of the discussion, is summarized below.

2. Should PCM method be used for future planning of RID?

As a tool for planning, all the PCM team members shared a common view that it should be used further by RID. Advantages of this exercise were mentioned as following:

- PCM is a tool that promotes a participatory approach in which the prospective beneficiaries could have a good opportunity to participate in the development planning for their own areas;
- PCM exercise/workshop is a means/venue in which all the key stakeholders from the Central (Government) to the grassroots levels (the farmers/villagers) can participate, using the people as a base/focus of the planning;
- PCM as an effective step for securing the first hand information/input for the planning;
- PCM enables the villagers/farmers to understand better the work of the planning/implementing agency (RID in this case);
- PCM facilitates a collaborative work among the government agencies concerned (integrated approach);
- PCM enables the parties concerned to learn experiences of each other;
- PCM produces useful information that can be used by not only the leading agency (RID) but also many Offices/Agencies involved (i.e., TSG members) which is a good basis for promoting development projects/activities;
- PCM could lead to better understanding among the stakeholders on any critical subject matter and therefore, help to reduce a pressure from of possible conflict of interest.

To RID, however, some members believe that the following are disadvantages and should need further consideration:

- This method requires lots of time and resources and accordingly, may not be appropriate for a large-scale project;
- This method requires expertise of multi-disciplinary nature and therefore, to be effective, a Unit/Division responsible for this work should be institutionalized/established within RID (similar to the one suggested for RRA);
- This method involves a long working process that may not be able to meet with any immediate requirement for problem solving of the local people. This could worsen further the situation of unhappiness and dissatisfaction among the villagers/farmers.

3. Who should be in the PCM Team?

From the field experiences, it was observed that the development problems and needs as expressed by the villagers/farmers were in most of the cases diversified. In this connection, the PCM team members being established by RID should comprise a number of experts/specialists in different fields.

According to an experience from the present project, usefulness of the setting up of the Technical Support Group (TSG) comprising representatives from the various government offices at the

provincial level was recognized. However, a well-elaborated Terms of Reference for this Group could have been made. For example, it was suggested that members of TSG should participate in all the PCM meetings/workshops, to facilitate the meetings and/or to take note of the needs of the people.

Additionally, to ensure that all the major problems and needs of the people will be taken into account in formulating the development plans to be implemented by the government Offices/Agencies concerned, it was further suggested that a kind of Steering Committee comprising of representatives from those relevant Offices/Agencies at the Central level (in addition to RID) be established for all the new project(s), to help ensure that all the necessary projects/activities will be formulated and put into implementation without unnecessary delay.

4. How should the PCM be carried out and for how long?

The current PCM team members shared a common view that the “workshop” style of meetings was useful, although new to most of the farmers/villagers. In addition to village leaders, number of the representatives from each village in the project area should not exceed two (2) persons. In this connection, to be effective, the total number of participants in each workshop should be between 30 and 50 persons. Finally, each workshop should not be longer than three (3) days.

It was pointed out that time constraints on the side of the farmers should be fully taken into consideration. According the experience from the present project, most of the farmers were not ready to participate in the exercise for many days.

5. Other comments

It was observed that prior to the organization of PCM workshops, the villagers/farmers in the Lam Pa Chi project area had a rather limited knowledge on the project. Public relation activities should be promoted and strengthened systematically. Some also believed that the activities should be institutionalized.

To communicate effectively with the people in the project area, it was suggested that a competent Office (at regional/provincial level) should be given a clear mandate to make regular contacts and communications with the local people/agencies concerned. It represents the project and has a full authority in making invitations to the villagers/community leaders. A systematic approach on this matter is required. Apart from this, to be successful, the following should be considered:

- Human resources development program for staff of the newly recommended Unit/Division at RID should be prepared. As a new Unit/Division being established, it must be institutionalized and equipped with responsible staff who are able to handle its roles and tasks. Staff positions in the system are established and individual staff have equal access to adequate training. Among others, these staff should possess communication skills and they should have always adequate consultations with their superior and working colleagues/partners, to ensure a thorough understanding of the issues involved and consistency of the procedures that are put in to practice;
- Contingency funds should be considered for any future studies of this kind, for possible and immediate implementation of small activities required by localities. Immediate impacts of the project are normally highly expected by the beneficiaries;
- There should be a need for a study to determine appropriate use of the PCM method specifically for the medium- to a large-scale project areas, which could take a lot of time and, are costly.

The above is, a matter of fact, similar to the case of RRA which was discussed already in a separate paper. In summary, RRA and PCM are the planning tools that were recommended by this Study Team for future application by RID. Under its current restructuring process, the question of whether RID will be able to initiate development projects of its own in the future still has to be made clear. Depending on the final picture on this matter, the discussed modality of implementation, i.e., institutionalization of the new Unit/Division at RID will need to be adjusted.

Location Map

Summary

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1. Objectives

The PCM workshops were conducted at 16 tambons, all the tambons in the Study Area. The participants were the representatives of the villages in the tambon. The intentions of the workshop are to

- identify the major stakeholders for agricultural development in the area and their links with the farmers,
- discuss the problems and needs with the farmers,
- identify the possible development approaches, and
- prioritize them with time frame.

2. Schedule and Process

After the brainstorming through the RRA and discussion on RRA results, the Study Team, RID counterparts, and related agency had conducted a series of PCM workshops during December 23, 2002 to January 24, 2003. The first workshop was moderated by JICA Study Team, assisted by local consultants and the RID staff. From the second workshop, the RID staff and local consultants were the main moderators, assisted by the Study Team. The PCM Report was prepared for each Tambon with (i) the summary of major problems and needs of the farmers, priorities and major characteristics, (ii) major stakeholders, and (iii) the outputs of the workshops, such as problem tree, objective tree, project selection and project activity matrix (PAM). The reports also contain the feedback from the PCM team regarding how the RID could use PCM or other workshop-style methods for their future. Following describe very basic idea of what had been found through the PCM workshops.

3. Summary of the Results

The result of the PCM workshops reached one perception that all of Tambon in the Study Area share the same issue as a top of Problems Trees as “High expenditure compare to income.” What’s more, the courses of this problem staying in top of the Problems Trees were also integrated into some of main problems such as:

- 1) **High cost for agricultural inputs**
- 2) **Low productivities**
- 3) **Damage on the products**

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- 3) **Damage on the products**
- 4) **Low market prices**

4) Low market prices

Each Tambon suggested at least three of them as a main problems of their communities, although natural conditions such as topography, water resources, soil type, and as well as agricultural practice are various among the Study Area. Considering the above, each Tambon might have stated the mutual problems, which might not be affected by natural condition.

4. Results of Each Tambons

Problem Trees, Objective Trees, Project Selection and Project Activity Matrix (PAM) at each Tambon are shown as below.

PCM Reporting/

Problem and Need for the Development at Tambons

4.1 Tambon Ban Bueng, Ratchaburi

1. Major problems and needs of the farmers

The major problem of the farmers at Ban Bueng is “expenditure which is greater than revenue”. This problem creates great debt to the farmers and leads to a repeated failure in agriculture at this Tambon. The major causes, as ranked by the farmers, include:

- (1) High production cost;
- (2) Low land productivity;
- (3) Crop damage; and
- (4) Low production price.

For the high production cost, it was explained that in every crop season, the farmers must rely on various production inputs that in most cases, have to be secured from others by means of purchasing or employing. The costs of these inputs are high and increasing steadily. They are some things beyond the farmers’ control that eventually, increase the production cost to the farmers.

Location of the market which is located far from Tambon, is also another reason of high production cost. Long distance between the market place and the production centre is a cause of a high transportation cost (because of more fuel consumption, etc).

Another important factor of high production cost there is “high interest rate” in informal financial market. The lack of appropriate land title deed, which is normally used as collateral for loan/credit, made it difficult for many farmers to secure their loans from the formal financial market. Therefore, it is inevitable that most of the farmers who are in bad need of investment funds during a crop season will have to get their loans from the informal financial market with high interest rates thus finally add to their production cost.

Low land productivity is due mainly to the lack of necessary knowledge in appropriate cropping and the deteriorating soils fertility due to overuse of farm chemicals. Fertilizers used are normally of low quality and there are problems from insects and pests. Rain-fed agriculture accompanied with unstable rainfalls and frequent drought is also another major reason of the low land productivity in this Tambon, i.e. low crop yields and hence, the low revenue.

Crop damages at Tambon Ban Beung are caused by many factors, including, inadequacy of irrigation water, fire from forest, flash flood, soil erosion and drought. Often, the damages were caused by the use of insecticides nearby sugar-cane plantation.

On the other hand, it was explained that the problem of low crop prices is often caused by over production in the area. Farmers do not have crop plans and therefore, production of certain crops could be greater than the market demand at a certain period/time, particularly during the harvest season. Other reasons of the low production prices include:

- A limited number of processing plants/factories for local agricultural productions;
- Individual undertaking in marketing of farm products and therefore, the lack of bargaining power on the side of the farmers vis-à-vis the middlemen.

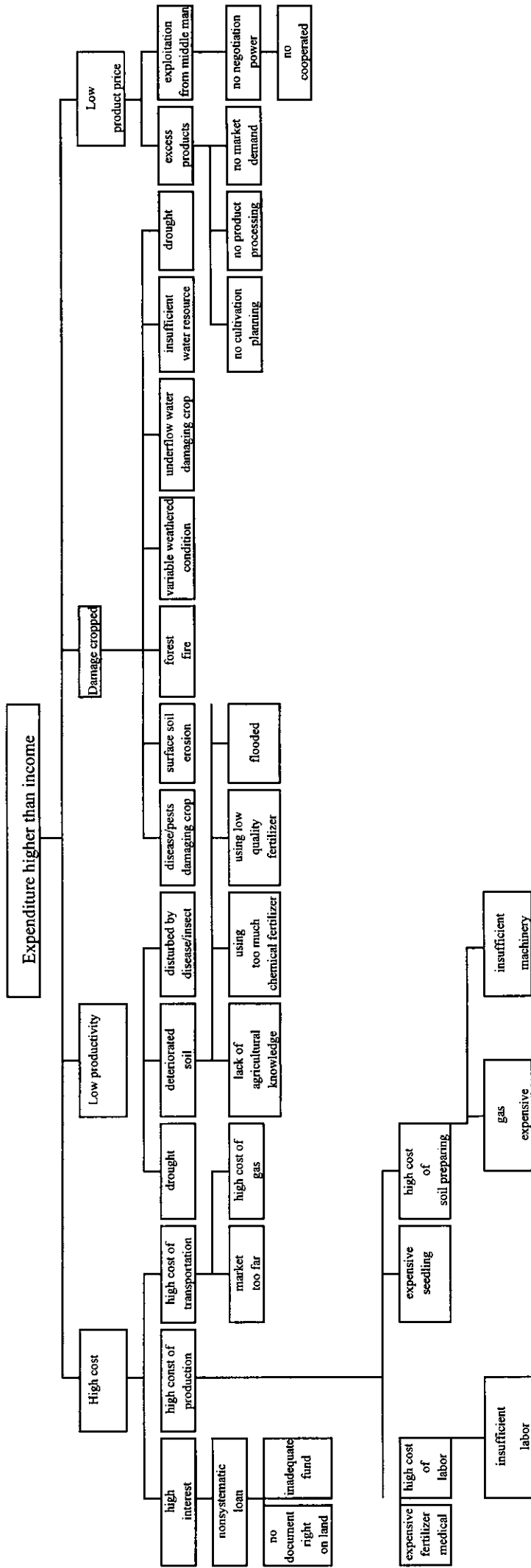
Regarding the farmers' needs, "appropriate land title deeds" was quoted as the top priority, reflecting the most severe problem of high interest rates in the informal financial market in the area. The farmers' debt coupled with the high interest rates could cause a very serious problem to the farmers, particularly when there lost occurred to their farms.

Development of irrigation water represented the second priority of needs at this Tambon, specifically weirs and farm ponds for agricultural purposes.

The farmers see also the necessity of joint undertaking in the form of cooperatives or other types of farmers' group but, there has been no obvious leadership among them to take the initiatives and lead the actions required. It was explained that previously, there used to be such the initiative once in the village but ended up with failure.

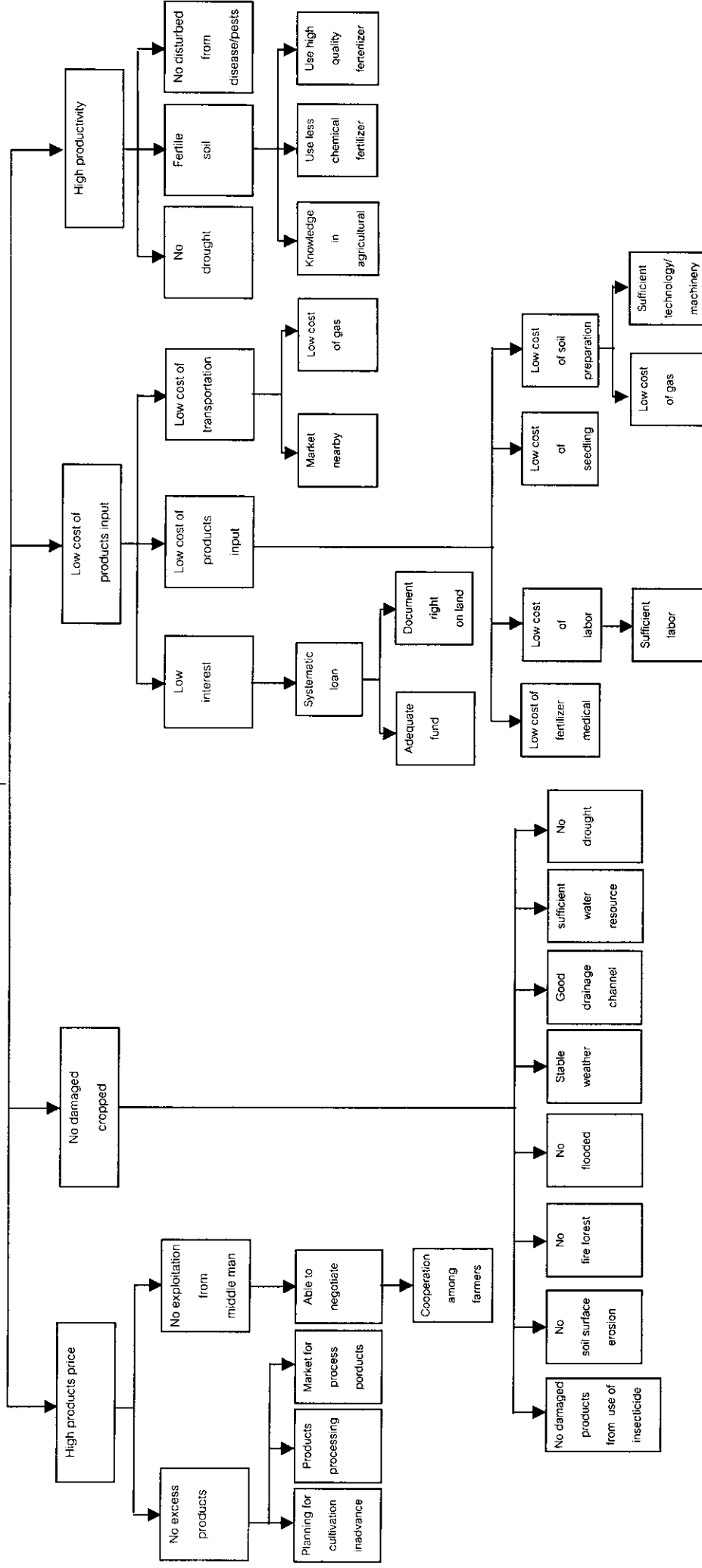
Another important thing to be noted is the farmers' need in conservation and protection of forest area to maintain their water resources and mitigate flash flooding.

Problem Layout - Tambon Ban Bueng



Objective Tree: Tambon Ban Bueng

Income higher than expenditure



Project Activities Matrix

1. Tambon Ban Bueng

Component	Urgent (within 3 years)	Within 5 years	Long term (more than 5 years)
<ul style="list-style-type: none"> Investman funds/credit 	<ul style="list-style-type: none"> The state issues the land document of right Consciousness-raising saving Expert gives guidance on establishment of cooperatives and demonstrate the work performance 	<ul style="list-style-type: none"> Grouping Cooperatives establishment 	<ul style="list-style-type: none"> Procuring loan with low interest
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Transmission pipelines Spillway 	<ul style="list-style-type: none"> Small reservoir 	
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice Crop rotation Using bio-fertilizer Using quality fertilizer appropriately Having responsible government agencies toseriously make improvement 		
<ul style="list-style-type: none"> Disease and insects 	<ul style="list-style-type: none"> Expert gives advice Responsible government agencies attentively make improvement Soil conservation and crop rotation 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Experts gives advice Mixing fertilizer for use Procuring quality seeds Dcomposing vegetation to be used as compost Producing home-made insecticide/pesticide 		

PCM Reporting/

Problem and Need for the Development at Tambons

4.2 Tambon Ban Kha, Ratchaburi

1. Major problems and needs of the farmers

The major problem of the farmers in the village of Ban Kha is "low revenue" that is lower than the break even point. The following were quoted as the causes:

- (1) Low production price;
- (2) High production cost; and
- (3) Deteriorating productivity.

Leaders of the Community frequently quoted the problem of low production price as the most serious one, compared to the other two. However, for a long time, there has been a problem of over production and the corresponding limited market in the area. Other causes of the low price problem included:

- Lack of knowledge on marketing on the side of the farmers;
- Poor quality of the products;
- Poor timing of delivery of the products, particularly vegetables, to the market due basically to shortage of farm labor; and
- No guarantee for crop prices.

The causes of high production causes were found to be similar to those in other Tambons, e.g., high wage due to the shortage of labor, high transportation cost due to long distance from market (Srimuang Market, Ratchburi province). For livestock rearing, a high cost of quality breeding makes it difficult for the farmers to expand their production, although production price for livestock is reasonably good (except the price of swine).

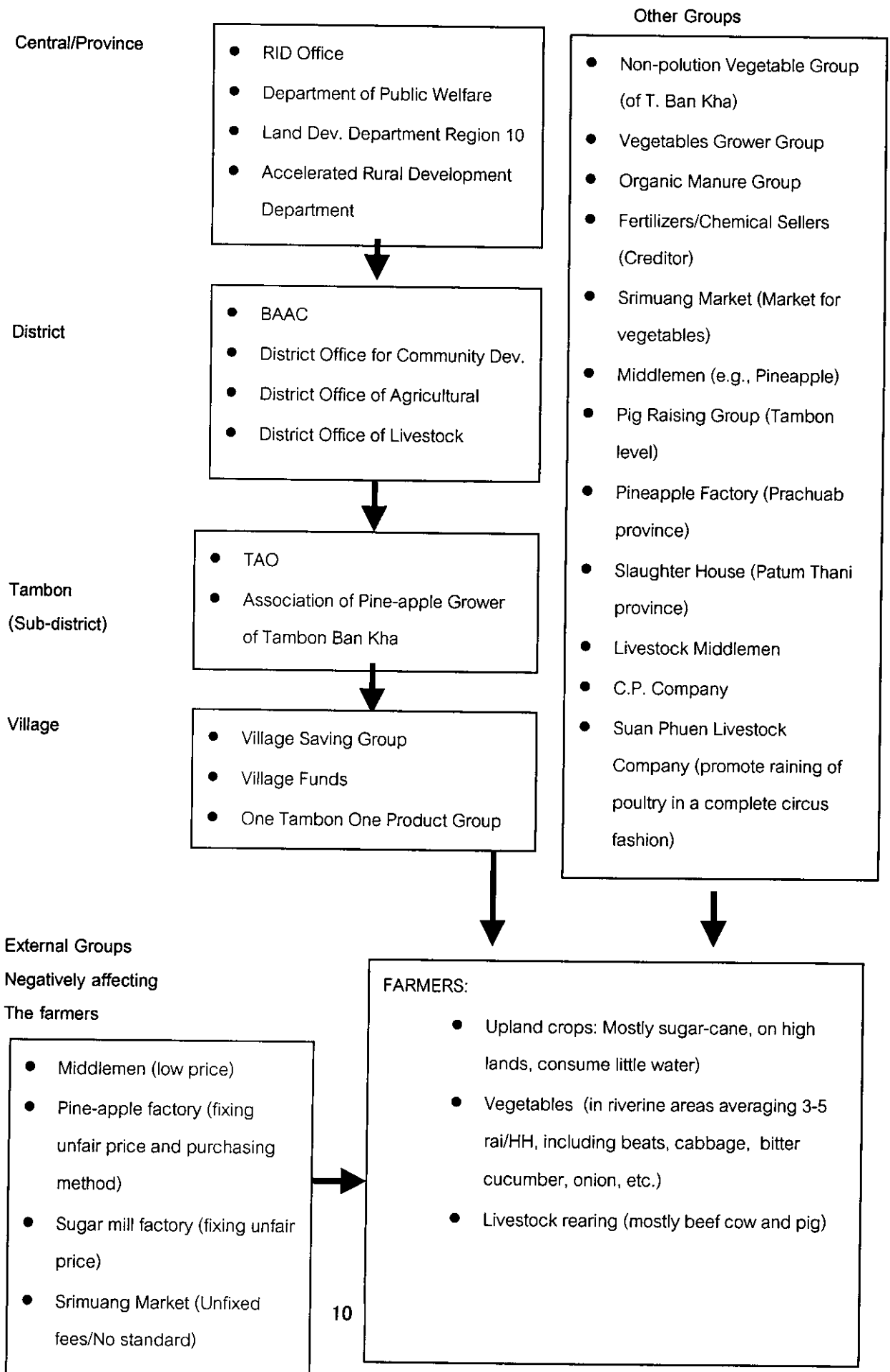
Deteriorating productivity is caused basically by shortage of water for irrigation, poor soils fertility, pest and insect problems.

Considering the needs for solving these agricultural problem, it was pointed out that the work/activities that can help to provide adequately irrigation water should be of top priority. Suggestions were made on appropriate types of irrigation for the Ban Kha area, such as,

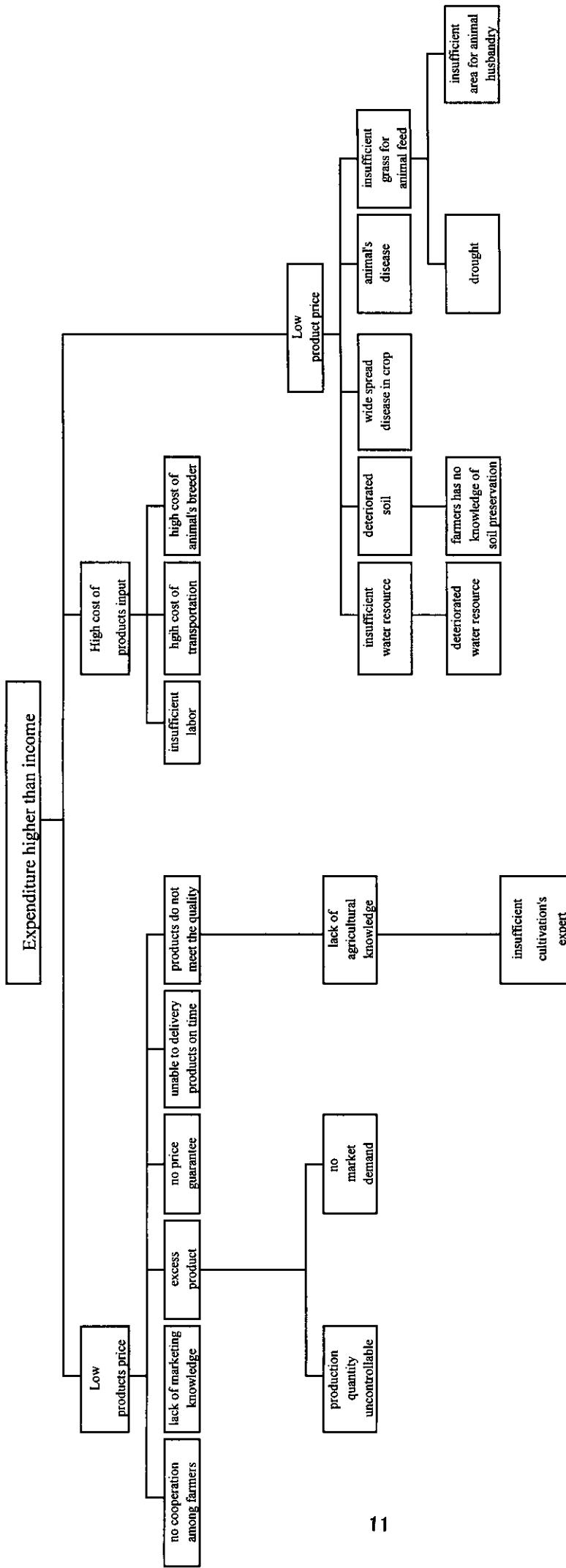
construction of weirs and ponds. On the marketing problem, it was suggested that marketing experts should be dispatched to provide the necessary advice and/or training, including provision of data and information on the marketing. Additionally, it was suggested that the farmers should be organized in group for conducting a joint purchasing of farm inputs and marketing of farm products.

To lower the production cost, it was suggested that a village bank for fertilizers and insecticides be established and, more farm machines used to supplement the labor shortage.

2. Stakeholders

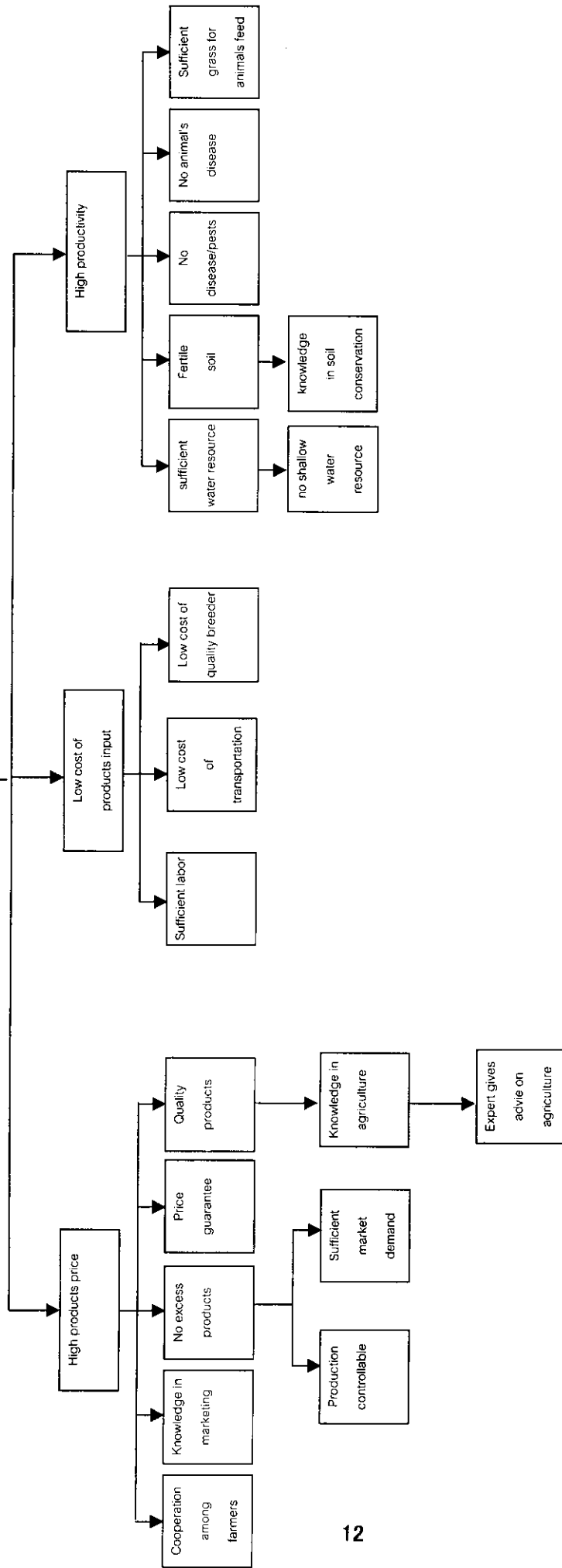


Problem Tree - Tambon Ban Kha



Objective Tree: Tambon Ban Kha

Income higher than expenditure



Project Activities Matrix

2. Ban Kha

Activity	Urgent (within 3 months)	Medium term	Long term
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Spillway Pond 	<ul style="list-style-type: none"> Reforestration Shallow well 	<ul style="list-style-type: none"> Dredging in natural creek Well Transmission pipe system
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice/knowledge Provide training Using bio and organic-fertilizer 	<ul style="list-style-type: none"> Growing leguminous crop Do agricultural in full cycle (cropping and animals) 	<ul style="list-style-type: none"> Soil conservation
<ul style="list-style-type: none"> Disease and insects 	<ul style="list-style-type: none"> Promoting organic extract to eliminate disease/pests Promoting non-toxic chemical residual 		
<ul style="list-style-type: none"> Animals disease 	<ul style="list-style-type: none"> Experts gives advice and demonstrate on animals raising 	<ul style="list-style-type: none"> Setting up medical fund 	
<ul style="list-style-type: none"> Production price 	<ul style="list-style-type: none"> Setting up banking for fertilizer and medical within the village Joining as a group to purchase breeder to use among the group 		
<ul style="list-style-type: none"> Market 	<ul style="list-style-type: none"> PR on marketing Cooperation Designate cultivation area 	<ul style="list-style-type: none"> Price guarantee 	<ul style="list-style-type: none"> Setting up central market (District level)
<ul style="list-style-type: none"> Production input 	<ul style="list-style-type: none"> Experts gives advice on agricultural Promoting on animals research 		
<ul style="list-style-type: none"> Animals feed 	<ul style="list-style-type: none"> Expert gives advice on feed mixing 	<ul style="list-style-type: none"> Promoting in growing grass for animals feed 	

PCM Reporting/

Problem and Need for the Development at Tambons

4.3 Tambon Ta Nao Si, Ratchaburi

1. Major problem and need of the farmers

This Tambon is located adjacent to the border between Thailand and the Union of Myanmar. Several ethnic minorities, including Karen, also live in this area. Often, these minority people came to the village and areas nearby to seek for jobs, as wage labors.

The major problem of the farmers in the village of Ban Ta Nao Si is indebtedness caused mainly by doing agriculture. The causes of the problem, as ranked by the farmers, include the following:

- (1) High production cost;
- (2) Low production prices; and
- (3) Damages to productions.

For the high production cost covers the cost of production inputs (such as seeds, insecticides, fertilizers, farm machines, etc.), interest arising from loans borrowed in each crop season and transportation fees (i.e., to transport the productions to market). Generally, the farmers neither own nor have the capacity to produce these production inputs of their own. They have to secure or purchase them from others at high price. Tambon Ta Nao Si is one of security area under the control of military and therefore, the farmers in this Tambon are not allow to have any permanent types of land title deeds. Their holding rights over their lands do not have enough value for use as collateral (for borrowing money from formal financial market). This is a common problem that the farmers have to turn to the informal money market, with high interest rates.

For the low production prices, the lack of farm/crop plan on the side of the farmers was quoted as the main cause. Because of this, farm productions do not meet exactly with the market demand. Responsible government agencies do not have land-use planning neither. These altogether have caused a problem of over supply of production in the market.

Apart from the above, quality of the products, including packaging, was quoted as another reason for low production price. In this connection, poor seeds, fertilizers of sub-standard,

inadequacy of irrigation water and most importantly, the lack of bargaining power among the farmers were quoted as other causes.

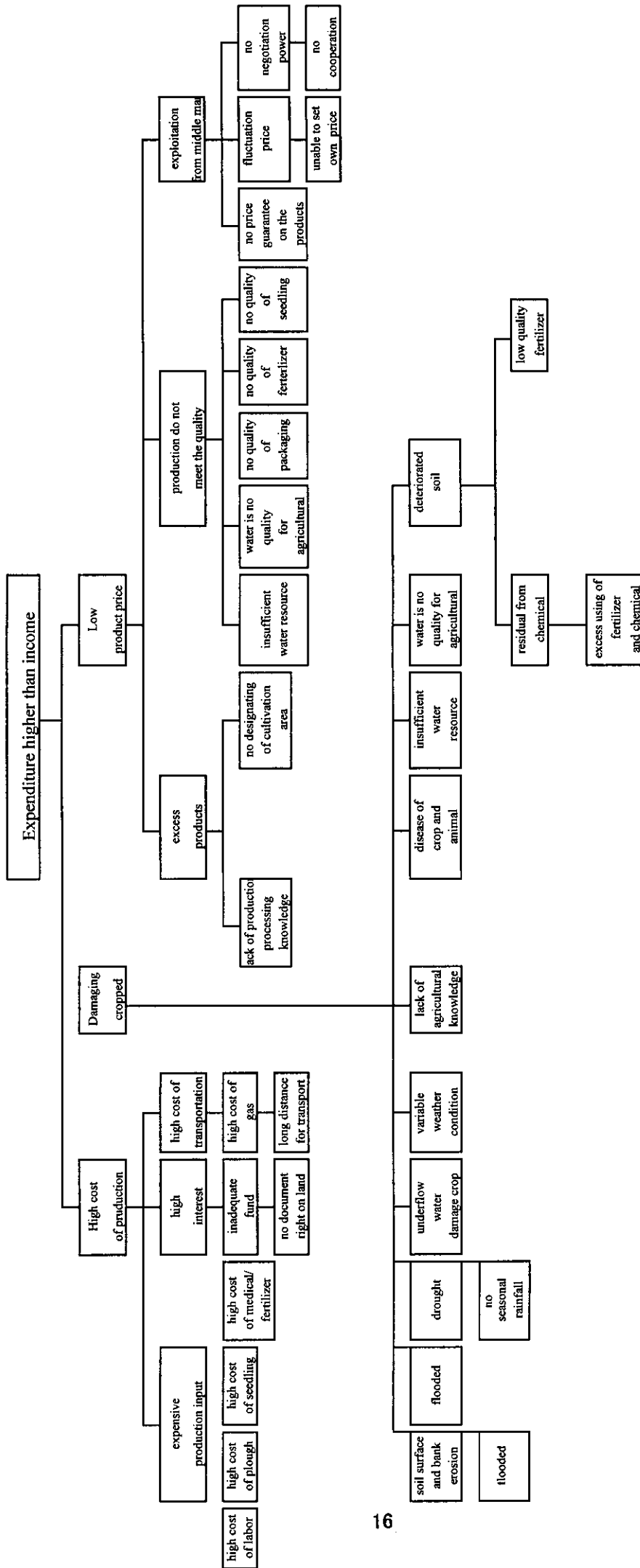
Damage to productions was quoted as a major reason of failure in agriculture at this Tambon. The causes, as mentioned by the farmers, included:

- Deteriorating of soil fertility due to the residue from over-use of chemicals;
- Drought;
- Pests and insects;
- Unstable rainfalls;
- Loss of fertility of soil due to erosion/flash flood; and
- Shortage of water for irrigation.

Damages that occurred during a crop season could worsen the situation of deficit and loss to farmers who have to do all the high investment but, for a low return.

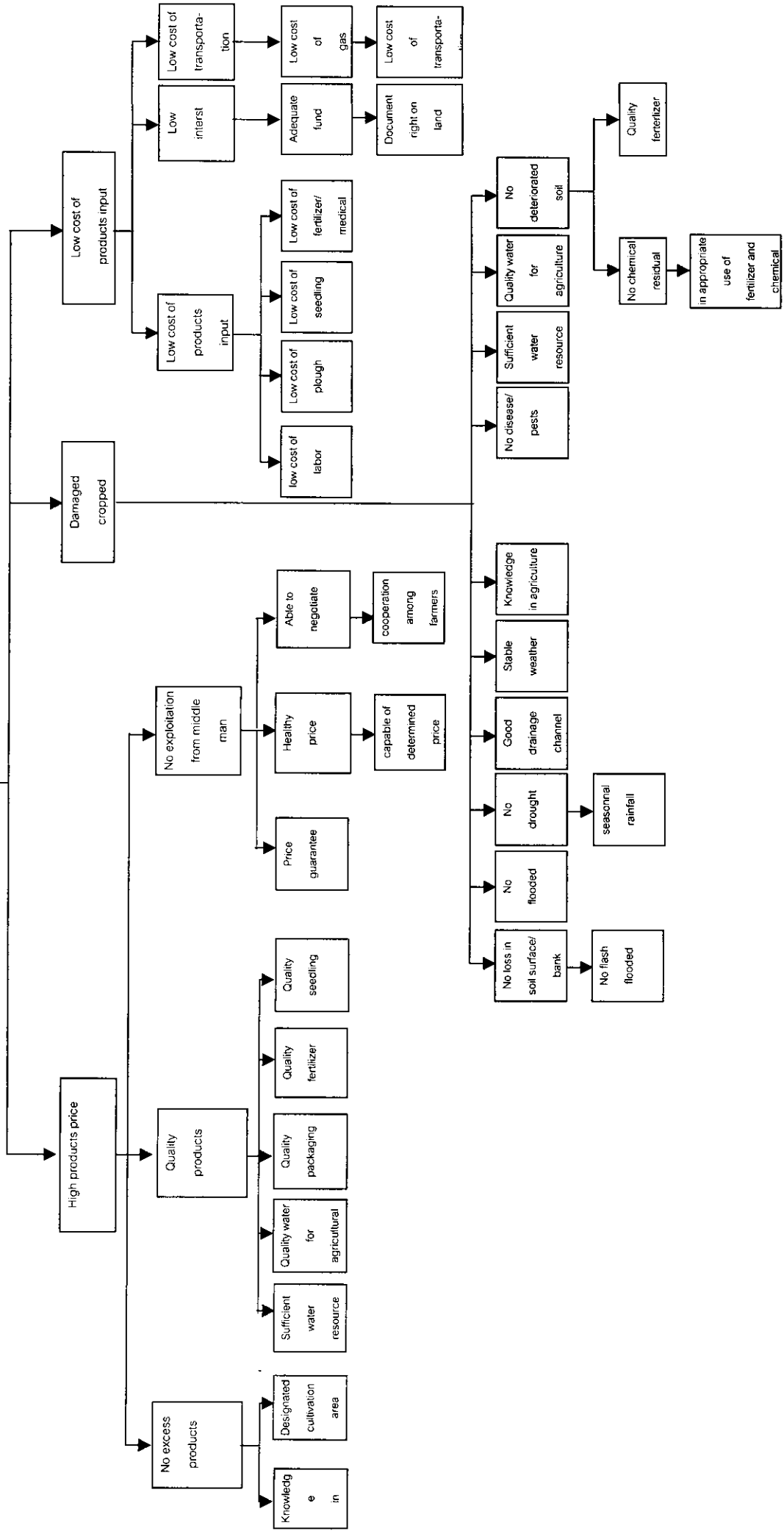
Considering the development needs, the farmers at Ban Ta Nao Si expressed the need for reservoirs, especially small farm ponds and pipe irrigation, as top priority. As this village is located on a relatively high elevation in a valley and foothill, there is a big problem of water resources. The demand for water for growing vegetables is particularly high in this village. Currently, there are several on-going assistance projects under the Royal Patronage of Her Majesty Queen Sirikit and some other Foundations but, those related to provision of water (water resources development projects) seem to be limited.

Problem Tree - Tha Nao Si



Objective Tree: Tambon Tha Nao Si

Income higher than expenditure



Investment	Within 1 year	Within 2 years	Beyond 2 years
<ul style="list-style-type: none"> Investman funds/credit 	<ul style="list-style-type: none"> The state issues the land document of right 	<ul style="list-style-type: none"> Cooperatives establishment 	<ul style="list-style-type: none"> Procuring loan with low interest
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Small reservoir Transmission pipeline 	<ul style="list-style-type: none"> Medium reservoir Transmission pipeline 	
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice Responsible government agencies attentively make improvement Crop rotation Using bio-fertilizer instead of chemical fertilizr 		
<ul style="list-style-type: none"> Knowledge 	<ul style="list-style-type: none"> Expert gives advice Coordinate with Government agencies to provide support Study visit to successful case 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Experts gives advice Producing home-made compost fertilizer Producing home-made insecticide/ pesticide Procuring quality seed Establishment Groups to joint working Joint grouping to procure modern machine for production 		
<ul style="list-style-type: none"> Marketing 	<ul style="list-style-type: none"> Establishment Groups to do joint market Government has fix price guarantee Have trading contract Making contract in advance of trading 		
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Produce good quality products Government agencies have a policy designate the cultivation area The government provides support for agricultural product processing Growing plants in consistent with market condition 		

Priority	Organ (within 5 years)	Within 5 years	Within 10 years
<ul style="list-style-type: none"> ● Disease and Pets 	<ul style="list-style-type: none"> - Expert gives advice - Responsible government agencies attentively make improvement - Using quality fertilizer appropriately - Crop rotation - Using bio-fertilizer 		
<ul style="list-style-type: none"> ● Flood prevention 	<ul style="list-style-type: none"> - Dredging sediment/load - Concousness-raising on forest protection - Spillway 	<ul style="list-style-type: none"> - Growing elephant grass 	

PCM Reporting/

Problem and Need for the Development at Tambons

4.4 Tambon Nong Phan Chan

1. Major proble and need of the farmers

The major problem of the farmers in this Tambon is “high expenditure” which is greater than revenue. The causes of the problem, as ranked by the farmers, are the following:

- (1) Low production price.
- (2) High production cost; and
- (3) Low land productivity;

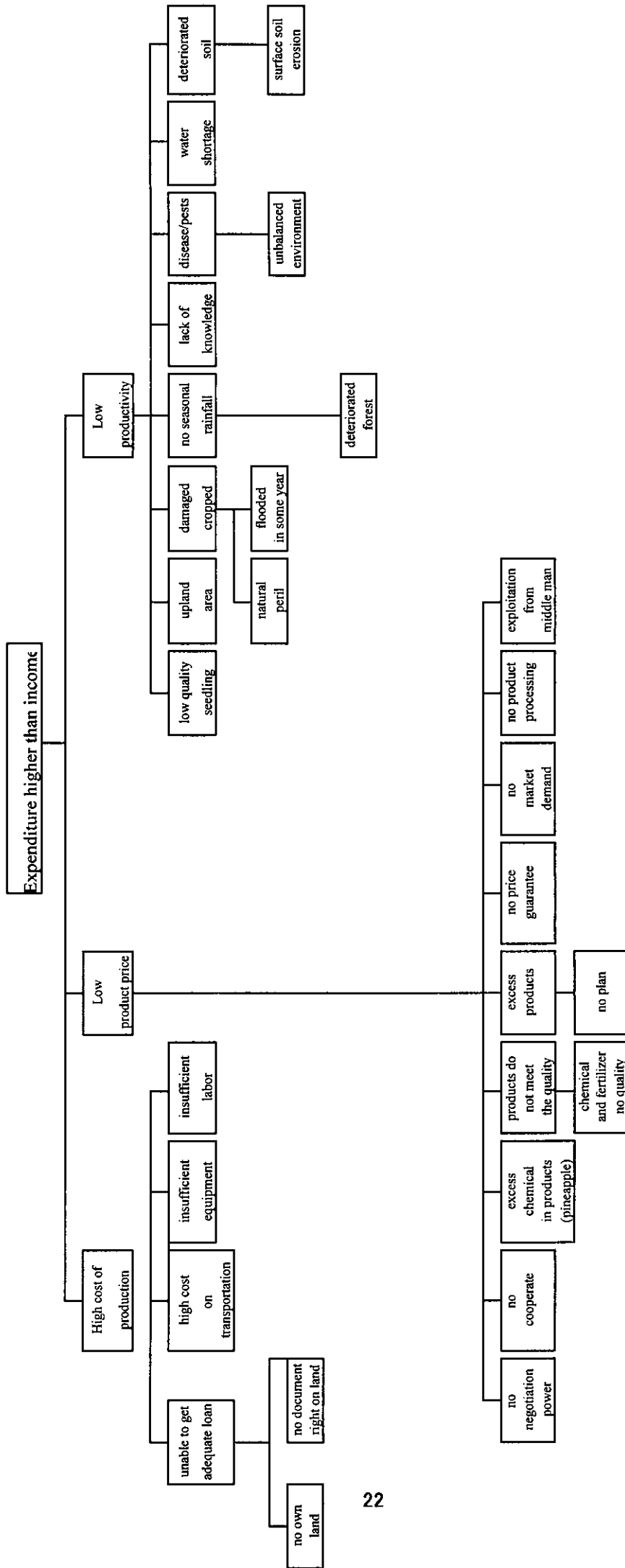
The farmers emphasized the severe problem of low production price. It was explained that the problem could be caused by many factors, such as, low standard of the products, over production in the market, limited market channels and the way that the products have to be sold through middlemen.

The causes of high production cost were believed to be attributable by many factors as well. The first is shortage of manpower that compels the farmers to bring in farm labor from other areas which involve some associate costs and thus, making the labor cost high. Rental fees for farm machineries, which are also high due to their scarcity. Lastly is the inappropriate land title deeds that make it difficult for the farmers to use them as collateral for cheap credit from the formal financial market. The farmers in this Tambon normally holf Sor-Por-Kor 4-01 or Phor-Bor –Thor 5 title deeds.

Regarding the low land productivity, the farmers mentioned several factors including lwo quality seeds, high elevation of lands which are not appropriate for cropping, damages from natural disaters, limited knowledge for production technology, insects and pests, shortage of irrigation water and deteriorating soil fertility.

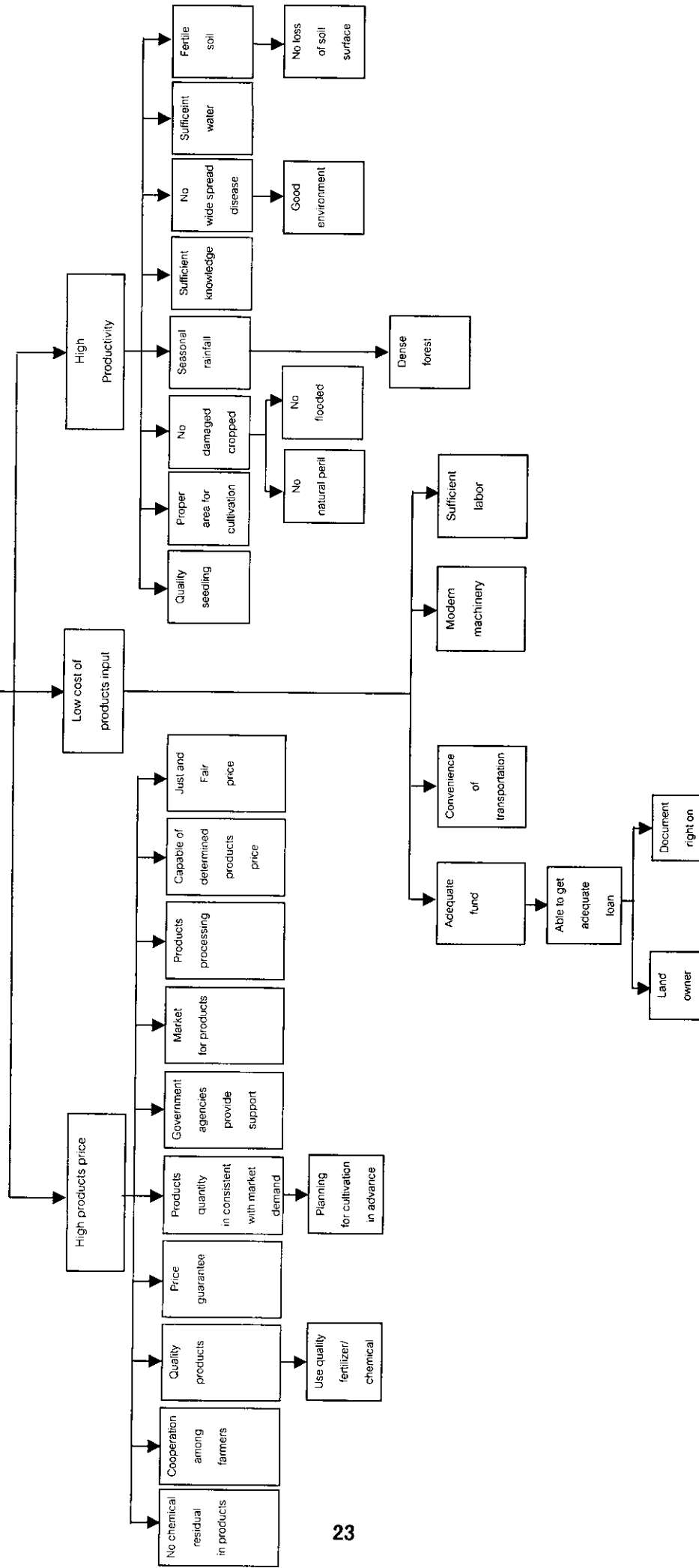
On the development needs, the farmers at this Tambon ranked their requirements according to the development processes for agricultural development, i.e., improvement of soil fertility, development of water resources, additional sources of credit, new knowledge on farming, reduction of production cost, more marketing channels and hence, better crop prices and, increase in crop yields per unit of land.

Problem Tree - Tambon Nong Pan Chan



Objective Tree: Tambon Nong Phan Chan

Income higher than expenditure



Project Activities Matrix

4. Nong Phan Chan

Project Activities	Inputs (within 28 days)	Plans/Activities	Outputs
<ul style="list-style-type: none"> Investman funds/credit 	<ul style="list-style-type: none"> Establishing the saving group Bank of Agriculture in Pan-Jan 		
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Dig Dredging sediment/ load in reservoir Well 	<ul style="list-style-type: none"> Small reservoir Transmission Pipeline Weir Dredgin sediment and riprap 	
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Using bio-fertilizer Growing leguminous crop as ground cover plant Growing elephant grass 		
<ul style="list-style-type: none"> Knowledge 	<ul style="list-style-type: none"> Training in soil improvement Training in appropriate uses of chemical-fertilizer Study visit to sucessful case Work training in sucessful area Expert gives advice and plan for cultivation 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Improve and maintain cooperatives Establishing Market demonstration center Grouping to produce bio-ferterizer Producing home-made insecticide/pesticide by using natural herbs 	<ul style="list-style-type: none"> Group joining in asking for supportatives on farmer's equipment 	
<ul style="list-style-type: none"> Production prices and marketing 	<ul style="list-style-type: none"> PR. on appropriate uses of chemical fertilizer Establishing Market demonstration center Training in appropriate uses of chemical 	<ul style="list-style-type: none"> Set the proper area for cultivation 	
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Expert gives advice on high quality plants <p>Productivity increase will be achieved by soil, water, fund, knowledge, and production factor.</p>		

PCM Reporting/

Problem and Need for the Development at Tambons

4.5 Tambon Yang Hak, Ratchaburi

1. Major problem and need of the farmers

Tambon Yang Hak is located in the upper part of Lam Pa Chi Basin. Its problems and respective causes are typical and similar to those in other areas nearby. The major problem of the farmers in this Tambon is "expenditure" which is greater than revenue. The causes, as ranked by the farmers, are as follow:

- (1) High production cost;
- (2) Low production price; and
- (3) Low land productivity.

The high production cost was explained to be attributable to the limited knowledge on new technology, leading to the problems of inappropriate use of production inputs and/or unnecessary high production cost. Shortage of local labor, difficult transportation routes and informal financial/money market are three other important causes of this problem. Also similar to many other areas in the Basin, the farmers in this Tambon do not have appropriate land title deeds for collateral purpose.

For the problem of low production prices, four causes were mentioned, namely, poor quality of the production (due to insects and pests), over production (without crop plan), distorted prices by middlemen (no price guarantee) and no bargaining power (limited market channels).

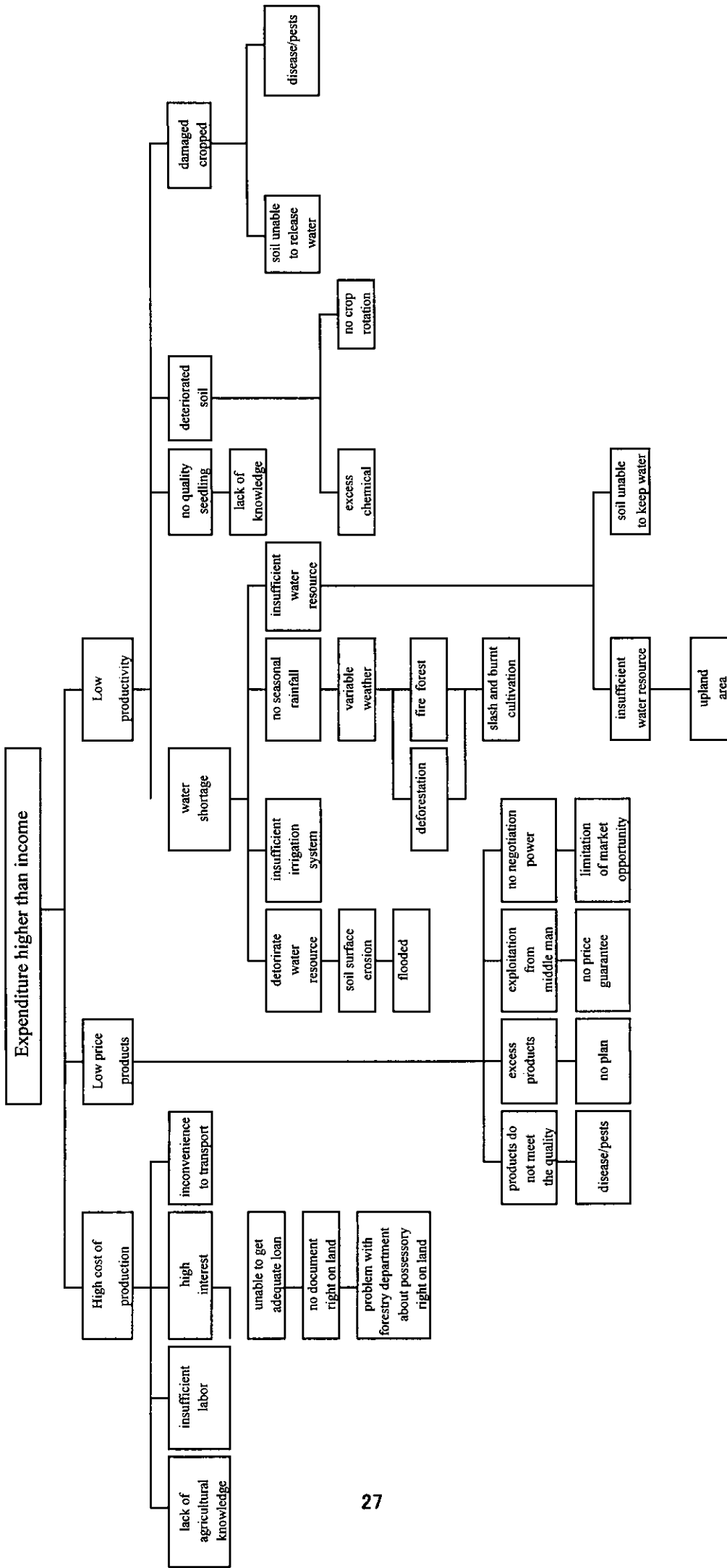
On the low land productivity, there were also four major causes:

- shortage of irrigation water (siltation of water resources, inadequate irrigation system, unstable rainfalls and unavailability of water resources);
- poor quality of seeds (mostly of vegetables on which the farmers have limited knowledge);
- deteriorated soil fertility (due to over-use of chemicals, repeated plantation of same crops every year, etc.)
- pest and insect problems; and

- poor drainage.

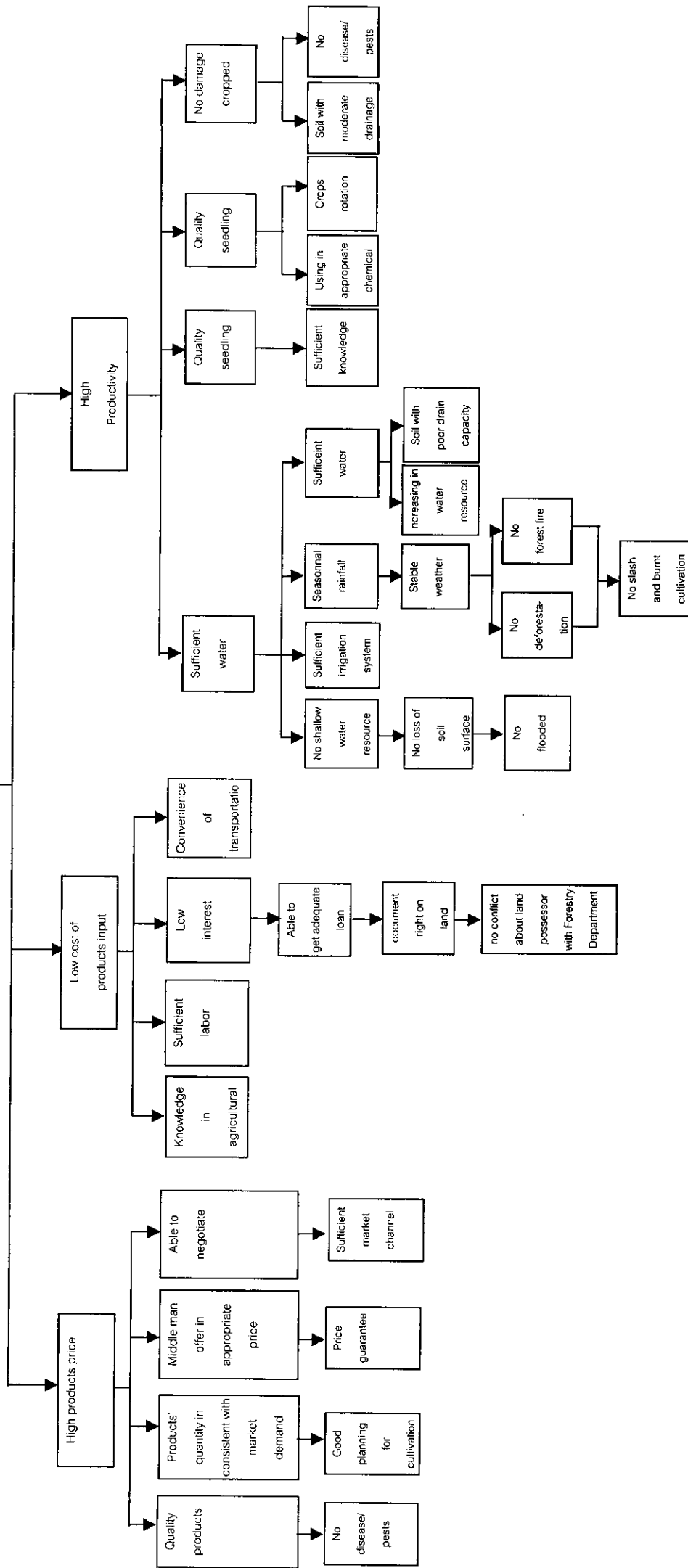
On the development needs, the farmers expressed their need for irrigation water, as top priority. They made suggestions specifically for excavation of canals, digging of farm ponds and shallow wells, construction of distribution system in the area where small reservoir already existed, construction of weirs, etc. The farmers' need for farm credit is also high and in this connection, they suggested an establishment of a Community Bank and the establishment of revolving fund. To combat with the other problems, the farmers expressed their need to have advice from experts, extension services including training in specific subjects. With these activities, a monitoring and evaluation system was also suggested.

Problem Tree - Yang Hak



Objective Tree: Yang Hak

Income higher than expenditure



Project Approaches	Urgent (within 2-3 years)	Within 5 years	
<ul style="list-style-type: none"> ● Water 	<ul style="list-style-type: none"> - Dredging sediment - Pond - Well 	<ul style="list-style-type: none"> - Transmission system - Weir 	<ul style="list-style-type: none"> - Reservoir
<ul style="list-style-type: none"> ● Soil 	<ul style="list-style-type: none"> - Using manure for soil improvement - Reduce in using chemical fertilizer and increase using of organic-fertilizer - Crops rotation - Digging more channel around underflow area 		
<ul style="list-style-type: none"> ● Farm Input 	<ul style="list-style-type: none"> - Provide training on making living from agricultural - Expert gives advice on fertilizer and chemical - Producing organic-fertilizer for own use - Producing bio-fertilizer for own use - Producing insecticide/pesticide for own use 	<ul style="list-style-type: none"> - Provide demonstration plot about fertilizer/chemical 	
<ul style="list-style-type: none"> ● Production 	<ul style="list-style-type: none"> - Procuring in appropriate seedling with geography and climate - Expert gives advice on quality seedling - Expert gives advice about seedling storage 		
<ul style="list-style-type: none"> ● Knowledge 	<ul style="list-style-type: none"> - Study visit at successful area about reducing cost production - Provide demonstration about reducing cost production - Study visit at successful area about disease/pests 		
<ul style="list-style-type: none"> ● Product price/Market 	<ul style="list-style-type: none"> - Cooperate in procuring and sells the products - Expert give advice about crop planning - Registering as farmer under agricultural category - Designate in appropriate cultivation area - Setting up group growing toxicant free crops 		
<ul style="list-style-type: none"> ● Loan 	<ul style="list-style-type: none"> - Establishing Community Bank - Establishing agricultural rotation fund 		

PCM Reporting/

Problem and Need for the Development at Tambons

4.6 Tambon Suan Pheung, Ratchaburi

1. Major Problem and need of the farmers

The most important problem of the farmers in this Tambon is "deficit" which is caused (as ranked by the farmers) by the following factors:

- (1) Low production price;
- (2) High production cost;
- (3) Low land productivity; and
- (4) Damage of production.

It was explained that the problem of low production prices is caused by the fact that crop prices are basically determined by middlemen. There is no guarantee on the crop prices. Often, over production and poor quality of products lead to low prices of the productions. In this Tambon, most farmers grow fruit trees, upland crops and vegetables. Livestock rearing, such as beef cow, pig and goat, represents a another important occupation for supplementary income. For vegetables, the farmers usually have a management problem that they have to sell their production timely (without delay) for better prices. In some other cases, the farmers can not sell their products after harvest, simply because there is no buyer in the area. In this connection, many farmers do not have transportation means of their own. Public buses that transport their products to the market often causes damage to the products due to bad roads, etc., and accordingly, they can not be sold easily.

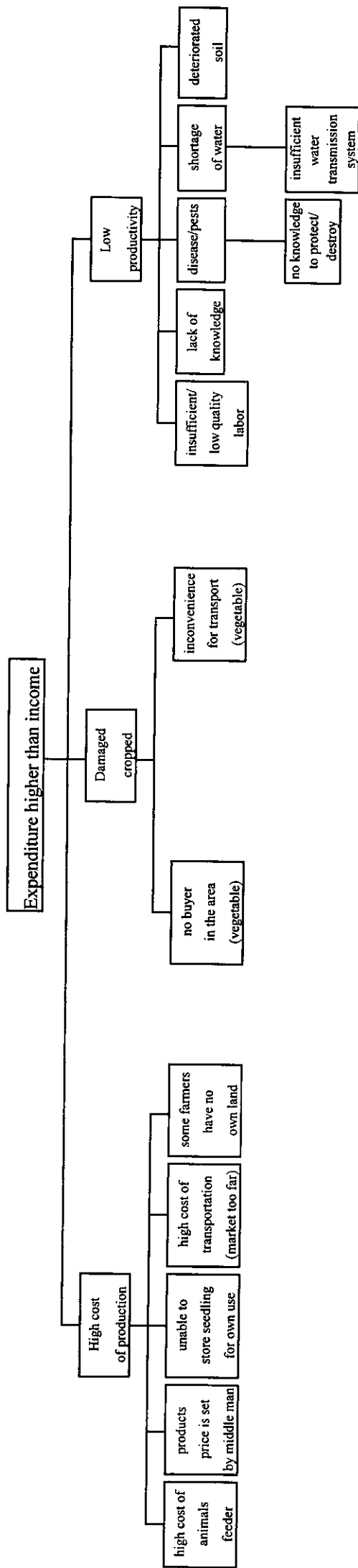
Regarding the high price of the side of production inputs, to the farmers' view, it is caused basically by high transportation cost. The market (Srimuang Market) is located in town and far from the village. Some farmers do not have lands of their own and therefore, have to rent the lands from others. Several kinds of seed varieties can not be kept very long. All of these have made the production cost high.

Low land productivity in the area, according to the farmers, is caused by pest and insect problems, shortage of irrigation water, poor soil fertility and shortage of labor.

On the development needs, the farmers ranked "water" as the top priority. They suggested that development of weir and distribution system and, construction of small reservoirs/farm ponds should be done in 2-3 years time. It should be noted however that currently, under the leadership of Land Development Department and the Royal Irrigation Department, four weirs have been constructed at this Tambon. Nevertheless, due to the hilly type of lands of this village, the water from these projects is still inadequate to the farmers.

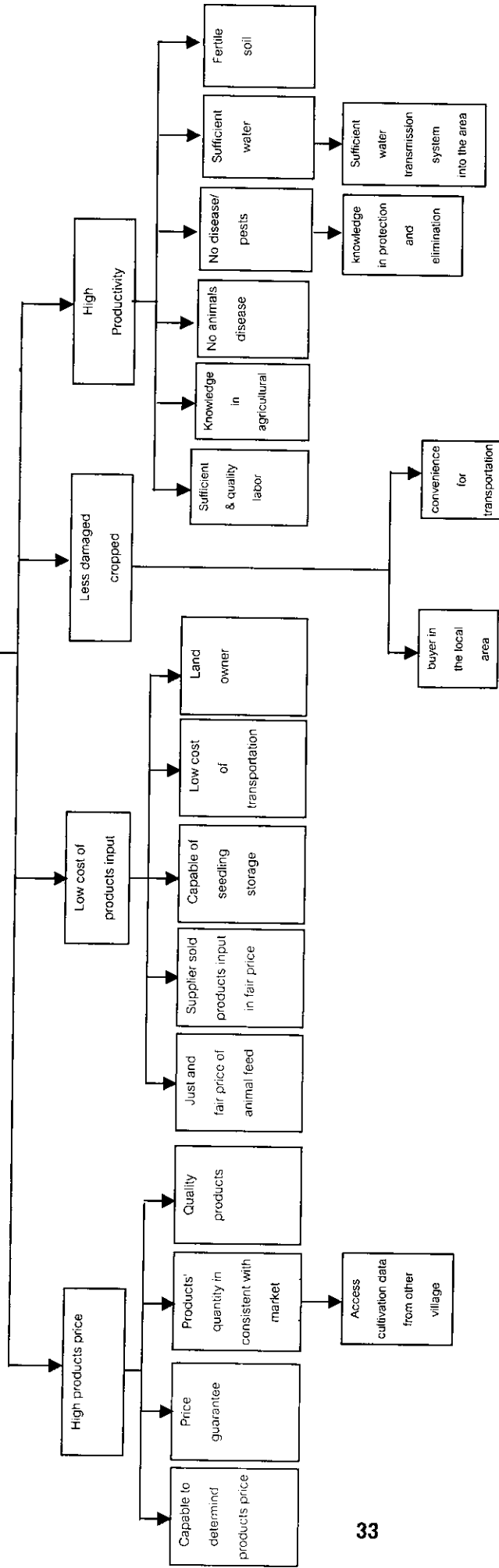
To solve the marketing problems, the farmers suggested that a Center to provide information relating to marketing should be established to provide them timely with data on crop prices, crop plans particularly for vegetables of all the regions (to avoid over production), etc. Additionally, it was suggested that there should be a guarantee for crop prices, more market channels and movement for collective marketing among the farmers.

Problem Tree - Tambon Suan Phueng



Objective Tree: Suan Phueng

Income higher than expenditure



Priority	Urgent (within 2 years)	Within 5 years	Not an immediate priority
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Weir and distribute system Pond 		
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Raise the awareness and understanding about requirement the soil quality for the farmers Growing legumenous crop Using bio-fertilizer Using compost and organic fertilizer 	<ul style="list-style-type: none"> Soil conservation 	
<ul style="list-style-type: none"> Knowledge 	<ul style="list-style-type: none"> Expert gives advice about the new plan for agriculture Study visit to successful case Training 	<ul style="list-style-type: none"> Information sources 	
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Making the demonstration plot in consistent with giving knowledge to every village 	<ul style="list-style-type: none"> Promote the growing of herbs to produce insecticide/pesticide 	
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Expert gives advice on the method of seedling storage 		<ul style="list-style-type: none"> Cooperative establishment
<ul style="list-style-type: none"> Marketing 	<ul style="list-style-type: none"> Establishing marketing network center Price guarantor Search for the market 		
<ul style="list-style-type: none"> Animals disease 	<ul style="list-style-type: none"> Providing training for farmers Dissiminating information of wide spread disease Establishing vaccine center within district 		

PCM Reporting/

Problem and Need for the Development at Tambons

4.7 Tambon Tha Khoei, Ratchaburi

1. Major problem and need of the farmers

The main problem of the farmers in this Tambon is "indebtedness" which is increasing by years due basically to doing agriculture that does not generate enough income to cover the expenditure. The farmers ranked the causes of their problem in accordance with the following order:

- (1) Low production price;
- (2) Low land productivity; and
- (3) High production cost.

Over production is believed to be the major cause of the problem on low production prices in the area. There is neither crop plan nor knowledge on land suitability among the farmers. The market that can absorb production from this Tambon is also limited. The farmers do not have necessary knowledge/skills to process/transform their production for value added purpose. Other causes of low production price related to the problems of "sub-standard production" due to the use of seeds of poor quality and "price distortion by middlemen". For the latter, it was also understood that part of the problem is caused by the fact that there is no farmers' organization and accordingly, the farmers do not have bargaining power in negotiating with the middlemen.

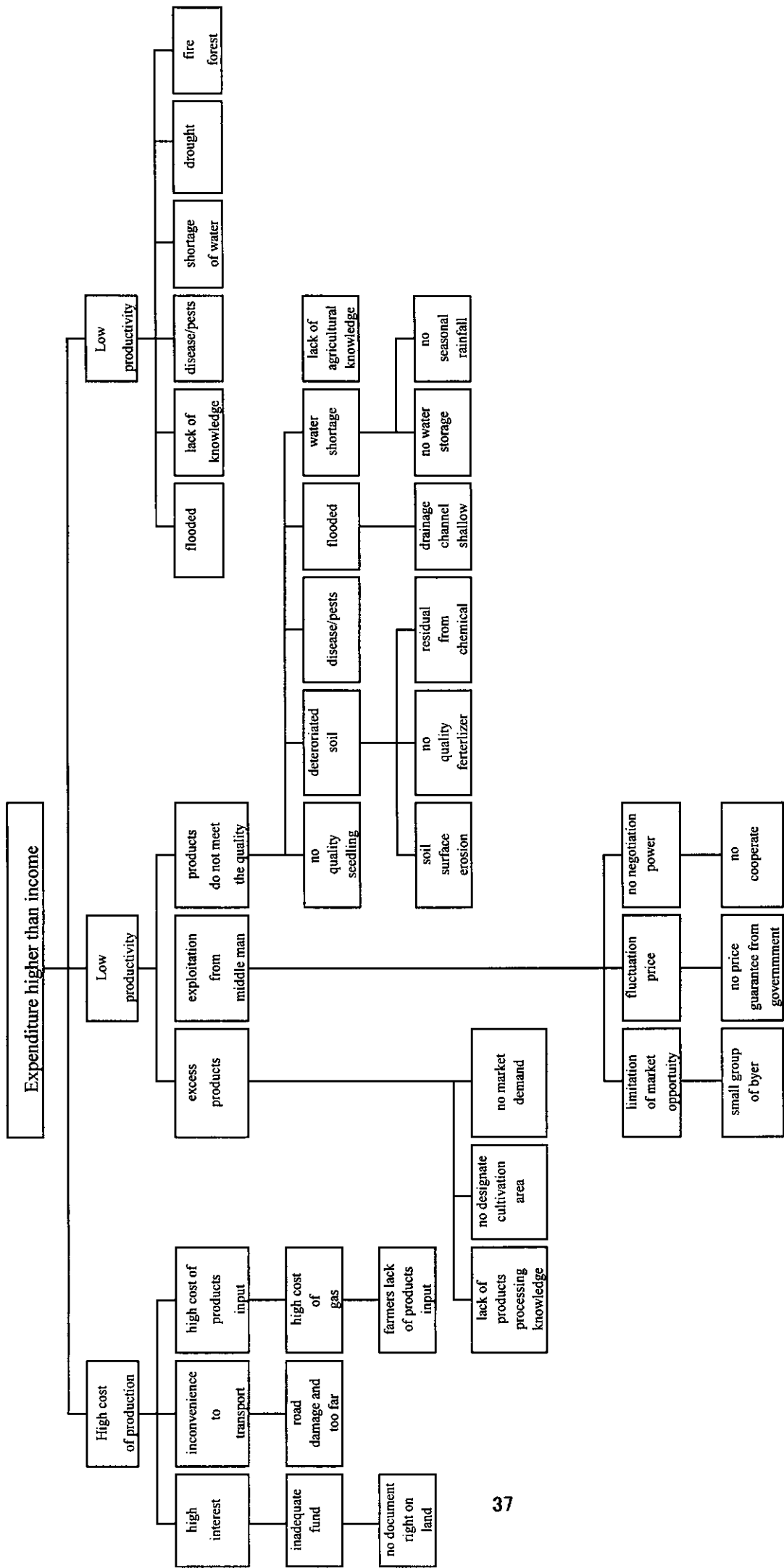
Low land productivity is believed to have been caused by such factors as shortage of water, poor soils (low degree of organic matters) due to flash flood, inappropriate use of chemicals that finally leave the unnecessary residue in the farm, pest and insect problem. The farmers recognize the problem of inadequate knowledge on technical matters related to agriculture. Often, there are problems of drought, fire from nearby forest and flash flood that caused unexpected damage to agriculture in this village.

On the problem of high production cost, it was explained that most farmers can not produce the necessary production inputs by themselves and for their own use. Such the inputs, which are costly, include new variety of seeds, fertilizers, insecticides, farm machines, etc. The cost of these inputs constitute the major variable factor that determines eventually "profits" or "loss" to the farmers.

Apart from this, a high interest rate was quoted as another factor of high production cost. Without appropriate land title deeds, most farmers in this Tambon do not have an access to the Bank of Agriculture and Agricultural Cooperatives (BAAC), which provides credit for agriculture at a lower interest rate.

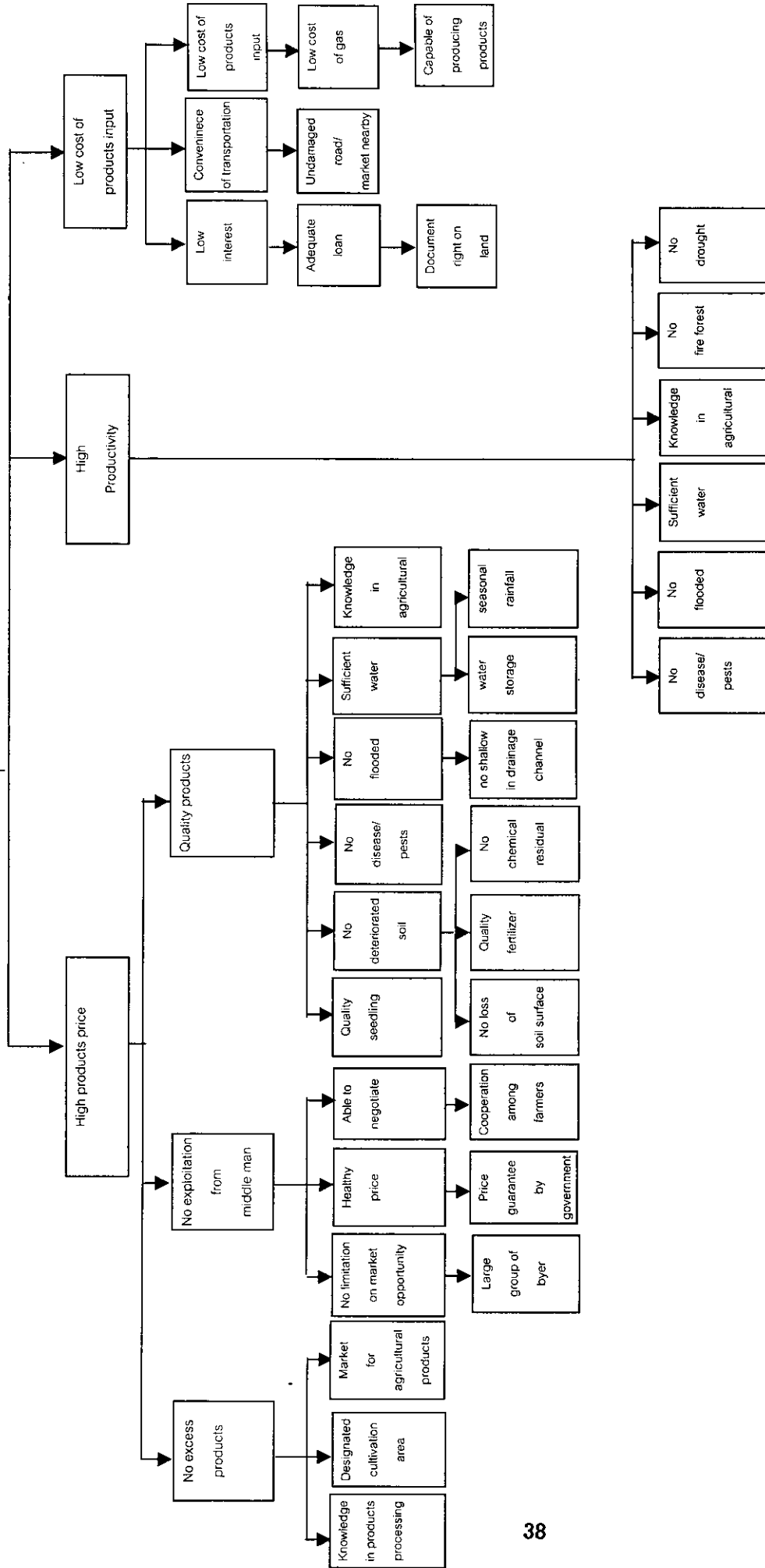
On the development needs, the farmers at Tambon Tha Khoei ranked "reservoir for water" as the top priority, perhaps due to the fact that this Tambon is located on a relatively high elevation. . The farmers suggested construction of farm ponds particularly in the villages that so far do not have any. To improve soil fertility, they actually have already organized themselves in a group to combat with the problem systematically, following a proper guidance supported by the so-called "Thammarat Group". In view of this, it can be said that the farmers see well the benefits of group working and are ready to be organized. The existing problems are that there is no strong "leader/motivator" including government agency that can seriously lead the movement and in a sustainable manner.

Problem Tree - Tambon Tha Khoei



Objective Tree: Tha Koei

Income higher than expenditure



Project Activities Matrix

7. Tha Koei

Project Approaches	Urgent (within 2-3 years)	Within 5 years	Less urgent After 5 years
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Pond Shallow well Weir Dredging sediment Transmission pipe 		<ul style="list-style-type: none"> Medium Reservoir
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice/knowledge Responsible agencies make attentively support Forming a group for distribute knowledge about soil 		
<ul style="list-style-type: none"> Production input 	<ul style="list-style-type: none"> Expert gives advice/knowledge Producing own insecticide/pesticide Producing own bio-fertilizer Forming a group for modern machinery procurement for the production system 		
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Expert gives advice Crops rotation Responsibility agencies make attentively support Using in appropriate and quality fertilizer 		
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Producing quality products Grows crop in consistent with market demand Government provide support for products processing Government agencies has policy about designation on cultivation area 		
<ul style="list-style-type: none"> Market 	<ul style="list-style-type: none"> Forming goup to sell products Government has fix price guarantee Trading with contract Making trading contract in advance 		
<ul style="list-style-type: none"> Production input 	<ul style="list-style-type: none"> Experts gives advice on agricultural Promoting on animals research 		
<ul style="list-style-type: none"> Investment fund 	<ul style="list-style-type: none"> The state issued the land document of right 	<ul style="list-style-type: none"> Cooperatives establishment 	<ul style="list-style-type: none"> Procuring loan with low interest

Project Approaches	Urgent (within 2-3 years)	Within 5 years	Less urgent After 5 years
<ul style="list-style-type: none"> ● Group establishment 	<ul style="list-style-type: none"> - Expert gives advice - Study visit to successful case - Forming farmers group - Raise responsibility consciousness 		
<ul style="list-style-type: none"> ● Flooded protection 	<ul style="list-style-type: none"> - Dredging sediment in creek - Construct drainage channel - Raise forest preservation consciousness 	<ul style="list-style-type: none"> - Grows elephant grass 	

PCM Reporting/

Problem and Need for the Development at Tambons

4.8 Tambon Pa Wai, Ratchaburi

1. Major problem and need of the farmers

The main problem of the farmers in this Tambon is "low revenue" which is lower than the expenditure in general. Three major causes were quoted as following:

- (1) High production cost ;
- (2) Low production price; and
- (3) Low land productivity.

Some farmers felt however that all the three causes have about the same degree of seriousness. On the problem of high production cost, it was explained that because the farmers still can not produce the necessary production inputs particularly fertilizers, pesticides and insecticides by themselves all have to be procured at high cost from the market. Also, many kinds of farm machine have to be rented and often, can not be secured at the time of need. Shortage of labor has caused the increase in wage rate. Problem of transportation of the productions has also increased the transportation cost. For the farmers who raise livestock, due to the limited land area for grazing, they have to purchase grass/hay and processed feeds from market too. All have added to the production cost on the side of the farmers.

Regarding the problem of low production prices, the lack of price guarantee system was quoted as the major factor. The system is required particularly for economic crops in the area which include cassava, vegetables and some fruit trees. As it is in the present days, the farmers have no power whatsoever, to determine the price of their crops/production problem. Another factor, as mentioned by the farmers, was "sub-standard production" due to the use of seeds of poor quality.

For the last problem, it was explained that low land productivity is caused by such factors as unstable rainfalls, shortage of water resources, deteriorating soils fertility, diseases and the lack of necessary knowledge on the side of the farmers.

On the development needs, most of the farmers expressed the need for water resources development as the top priority. It was also suggested that as water is the most important factor for agriculture, irrigation development should be carried out differently for different areas, taken into consideration their respective geography. Such the development may include electrical pumping irrigation, reservoir, irrigation distribution system, cleaning up of siltation in the Lam Pa Chi, using underground water, digging farm ponds, etc. In this connection, the farmers referred also to the "Huai Phak Project" that should be implemented soon as the study and design seemed to have already been made and completed.

In addition, the farmers expressed their need to have more knowledge on doing agriculture by means of training and extension services followed by a monitoring and evaluation system that can ensure a high success. In view of the severe problems on diseases from pests and insects, it was suggested that a "research center" on this subject be established at this Tambon level. In this connection, it was also suggested that the existing Technology Transfer Center (TTC) can be considered as well to perform this function by increasing the number of specialists for the purpose.

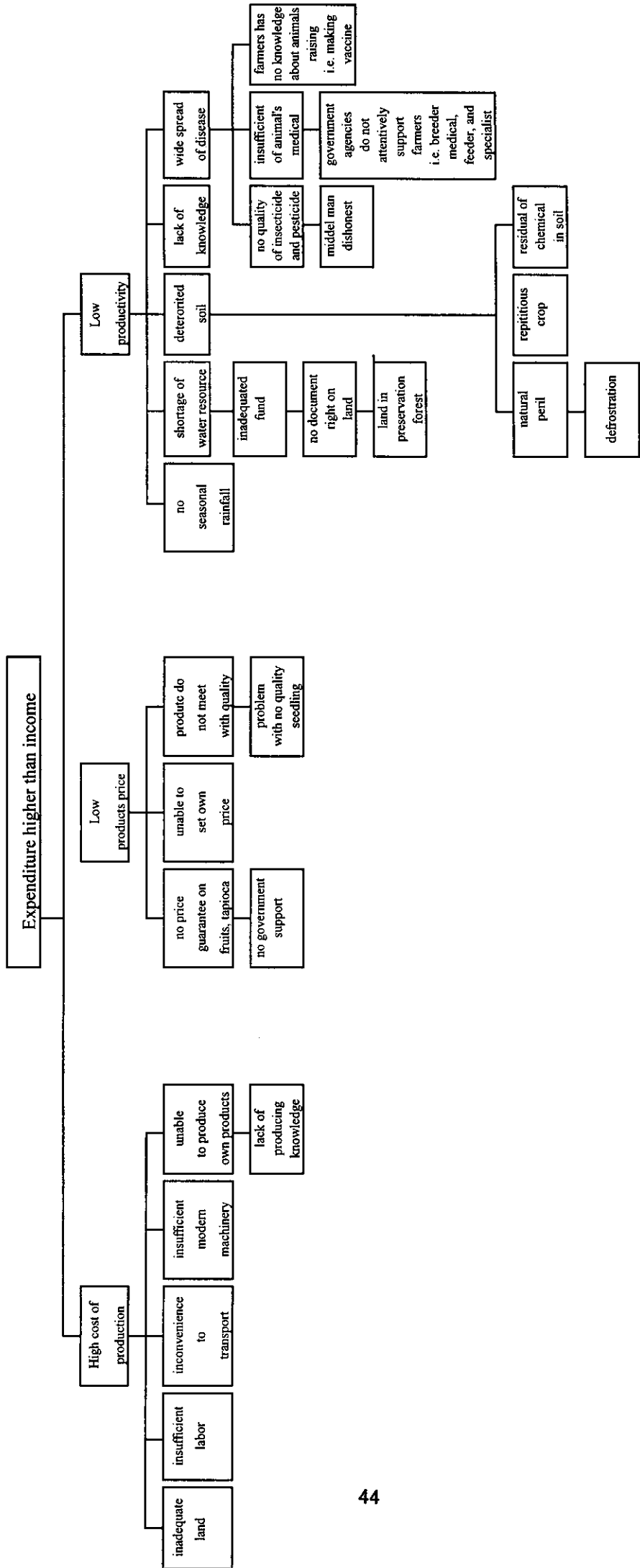
To solve the price problems, the farmers expressed the need for group undertaking, including joint marketing, registration of crop plan and livestock rearing to know exactly the quantity of supplies (productions). It was also suggested that a "central market for farm product" be established. Lastly, processing of the farm products be promoted to enhance the value/price of productions from the area.

To improve soil fertility, the farmers express the need for fresh or green manure, including insecticides extracted from nature. Additionally, they express their interest in adopting the method of crop rotation for the purpose.

To reduce the total production cost, they wish to have advice from experts, including some training in appropriate uses of fertilizers and insecticides. The farmers expressed the need to be able to produce some of these production inputs by themselves and for their own uses. It was also suggested that a "center for rental farm machinery" be established. This may be supported by external agency at the initial stage (in view of their high cost) and subsequently be managed by the farmers themselves.

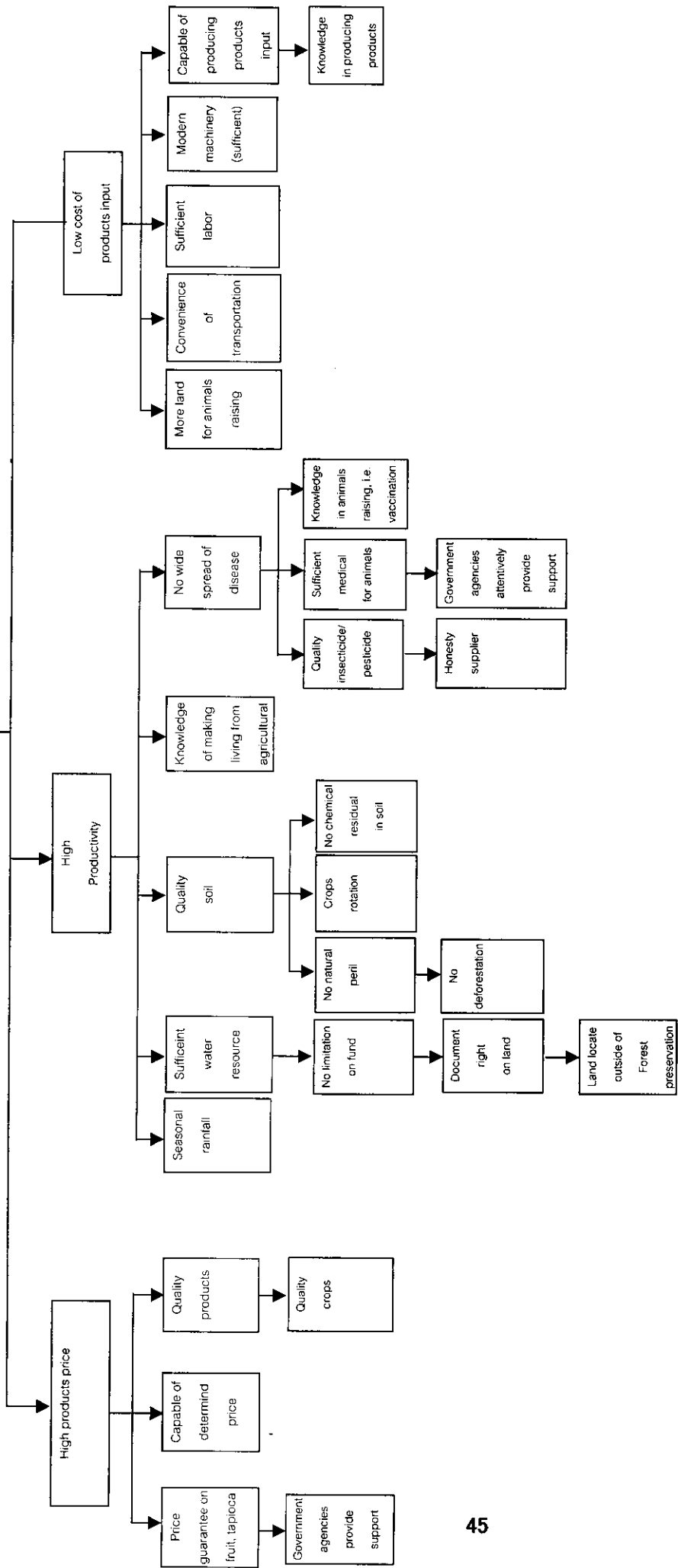
To increase land productivity, the need for water resources development was placed top priority. Additionally, the farmers expressed the need for guidance on crop planning, improvement of soil fertility and appropriate use of production inputs.

Problem Tree - Tambon Pa Wai



Objective Tree: Pa Wai

Income higher than expenditure



	Urgent (within 2-3 years)		
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Electrical Pumping Station Storage Dredging in Lampachi and Natural water resource Well Shallow well Weir 	<ul style="list-style-type: none"> Transmission system 	<ul style="list-style-type: none"> Reservoir
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Using compost and manure fertilizer Producing fertilizer from natural herbs Crop rotation 		
<ul style="list-style-type: none"> Knowledge 	<ul style="list-style-type: none"> Providing training on all types of agricultural occupations Prepaing demonstration plot of medical fertilizer Evaluation follow up after training 	<ul style="list-style-type: none"> Establishing the animal and plant diseases research center of the sub-district Increasing personnel of the center 	
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Procuring quality and low price seed, animals and medical Expert gives advice and provide training on chemical-fertilizer Using quality fertilizer 	<ul style="list-style-type: none"> Producing home made ferterizer and insecticide/pesticide The government to set up the agricultural machinery rental center 	
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Production activities will be achieved by activites of water, knowledge, and soil 		

PCM Reporting/

Problem and Need for the Development at Tambons

4.9 Tambon Dan Thap Tako

1. Major problem and need of the farmers

The main problem of the farmers in Tambon Dan Thap Tako is accumulated "debt" arising from a repeated unsuccessful agriculture. Three major causes of the failure were quoted as following:

- (1) High production cost;
- (2) Low production price; and
- (3) Low land productivity.

On the problem of high production cost, it was explained that in each crop season and at various production stages, the farmers will have to procure almost every inputs from the market at a high cost. These include land preparations, seeds, fertilizers, chemicals and labors. The farmers neither own the necessary resources nor have the capability to produce these production inputs the prices of which are increasing continuously without any proper control from the Government. Therefore, they become important variable factors for the high cost of the productions. In addition, there is a problem of a high interest rate from informal financial/money market. Holding of inappropriate land title deeds make it difficult for the farmers to have an access to formal financial market for an adequate credit and lower interest rate.

On the problem of low land productivity, the following were quoted as the major factors: deteriorating soils fertility due to over-use of chemicals, diseases from pests and insects, shortage of water resources, flash flood in the rainy season and the use of seeds of poor quality. Crop damage from such causes as diseases, drought, unstable rainfalls, fire from forest, etc., is a major factor of low production/yield which will lead to less income and hence, the deficit to farmers.

Regarding the problem of low production prices, the following two factors quoted as the major causes: poor quality production and lack of bargaining power on the side of the farmers. Poor quality of production could be caused by many factors, i.e., poor seeds, damage from insects and

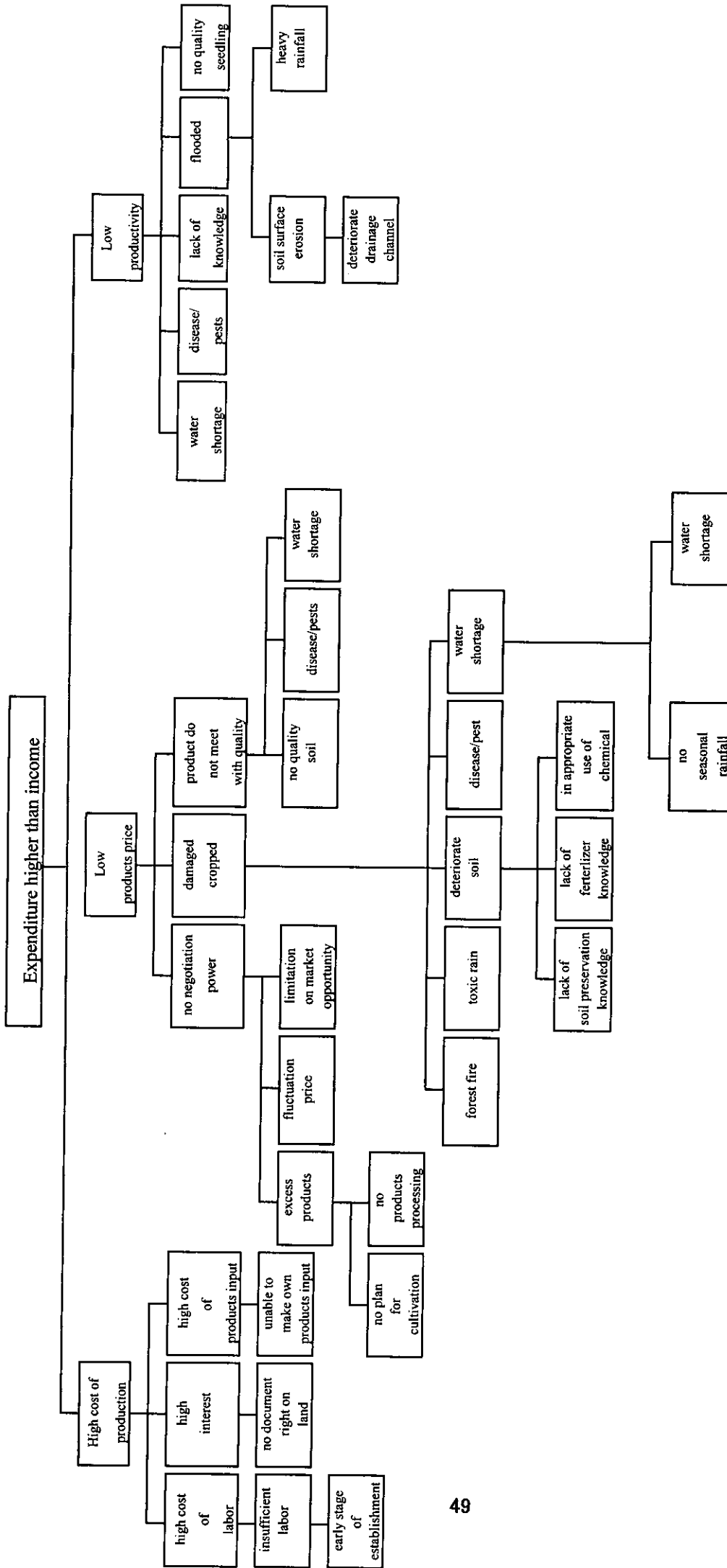
others that eventually, produce the production unacceptable to the middlemen or consumers. Again, poor quality products lead to low prices and income to farmers.

Bargaining power was an issue raised by the farmers, in addition the question of limited market channels. There is no practice of joint marketing among the farmers. Crop prices are subject to frequent fluctuation, depending on various external factors, particularly decision of the middlemen.

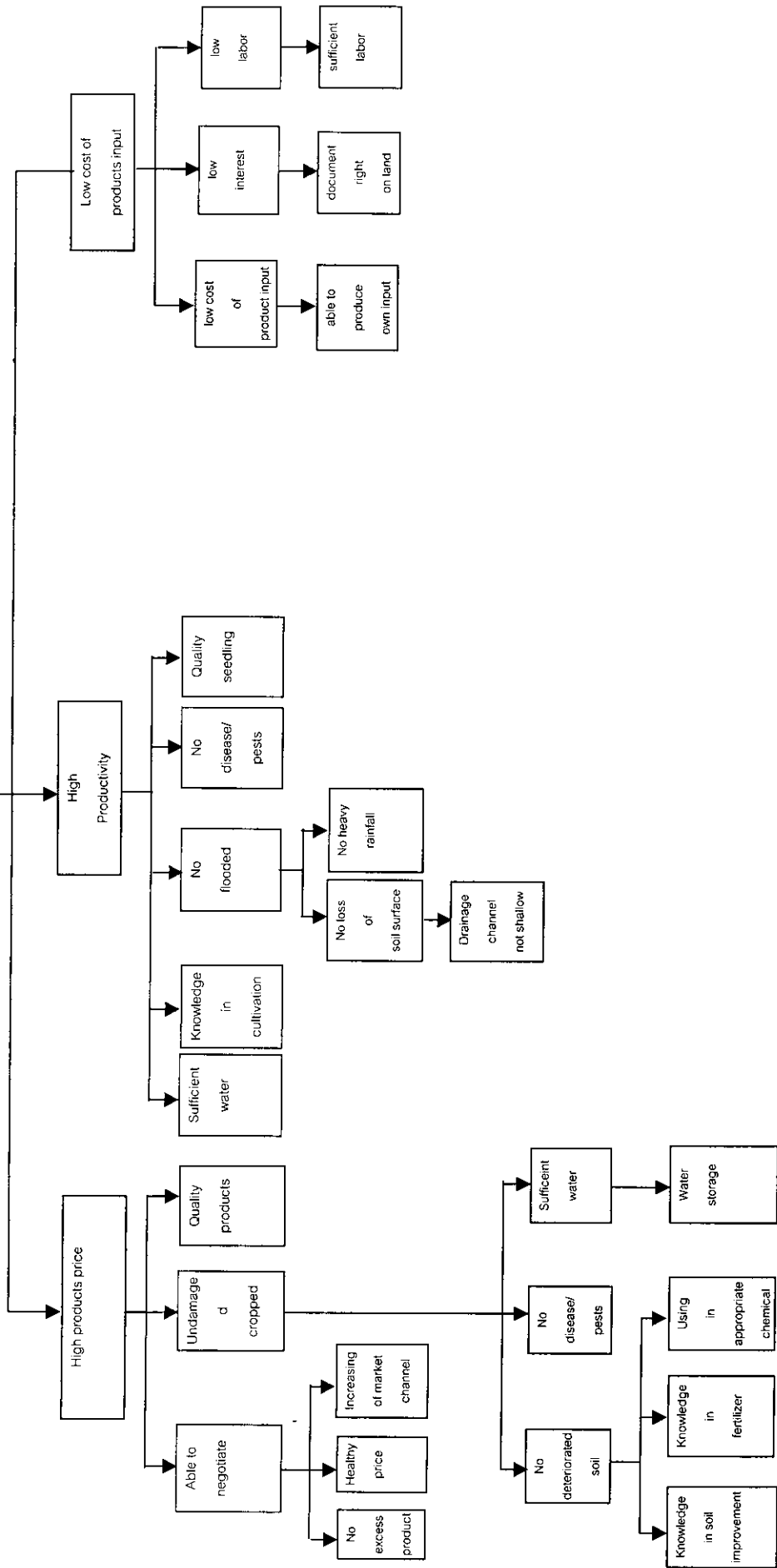
On the development needs, the farmers at Dan Thap Tako expressed the need for more water resources that are adequate for agricultural purpose in the Tambon. Excavation of the existing canals and channels and construction of weirs and dikes to protect flash flood were suggested.

At present, there are 20 villages in Tambon Dan Thap Tako. Several farmers' groups have also been established for joint economic activities, including, Pine-apple Group, Herbs' Growing Group, Ladies Weaving Group, Ladies Volunteer for Development Group, Vegetable Growers' Group, etc. In the future, they have an intention to group together to do "joint purchasing and marketing" too. Guidance and promotion from the responsible government agencies in this respect are required.

Problem Tree - Dan Thap Tako



Income higher than expenditure



Project Activity	Urgent (within 1-2 years)	Medium term	Long term (more than 2 years)
<ul style="list-style-type: none"> ● Water 	<ul style="list-style-type: none"> - Pool - Weir - Transmission canal - Dredging sediment/load - Well 	<ul style="list-style-type: none"> - Small reservoir 	<ul style="list-style-type: none"> - Medium reservoir
<ul style="list-style-type: none"> ● Soil 	<ul style="list-style-type: none"> - Expert gives advice - Responsible government agencies attentively make improvement - Producing green manure for own use - Crop rotation 		
<ul style="list-style-type: none"> ● Investment 	<ul style="list-style-type: none"> - The state issues the land document of right 	<ul style="list-style-type: none"> - Cooperatives establishment 	<ul style="list-style-type: none"> - Procuring loan with low interest
<ul style="list-style-type: none"> ● Farm Input 	<ul style="list-style-type: none"> - Expert gives advice - Forming a group for modern machinery procurement for the production system - Producing own seedling - Producing home-made insecticide/pesticide - Producing compost-fertilizer 		
<ul style="list-style-type: none"> ● Production 	<ul style="list-style-type: none"> - Expert gives advice and provide knowledge - Procuring quality seedling - training on chemical-fertilizer 		
<ul style="list-style-type: none"> ● Disease and pests 	<ul style="list-style-type: none"> - Expert gives advice - Responsible Government agencies attentively make improvement 	<ul style="list-style-type: none"> - Crop rotation 	
<ul style="list-style-type: none"> ● Marketing 	<ul style="list-style-type: none"> - Producing only quality products - Government agencies have a policy designate the cultivation area 		
<ul style="list-style-type: none"> ● Cooperation 	<ul style="list-style-type: none"> - Expert gives advice - Study visit to successful area - Setting up Farmer's group 		
<ul style="list-style-type: none"> ● Flood Protection 	<ul style="list-style-type: none"> - Sillway - Dredging sediment/load - Weir - Growing elephant grass 		

PCM Reporting/

Problem and Need for the Development at Tambons

4.10 Tambon Rang Bua, Ratchaburi

1. Major problem and need of the farmers

The major problem of the farmers in Tambon Rang Bua is "deficit" from doing agriculture.

Three major causes of the deficit were quoted as following:

- (1) Low land productivity ;
- (2) Low production price; and
- (3) High price of production inputs.

Tambon Rang Bua is located on a hilly area, with sandy soils. The farmers there had a serious problem of shortage of irrigation water every year. According to the farmers' view, low land productivity was ranked first among the major problems. In addition to the shortage of water and poor soils, problems from insects and pests, diseases (of livestock) and deteriorating soil fertility are pronounced.

It was explained that the problem of low production prices is caused by:

- (I) The lack of bargaining power to determine the prices on the side of the farmers;
- (II) No/limited market demand; and
- (III) The absent of price guarantee.

Situation as it is at the present, the middlemen will come to buy the products (e.g., vegetables) from farmers and unilaterally, determine the prices. If the farmers are not satisfied with the offered prices, they will have to take their products to a wholesale/retail market somewhere by themselves. This is not an easy case, as the wholesale/retail market will normally have a network of its own with a number of middlemen and accordingly, the farmers will have a difficult time to sell their productions at will.

High price of production inputs is common to both agriculture and livestock. For example, fertilizers and chemicals are expensive to farmers. Often, the farmers have to pay a high price for the

inputs with low quality, adding an unnecessary burden to their production price. The lack of grass/hay for livestock leads to a higher price of feed stuff, etc.

On the development needs, the farmers at Tambon Rang Bua expressed the need for "water" as the top priority. They suggested that for immediate future, small-scale farm ponds and weirs should be constructed and, the existing canals excavated. One of the reasons for these suggestion is that small-scale work do not require complicated procedures and therefore, may be completed within a short period of time. In the medium term, the farmers suggested construction of large-scale ponds/reservoirs, with installation of pumping devices and distribution system for irrigation.

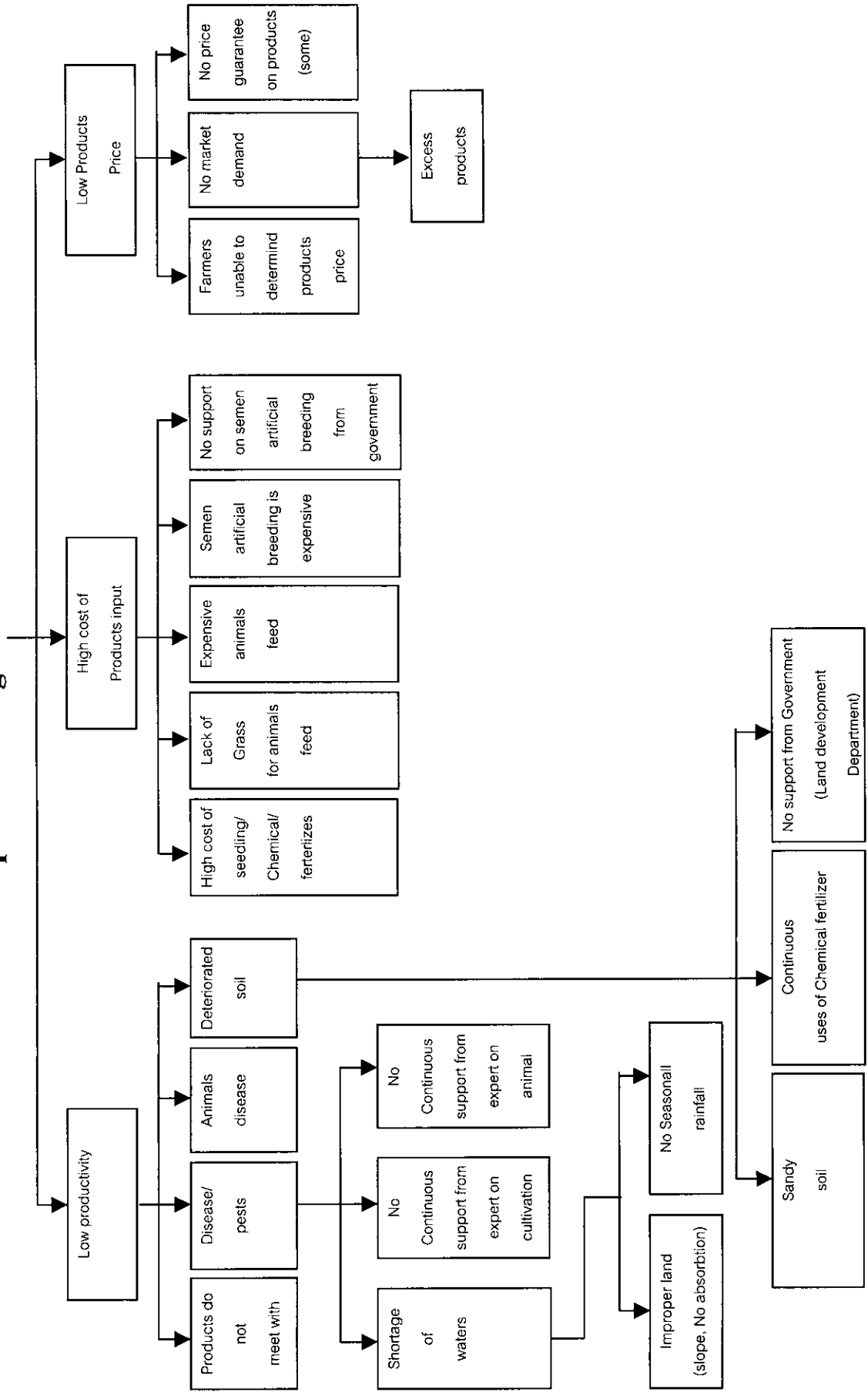
To solve other problems, the farmers expressed their needs for solutions for the following items:

- land improvement;
- price of the production inputs;
- pests and insects control;
- diseases of livestock; and
- marketing issues.

In summary, it was a common view of the farmers that if the problems related to water and soil fertility are solved, other related problems on insects and pests will be less, at least to a certain degree. They should be in a better position to select suitable crops to be grown, taking into consideration availability of the water and the market demand. In any case, the farmers express their need for technical advice and guidance from experts, both on the production and marketing aspects. "Profitable production" is the ultimate aim of the farmers at Tambon Rang Bua.

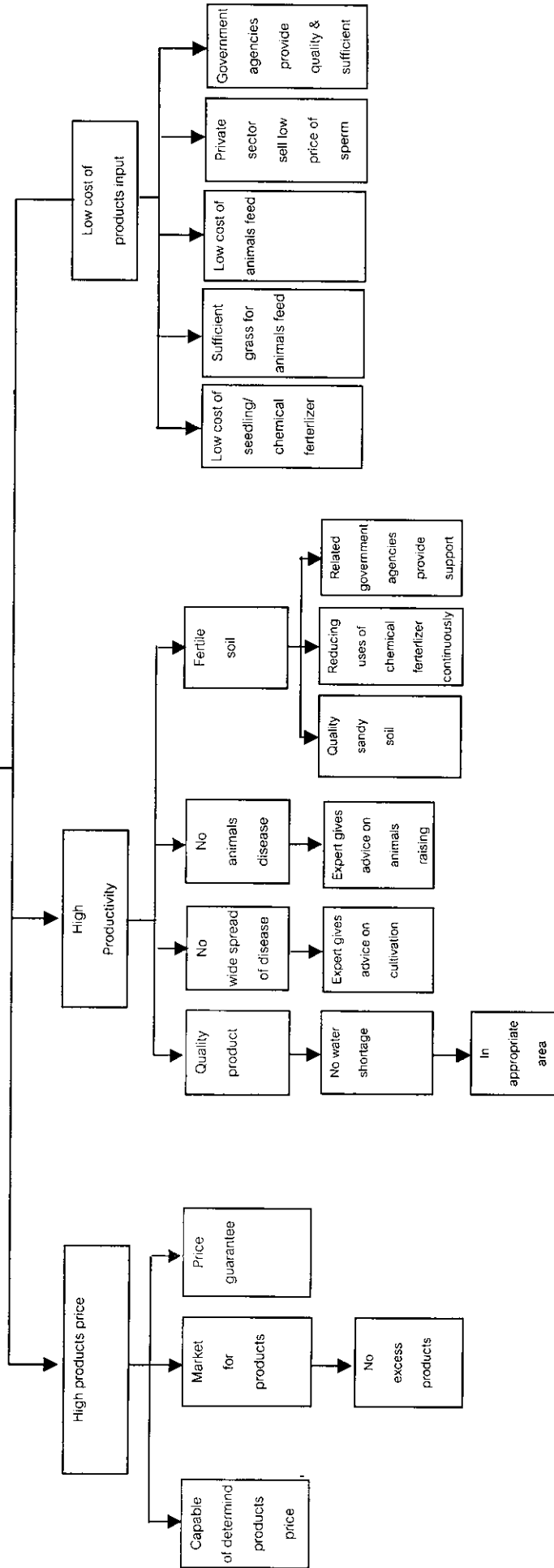
Problems Tree - Rang Bua

Expenditure higher than income



Objective Tree: Rang Bua

Income higher than expenditure



Project Activity (G1)	Urgent (within 2-3 years)	Medium (within 5 years)	Long term
<ul style="list-style-type: none"> ● Water 	<ul style="list-style-type: none"> - Digging a small pond (5-10 rai) - Dredging sedimen in natural pond - Weir - Dredging sediment/load - Well 	<ul style="list-style-type: none"> - Digging a large pond in the deteriorated area of approximately 1,200 rai - Setting up pumping station along with irriation system 	
<ul style="list-style-type: none"> ● Soil 	<ul style="list-style-type: none"> - Monitoring and analyzing soil quality - Expert gives advice - Government agencies provided quality seedling - Growing leguminous crop as groud cover plant - Using organic and bio-fertilizer 		
<ul style="list-style-type: none"> ● Farm Input 	<ul style="list-style-type: none"> - Government agencies responsible for monitoring of quality seedling - Expert gives advice - Promoting cultivation of plants that are both cash crops and feed crops - Producing feed for farm animals 		
<ul style="list-style-type: none"> ● Disease/pests 	<ul style="list-style-type: none"> - Expert gives advice and provide training - Provide demonstration plot - Using quality and disease resistance seedling - Using organic fertilizer 		
<ul style="list-style-type: none"> ● Animals disease 	<ul style="list-style-type: none"> - Expert gives advice - Provide knowledge and training 		
<ul style="list-style-type: none"> ● Marketing 	<ul style="list-style-type: none"> - Provide knowledge and requirement to the farmer about the growing plants system - Appoint representative or coordinator to monitor on marketing data both in retail and wholesale - Price guarantee - Government agencies provide assistance on monitoring market 		<ul style="list-style-type: none"> - Designate cultivation area - Collecting products for sales

Problems and Needs for the Development at Tambons

No 11. Tambon Kaem On, Rachaburi

The core problem of the farmers is that “return from agriculture is negative”. The direct causes of this problem are identified as follows:

- (1) Low prices of agricultural products
- (2) High costs of inputs
- (3) Low yields

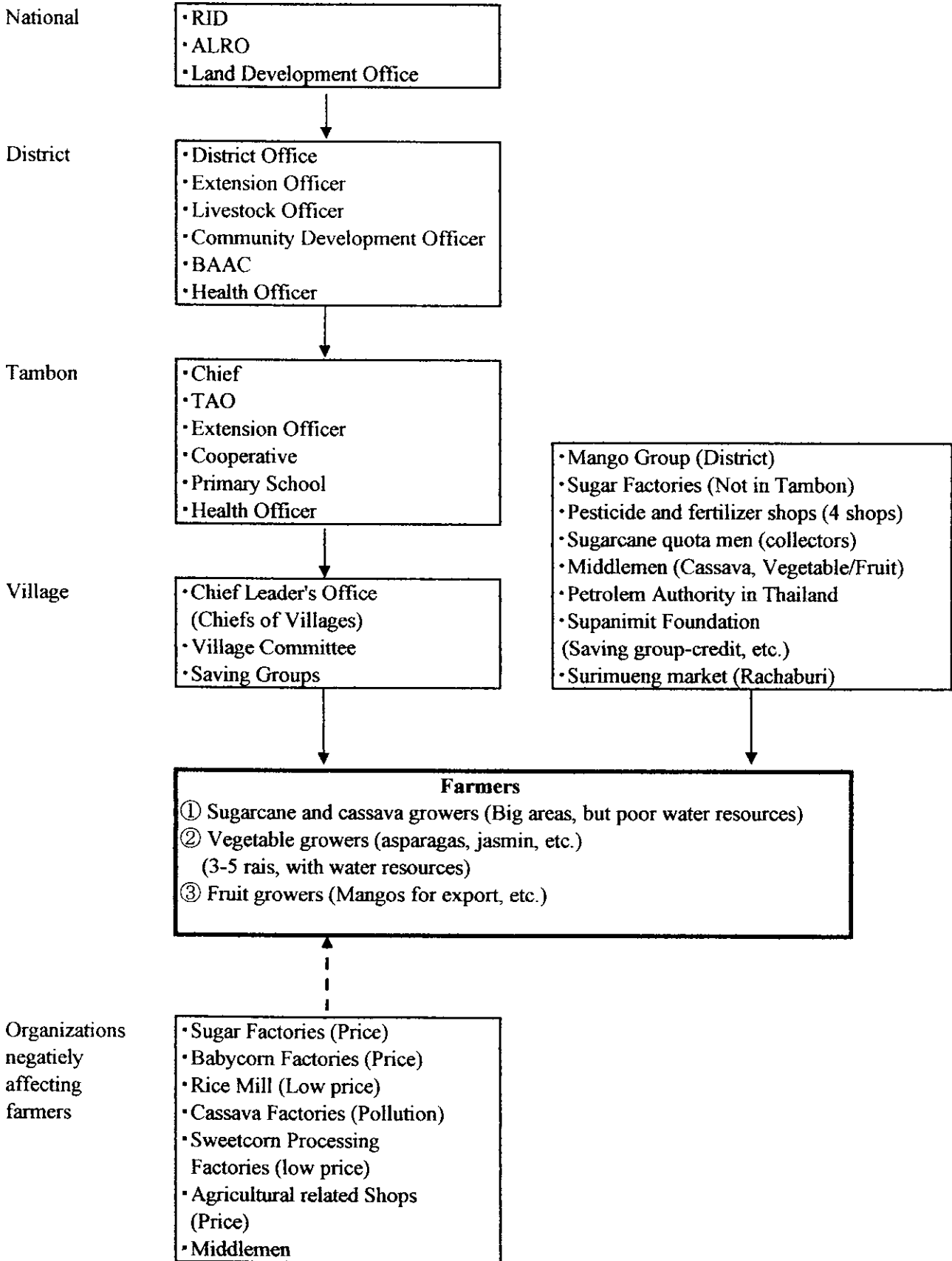
The farmers are concerned particularly about the low prices rather than the low yields of their products. This is because the farmers have the limited market channels and therefore have to sell most of the products to middle men. The reasons of the low prices are considered that i) the farmers lose their advantages against middle men, shops, merchants, etc., ii) the crops are damaged by floods and diseases/insects, and iii) the quality of the products are low because of water shortages, poor soils and diseases/insects. The lack of cooperation among the farmers (e.g., no collective planting and selling of their products), the high interest rates of loan from middle men, and the quotas given by sugar cane factories are mainly responsible for the low advantages of the farmers. The poor soils are considered as the results of mono cropping and over use of chemical fertilizer.

As per the development needs, the farmers place high priorities on the construction of reservoir and irrigation canals, technical advices for improving the quality of their products, and advices for the establishment of the farmers’ groups to facilitate effective cooperation among them. They are also interested to expand environment-friendly agriculture at the earliest time, such as the production and use of natural fertilizer and pesticide.

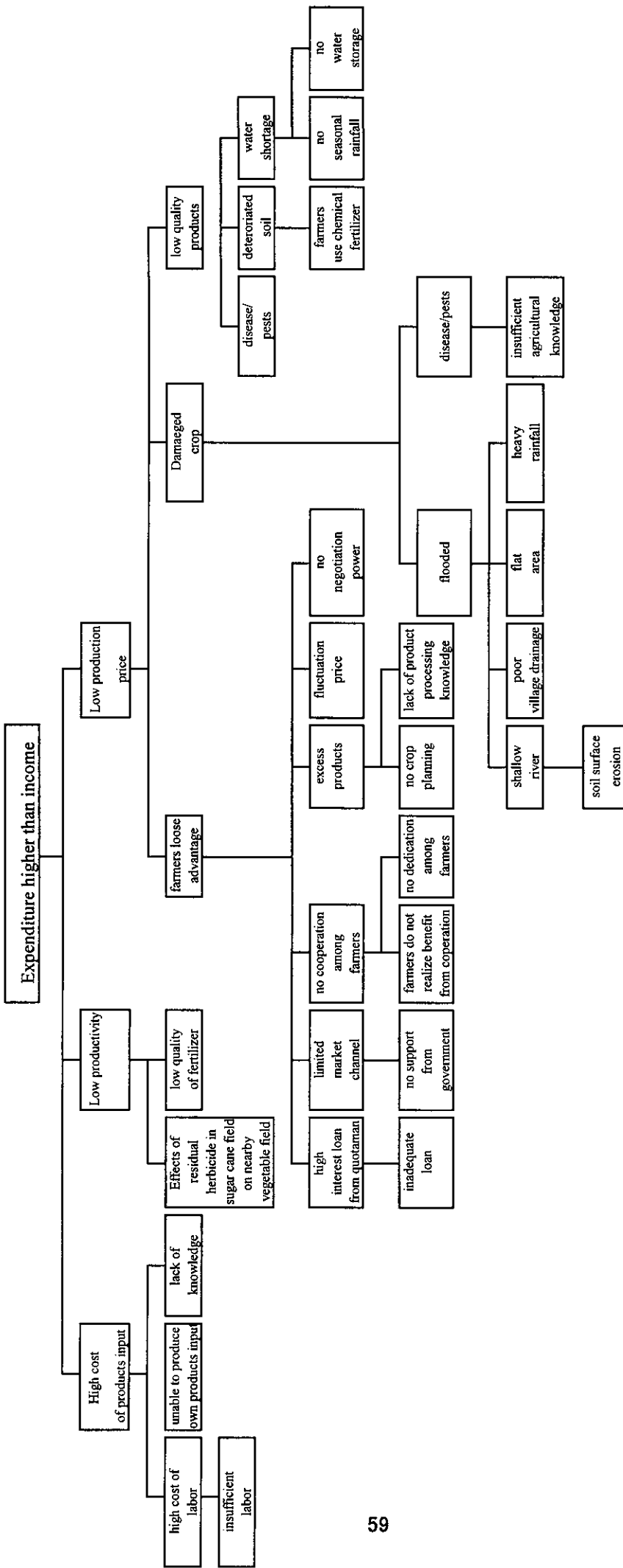
The farmers need reservoir and irrigation canals more urgently than farm ponds and wells because of the scale of the impact to the community. The strong farmers’ groups are also needed urgently because it would enable the farmers collectively to purchase the inputs, and plant and market their products. As a result, the farmers would be able to have strong negotiation power against the buyers.

There is the mango group, one of the farmers’ groups at the district level for collecting and marketing high-quality mango for export. This group could be strengthened or newly established for improving the product quality, developing the new market channels, and introducing some food processing activities into the community.

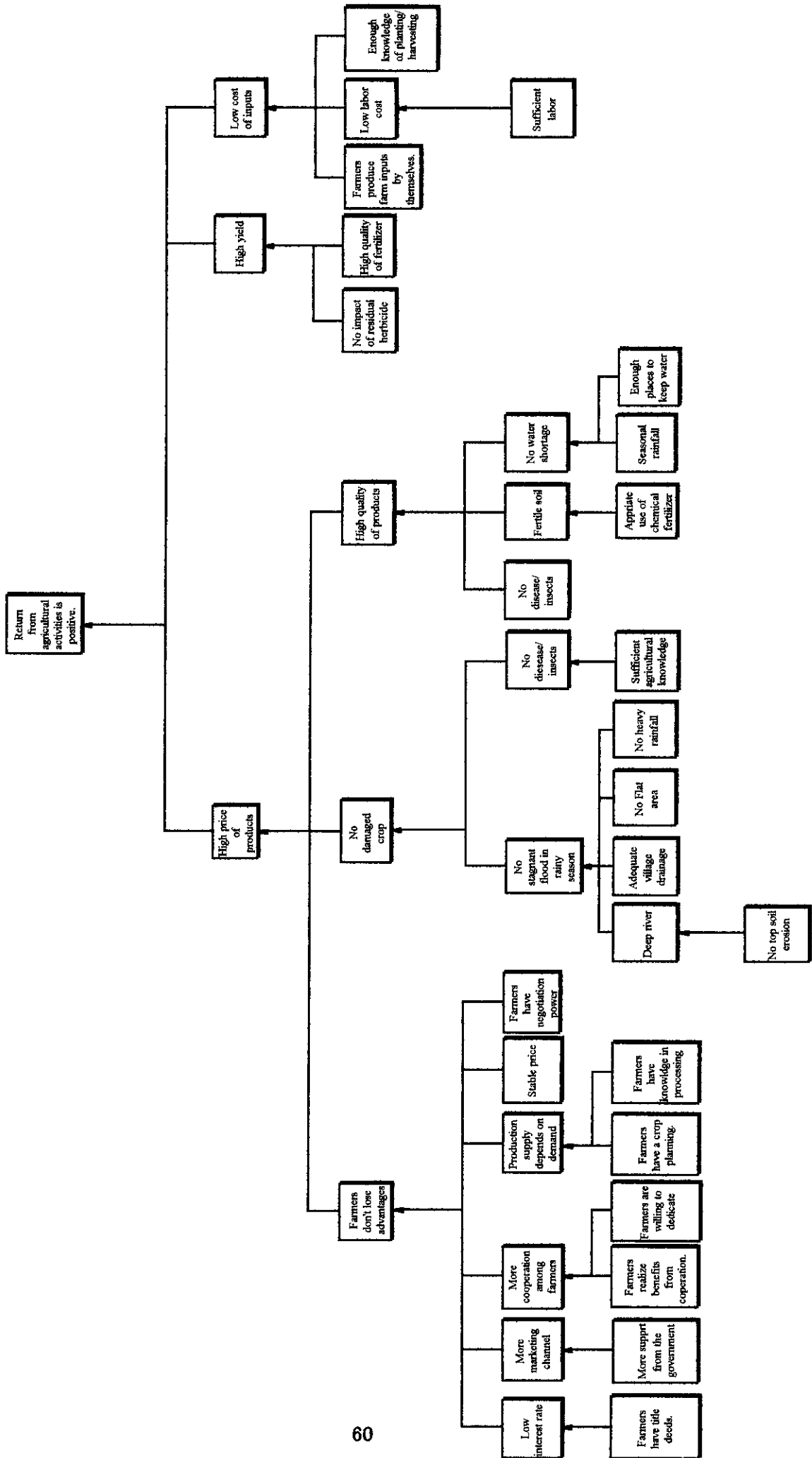
Stakeholders



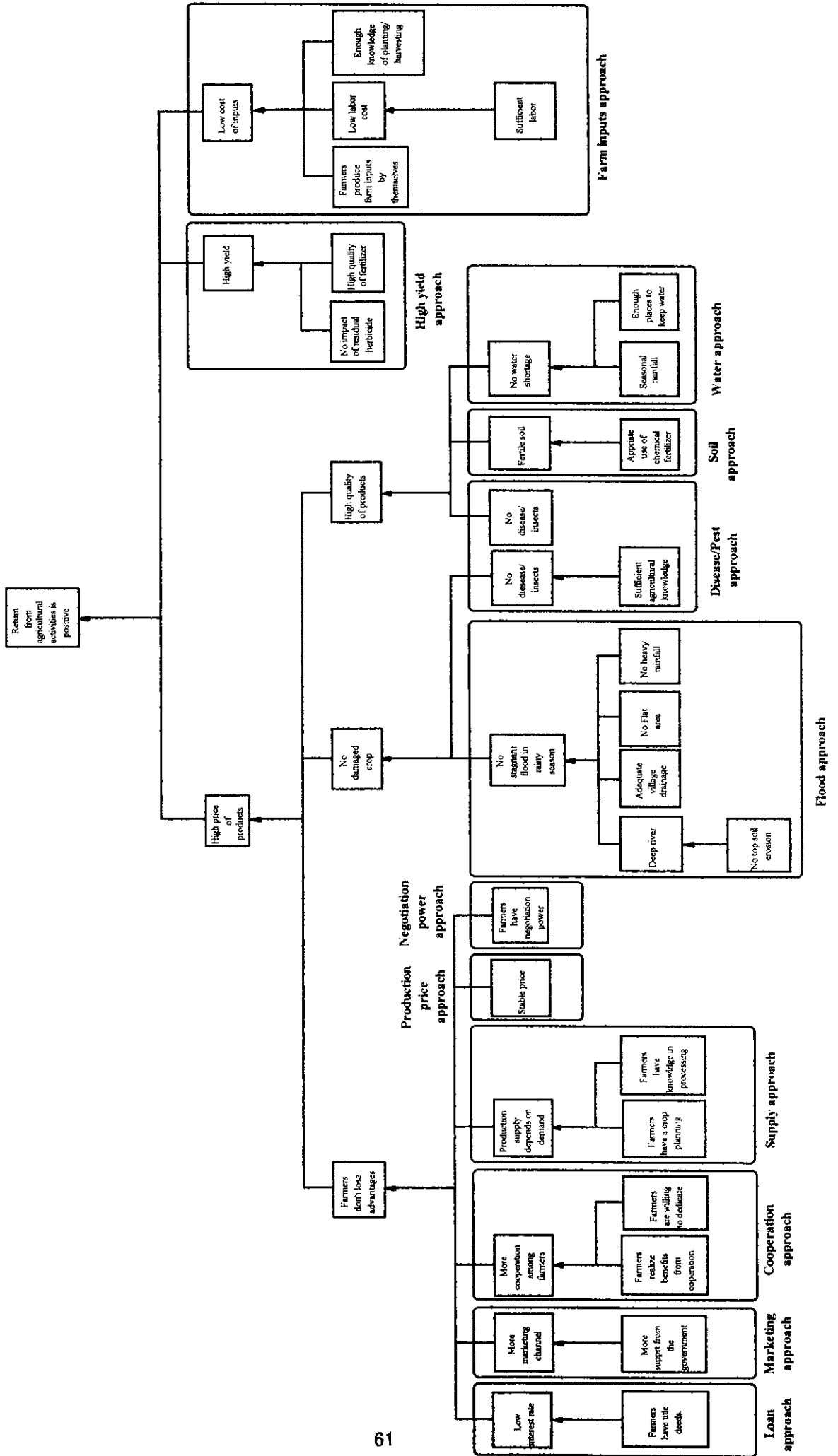
Problem Tree - Kaem On



Objectives Tree



Project Selection



	Urgent (within 2 years)	Within 5 years	After 5 years
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Reservoir Irrigation canal 	<ul style="list-style-type: none"> Farm pond Ground water well Shallow well 	
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice Producing compost/manuer fertilizer Crop rotation 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Expert gives advice Producing natural fertilizer Producing home-made pesticide from extracted plant 	<ul style="list-style-type: none"> Group formation to buy and provide machine/ equipment Preparation of seeds and seedlings by farmers 	
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Expert gives advice 		
<ul style="list-style-type: none"> Loan 		<ul style="list-style-type: none"> Money saving 	<ul style="list-style-type: none"> Revoliving fund
<ul style="list-style-type: none"> Product price 		<ul style="list-style-type: none"> Guranteed price by buyers Production of standardized agricultural products Crop planning by farmers 	
<ul style="list-style-type: none"> Marketing 		<ul style="list-style-type: none"> Production selling by Agricultural products processing Selling through farmer group 	
<ul style="list-style-type: none"> Cooperation 	<ul style="list-style-type: none"> Expert gives advice Establisging of small groups Study visit to successful case 		
<ul style="list-style-type: none"> Negotiation power 	<ul style="list-style-type: none"> Establisging of small groups 		
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Expert gives advice on inputs (i.e. fertilizers, seeds) High quality seeds Producing compost fertilizer 		
<ul style="list-style-type: none"> Flood protection 		<ul style="list-style-type: none"> Grass/tree planting Slope protection by center Dike Construction More drainage channel 	<ul style="list-style-type: none"> River dredging

PCM Reporting/

Problem and Need for the Development at Tambons

4.12 Tambon Boek Phrai, Ratchaburi

1. Major problem and need of the farmers

The main problem of the farmers in Tambon Boek Phrai is "low production" which is not adequate to cover the invested expenditure. Three major causes are ranked as following:

- (1) Low land productivity ;
- (2) High production cost ; and
- (3) Low production price.

The farmers at Tambon Boek Phrai have more concern over the low productivity than the other two causes. It was explained that low land productivity at this Tambon is caused mainly by "shortage of water" which include both the lack of water resources and unstable rainfalls. Moreover, there are problems of soil fertility (good drain), pests and insects, poor quality of fertilizers and chemicals and the lack of supporting knowledge in doing modern agriculture. Deteriorating soil fertility is believed to have been caused by the mono crop practice and over-use of chemicals.

The high production cost is due to the following three factors, namely:

- the use of outdated farm machinery leading to high cost and time consumption;
- poor management skills leading to unnecessary over-use of certain inputs; and
- the use of wage labor due to shortage of manpower.

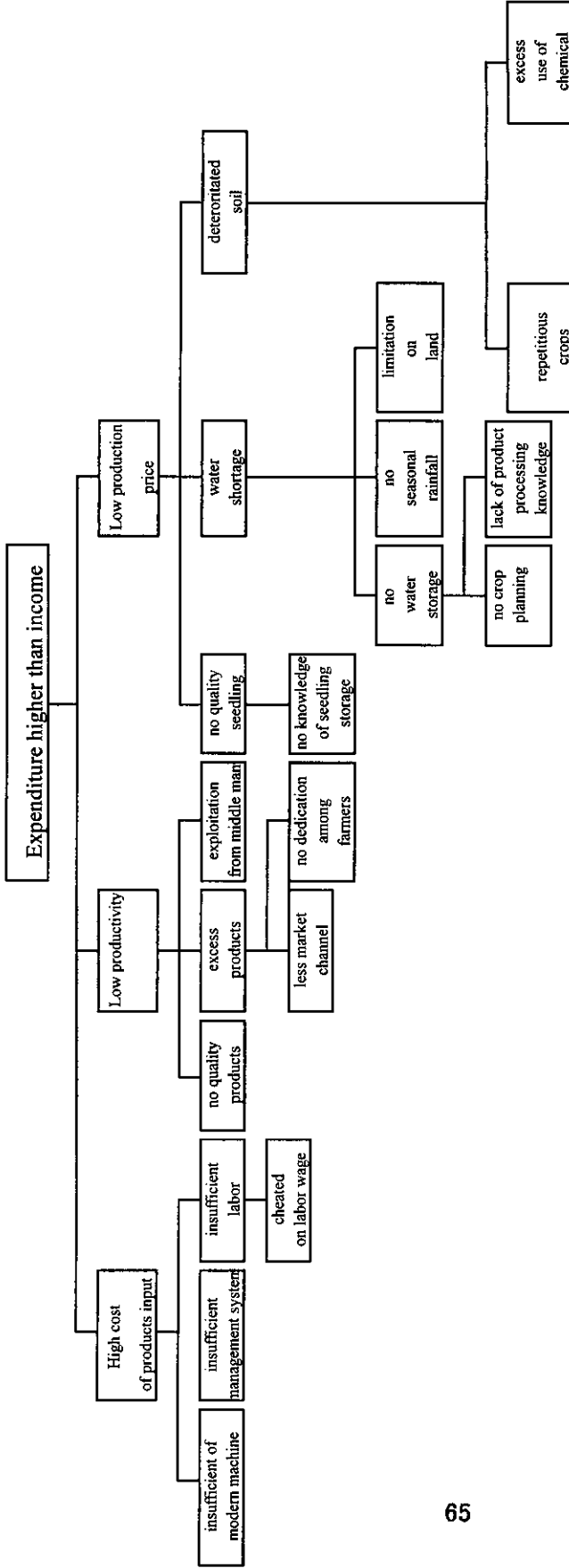
At this Tambon, there is always a high demand for labor for cutting sugar-cane and harvesting cassava. Often, problems related to the middlemen who arrange labor force from other areas occur. For example, the farmers have to make advance payment to these middlemen in anticipating the labor at the time of need but, the middlemen fail to comply with their commitment.

On the development needs, after the joint workshop/discussion, the farmers at this Tambon felt that top priority should be attached to their need for experts' advice and guidance for appropriate agricultural development in the area. Any advice/project after this should have a monitoring and evaluation program in place to ensure a real success of activities.

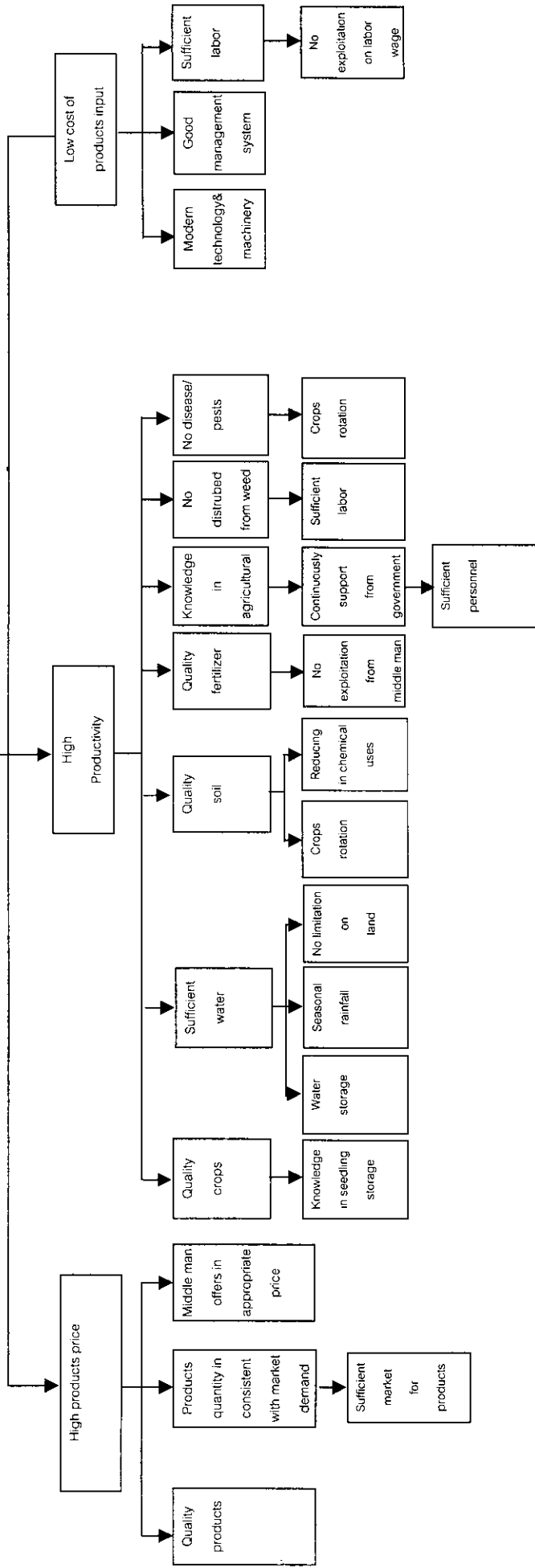
Development of water resources and related distribution system is the second need, among others. The development should take fully into consideration the different geographic setting of the areas. Other needs of the farmers include improvement of soil fertility, problem solving for the production inputs, pests and insects control and production prices.

In Tambon Boek Phrai, there are already several farmers' groups that have been organized to do joint activities. Successful ones include Mulberry (for silk) Growing Group, Tea (from mulberry) Making Group and Chili Processing Group. However, to improve their productivity and enhance further the profits out of these economic activities, the farmers expressed their need for more knowledge and/or guidance on various subjects of relevance for further application.

Problem Tree - Boek Phrai



Income higher than expenditure



Project Approaches	Urgent (within 2-3 years)	Within 5 years	
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Digging pond 	<ul style="list-style-type: none"> Transmission system Stream dredging 	<ul style="list-style-type: none"> Ladder weir
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice about producing organic-fertilizer Producing bio-fertilizer for own uses Using manuer-fertilizer for soil improvement 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Expert gives advice about production input Study visit to successful area in cost reduction 	<ul style="list-style-type: none"> Provide demonstration procedure and method of cost reduction Producing organic-fertilizer for own uses Producing insecticide/pesticide for own uses 	
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Procuring seedling in appropriate with geography and climate Expert gives advice about the quality seedling resources 	<ul style="list-style-type: none"> Expert gives advice about seedling storage 	
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Specialist on plant diseases/insect/pest 		
<ul style="list-style-type: none"> Product price 	<ul style="list-style-type: none"> Price guaranteed Setting up groups to do joint market Designate the cultivation area in appropriate with land condition 		
<ul style="list-style-type: none"> Knowledge 	<ul style="list-style-type: none"> Expert gives advice about agricultural Provide training in agricultural planning Study visit/training 		

PCM Reporting/

Problem and Need for the Development at Tambons

4.13 Tambon Nong Phai, Kanchanaburi

1. Major problem and need of the farmers

The main problem of the farmers in Tambon Nong Phai is "low revenue" that is lower than expenditure. Four major causes are ranked as following:

- (1) Damage of production;
- (2) Low land productivity ;
- (3) High price of production inputs; and
- (4) Low production price.

The farmer participants at the PCM Workshop discussed at length on the matter related to complete damage of production that occurred frequently due to the unfavorable location of the village. The problem is considered most serious to the farmers as it means a "complete loss" against any investment sum. Tambon Nong Phai is subject to frequent flooding and severe problems caused by insects. Most areas of Tambon Nong Phai are lowland in a valley. Due to this nature, flash flood occurs frequently after raining (particularly during August and October every year). In bad cases, flood level could be as high as -2 meters, with flood duration of 15-18 days. However, these floods bring as well siltation (sandy one) to the planted areas in the Tambon and especially, along the banks of the Lam Pa Chi river.

The problem of low land productivity is caused basically by insects and pests, the lack of necessary knowledge in planting suitable crops on the side of the farmers, poor quality of underground water, the lack of reservoirs/farm ponds to collect/keep water in the fields and deteriorating soil fertility.

Regarding the problem of high cost of production inputs cost, it was explained that the farmers are not capable to produce certain seeds for their own use. As an example, middlemen will take the opportunity to increase the prices of seeds. The same is applied to such other production inputs as wage labor and specific farm machinery that the farmers have to secure or rent from other middlemen/owners at high cost, in an effort to raise the efficiency of their farm.

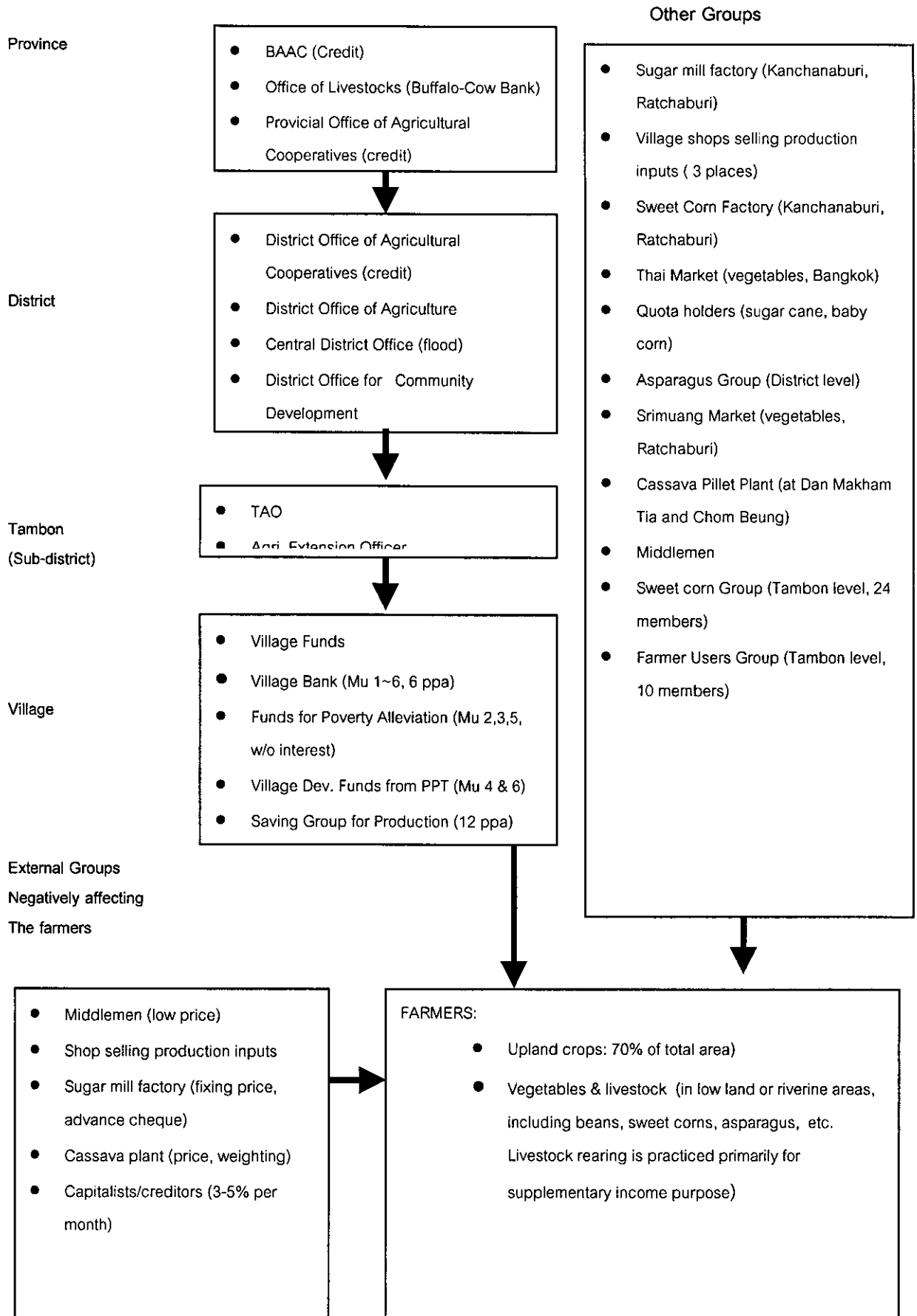
Lastly, the problem of low production prices is attributable to several factors too. They include over production in the market, exploitation by middlemen/sugar-mill factory (i.e., there is no price guarantee system and the farmers have no bargaining power), inadequate assistance from the Sugarcane Growers' Association. It should be noted, however, that this Association collects fees from its members (sugarcane growers) at the rate of 2 Baht/ton/year.

On the development needs, after the joint workshop/discussion, the farmers at this Tambon placed "flood mitigation" as top priority. For immediate future (2-3 years), it was suggested that the existing canals/river should be excavated, dikes at critical sections constructed, and grass to protect bank erosion planted.

In 5 years time, there should be construction of reservoirs and installation of drainage gates in several spots that are appropriate, due to the low land nature of the area. Moreover, as the problem of shortage of water still occurs very often during the dry season, it was recommended that weirs, ponds and irrigation distribution system are constructed too.

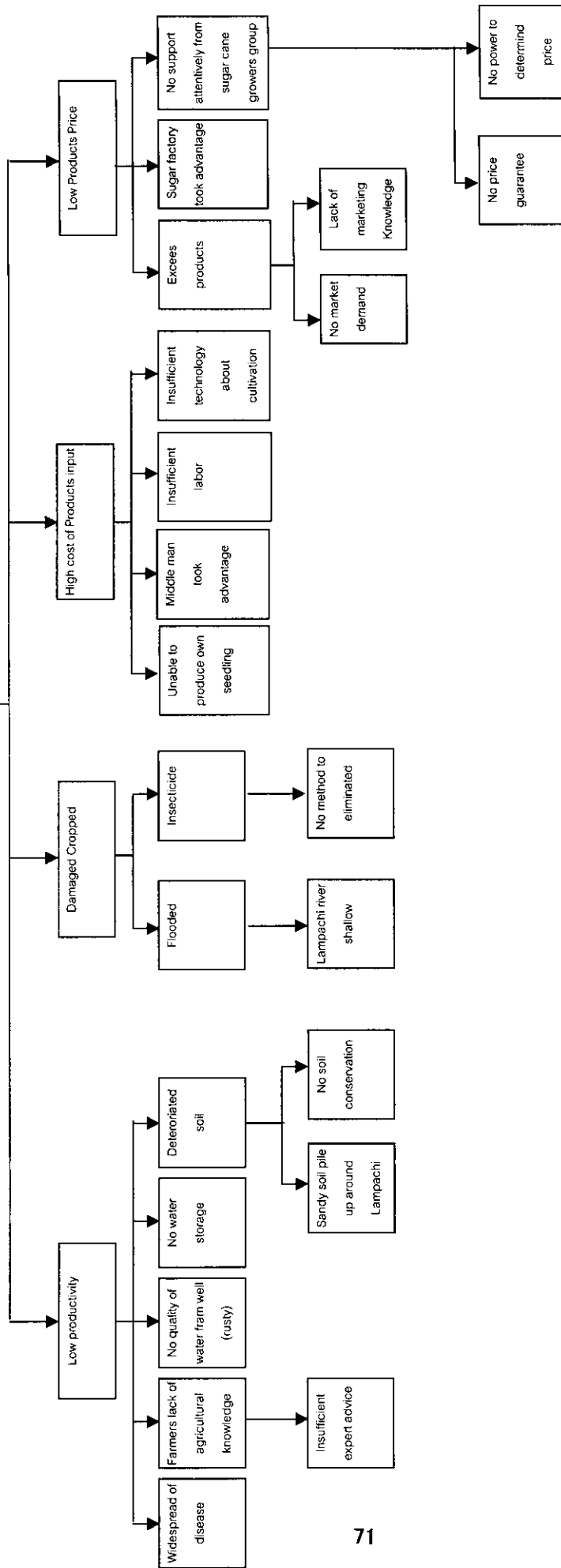
To help solve the problems related to soils, production and production inputs, it was suggested that relevant experts be dispatched to provide the farmers with the necessary knowledge/guidance. Research work on such subjects as how to control pest and insect problems and the appropriate uses of organic and bio-fertilizers should be carried out. The farmers believe that group activities should make it possible to procure production inputs at a lower cost and to solve the problem of shortage in manpower in their area. Furthermore, they believe that joint marketing should generate positive outcome to production prices, in addition to the need for price guarantee system. Other suggestions included identification of new market for direct sell (without middlemen), establishment of a center for marketing information, establishment of a central market at Tambon level, the setting up of minimum prices for productions, etc.

2. Stakeholders



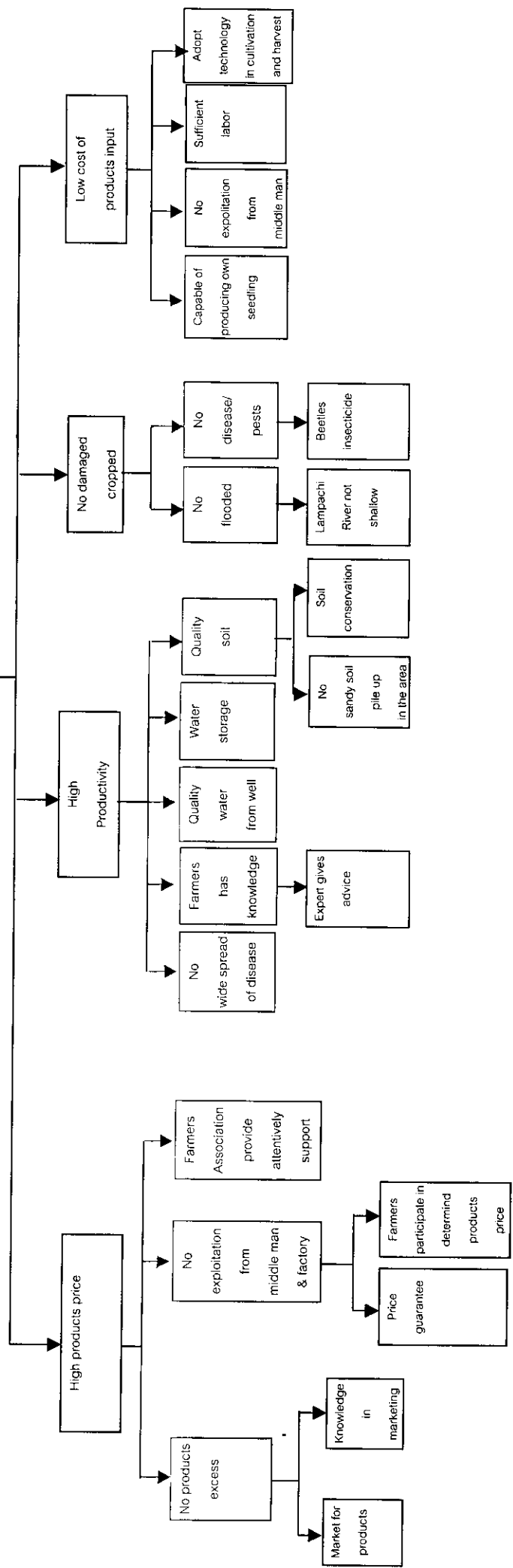
Problems Tree - Nong Pai

Expenditure higher than income



Objective Tree: Nong Phai

Income higher than expenditure



	Urgent (within 1-3 years)	Medium term (3-5 years)	Long term (5+ years)
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Weir Pond 	<ul style="list-style-type: none"> Transmission system 	
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice Soil conservation (about 1-2 moths) Crops rotation Using bio-fertilizer 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Expert gives advice about seedling storage Establishments group of farmers Using organic-bio fertilizer reduction 	<ul style="list-style-type: none"> Using machine instead of labor (save production cost) 	
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Expert gives advice about plants categories 		
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Using quality seed free of germs (i.e. sugarcane) The specialist do the research and elimination method of beetle 		
<ul style="list-style-type: none"> Product price 	<ul style="list-style-type: none"> Fixing up the minimum price for products Gathering all sale products 		
<ul style="list-style-type: none"> Market 	<ul style="list-style-type: none"> Establishing marketing network center Central farms market (sub-district level) Farmers setting up direct market 		
<ul style="list-style-type: none"> Flood protection 	<ul style="list-style-type: none"> Dredging Sediment Construction of concrete embankment (especially at the river curve) Growing grass, elephant grass, and bamboo 	<ul style="list-style-type: none"> Reservoir Concrete wall with barrage at proper area (convenience for water to flow in and out) 	

PCM Reporting/

Problem and Need for the Development at Tambons

4.14 Tambon Dan Makham Tia, Kanchanaburi

1. Major problem and need of the farmers

Tambon Dan Makham Tia is a low land area, with hills and mountains on the northern and western sides. Low land stretches from a high elevation in the west to the lower one in the north, forming a valley that is subject to frequent flooding, particularly during August and October. Lam Pa Chi River runs through this lowland area of the Tambon.

The main problems, as ranked by the farmers, include:

- (1) High production cost
- (2) Low production price; and
- (3) Low land productivity ;

These problems have caused "failure" to the farmers in doing their agriculture. The problems eventually cause accumulated debt, due to the deficit from agriculture.

The problem of high production cost is caused basically by the fact that the farmers can not produce those inputs (seeds, fertilizers, insecticides, pesticides, etc.) for their own use. The farmers have to rent machines from others to prepare their lands and so on so forth. The prices of these inputs keep on increasing and as a matter of fact, are beyond any control of the farmers. Another factor related to a high interest rate of informal money/financial market that the farmers have to rely on. Most of these money-lenders are middlemen in town or, quota holders of principal crops who will have direct influence on the farmers when harvest season comes. Inappropriate land title deeds hold by the farmers, again, constitute the major problem in this respect.

The problem of low production prices is, as quoted by the farmers, attributable basically to two major factors, namely, poor quality of the products and the lack of bargaining power on the side of the farmers.

Affects from the intensive use of pesticides in the surrounded sugar plantation, a poor quality of water, problems from pests and insects, inadequate knowledge for crop management, deteriorating soil fertility, etc., are part of the factors that could lead to a poor quality of the production. Additionally, unexpected flash flood could from time to time cause damage to the crops in terms of both quantity and quality.

Regarding the bargaining power, much was mentioned about exploitation exercised by the middlemen, taking the advantage of unorganized farmers. The absent of non-guarantee price system and sometimes, the situation of over production of certain crops in the market enable the middlemen to fix/determine the production prices unfavorable to the farmers. On the other hand, most of the farmers do not have alternative choices, as they do not have processing facilities or other marketing channel to rely on. As an end result, they have to sell their products at the prices offered by the middlemen.

The problem of low land productivity is caused by factors similar to those of the poor quality products. For example, the problems from insects and pests, poor soil fertility and the lack of irrigation water, they all are the basic factors of low land productivity in the area. Crop yields per unit of land are low in general and become a principal problem of low revenue to the farmers.

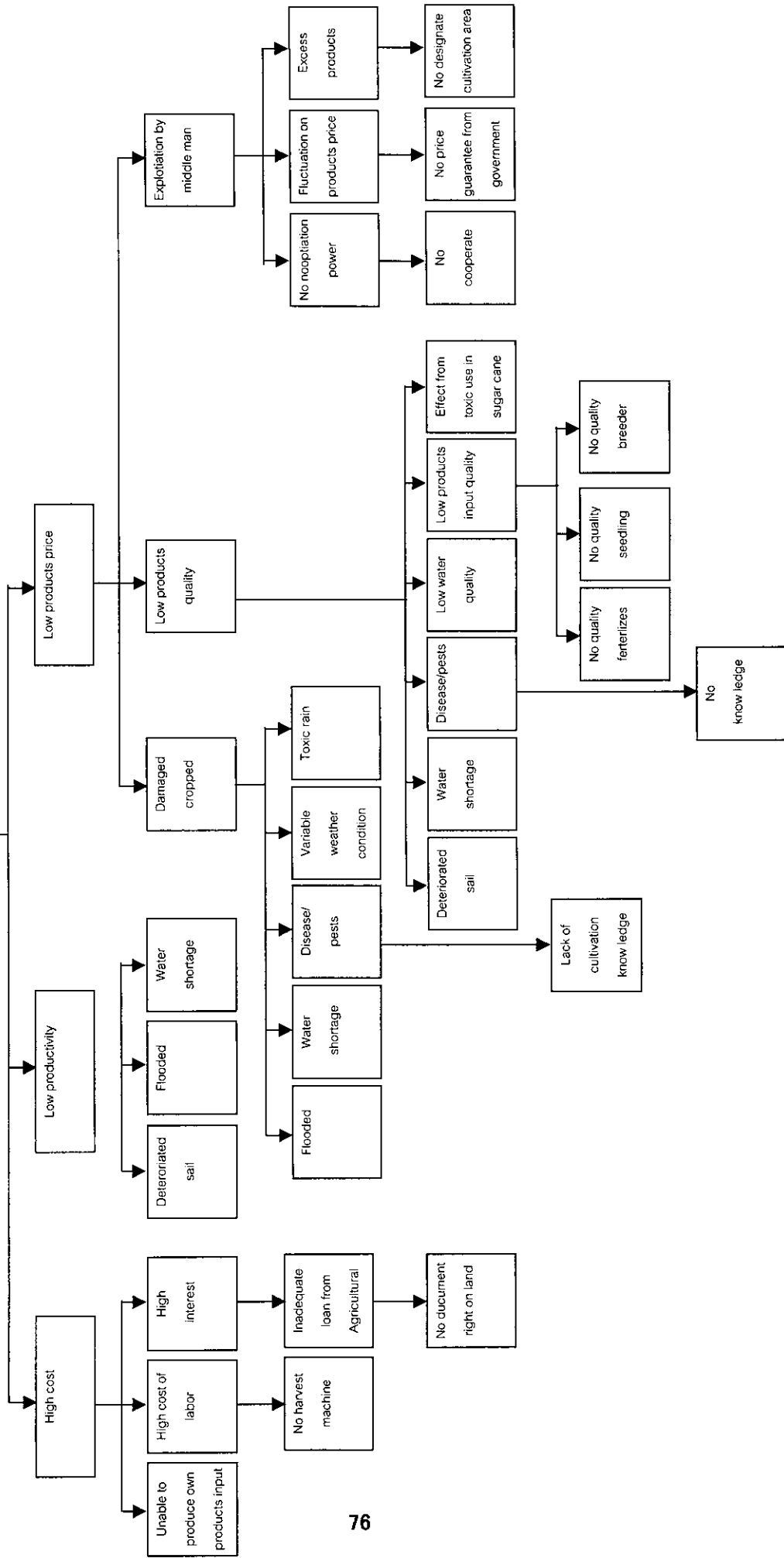
On the development needs, at the joint workshop/discussion, the farmers at this Tambon expressed the need for reservoirs and excavation of existing canals/river as top priorities. Next to these two, it was the need for flood mitigation measure. Many strong farmers/leaders in the area would like to organize themselves in the form of a group/co-operatives to do joint purchasing and marketing too.

Asparagus growers in this Tambon are an example of strong farmers who have already formed up their group to carry out joint activities in agriculture, including marketing. They have a bargaining power against middlemen or the processing factory, their buyers. They perform also quality control of the productions to be delivered by their members.

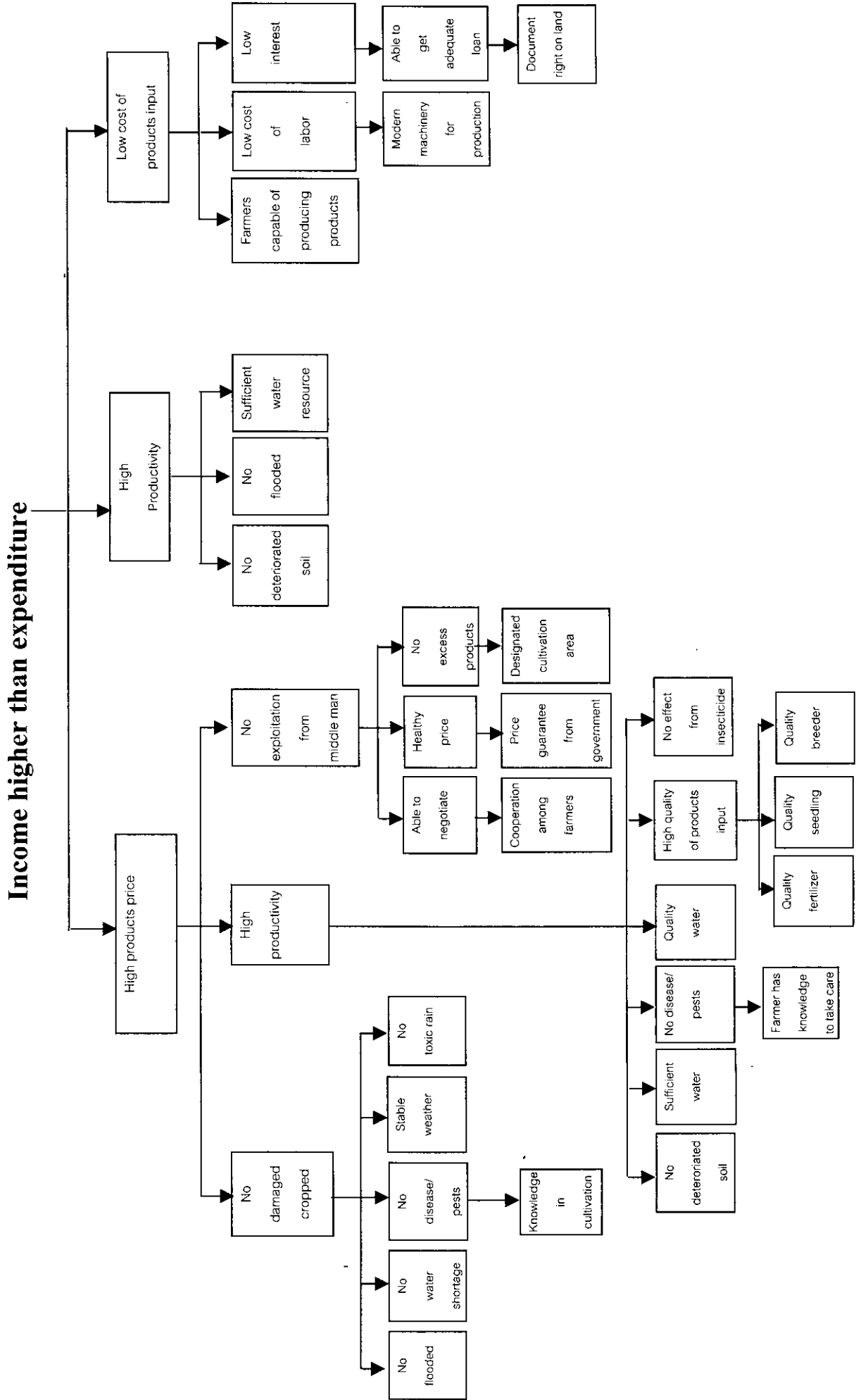
One of the most urgent needs expressed by the farmers at this Tambon was water resources development by the authorities concerned to guarantee adequate irrigation water for agriculture in the area. The farmers also expressed their readiness to share certain cost for water being obtained from such the development projects.

Problems Tree - Dan Makham Tia

Expenditure higher than income



Objective Tree: Dan Makham Tia



Project Activities Matrix

14. Dan Makham Tia

Project Approaches	Urgent (within 2-3 years)	Within 5 years	Less urgent After 5 years
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Pond Shallow well 	<ul style="list-style-type: none"> Small reservoir Transmission canal Weir Dredging 	<ul style="list-style-type: none"> Medium Reservoir
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice Farmers produce own bio-fertilizer instead of chemical fertilizer Responsible government agencies provide supporting Crop rotation (i.e. leguminous crop) 		
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Expert gives advice Producing own bio-fertilizer Producing own insecticide/pesticide Farmers group to procure modern machinery for production 		
<ul style="list-style-type: none"> Production 	<ul style="list-style-type: none"> Expert gives advice about Using quality seedling Using quality breeder Using quality fertilizer appropriately Using quality insecticide/pesticide 		
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Expert gives advice Farmers produce own insecticide/pesticide Crop rotation Responsible Government agencies attentively make improvement 		
<ul style="list-style-type: none"> Product price 	<ul style="list-style-type: none"> Fix price guarantee from Government Trading with contract Government agencies provide support for product processing Producing quality product 		

Project Approaches	Urgent (within 2-3 years)	Within 5 years	Less urgent After 5 years
<ul style="list-style-type: none"> ● Market 	<ul style="list-style-type: none"> - Establishing farmers group to do joint marketing - Government agencies designate the cultivation area - Growing plants in consistency with market - Producing quality product 		
<ul style="list-style-type: none"> ● Flood protection 	<ul style="list-style-type: none"> - Spillway 	<ul style="list-style-type: none"> - Dredging sediment - Growing elephant grass 	
<ul style="list-style-type: none"> ● Knowledge 	<ul style="list-style-type: none"> - Expert give advice - Study visit to successful case - Setting up Farmers group 		
<ul style="list-style-type: none"> ● Investment 	<ul style="list-style-type: none"> - The state issue the land document of right 	<ul style="list-style-type: none"> - Cooperatives establishment 	<ul style="list-style-type: none"> - Procuring loan with low interest

PCM Reporting/

Problem and Need for the Development at Tambons

4. 15 Tambon Chorakae Pheuk, Kanchanaburi

1. Major problems and needs of the farmers

The major problem of the farmers in Chorakae Pheuk is “**high expenditure**” that is higher than the corresponding revenue. The following were quoted as the causes:

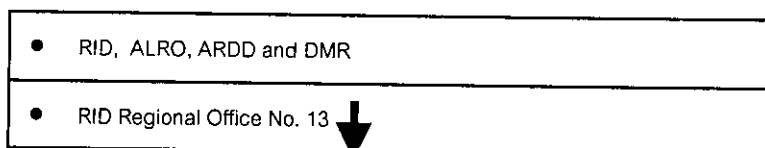
- (1) Low land productivity;
- (2) Low production price;
- (3) High production cost; and
- (4) Limitation of credit for investment.

Among the above, the farmers rated “low land productivity” as the most serious problem which was caused, as it was quoted, mainly by inadequacy of irrigation water. Regarding crop prices, the farmers had a common view that the problem is caused by middlemen (especially, in the case of vegetables). The farmers hardly have any bargaining power in this respect. On the high cost of production, inappropriate land-use was cited as the main reason. Other reasons include deteriorated soils caused by over-use of chemicals, the lack of crop rotation system, problems from insects and pest and inadequate knowledge on crop production. Limitation of credit for investment was part of the fact that most of the agricultural lands of the village are under the “land reform program” that can not be used as a major collateral for credit required for improving agricultural production.

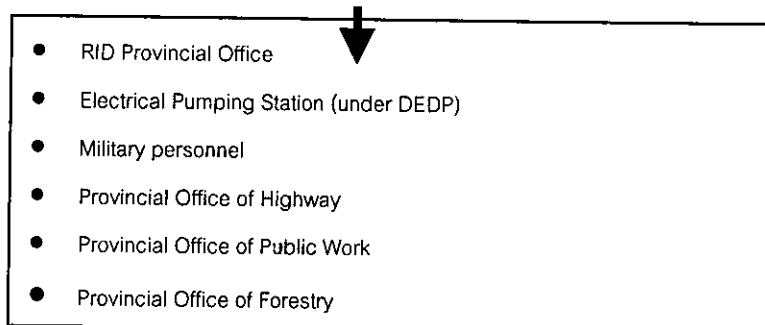
To help solve the problems, the farmers expressed their common need to have water resources for agricultural purposes, including an adequate distribution system. For the lands of high elevation, they suggested construction of a pumping station and reservoir that can store water on the high land before releasing it to supply agricultural lands in the lower area. All these development efforts should be carried out simultaneously for highest efficiency. Other requirements include technical advice for land improvements, production methods and the use of production factors using materials from nature, knowledge on crop planning that the farmers can eventually do it by themselves. It was also suggested that there should be monitoring and evaluation system to be effective in the long run. Another important requirement was an establishment of the marketing network for agricultural production that the Government /State is able to inform all the farmers of the various crop prices at appropriate time, leaving the decisions to be made eventually by individual farmers.

2. Stakeholders

National



Regional

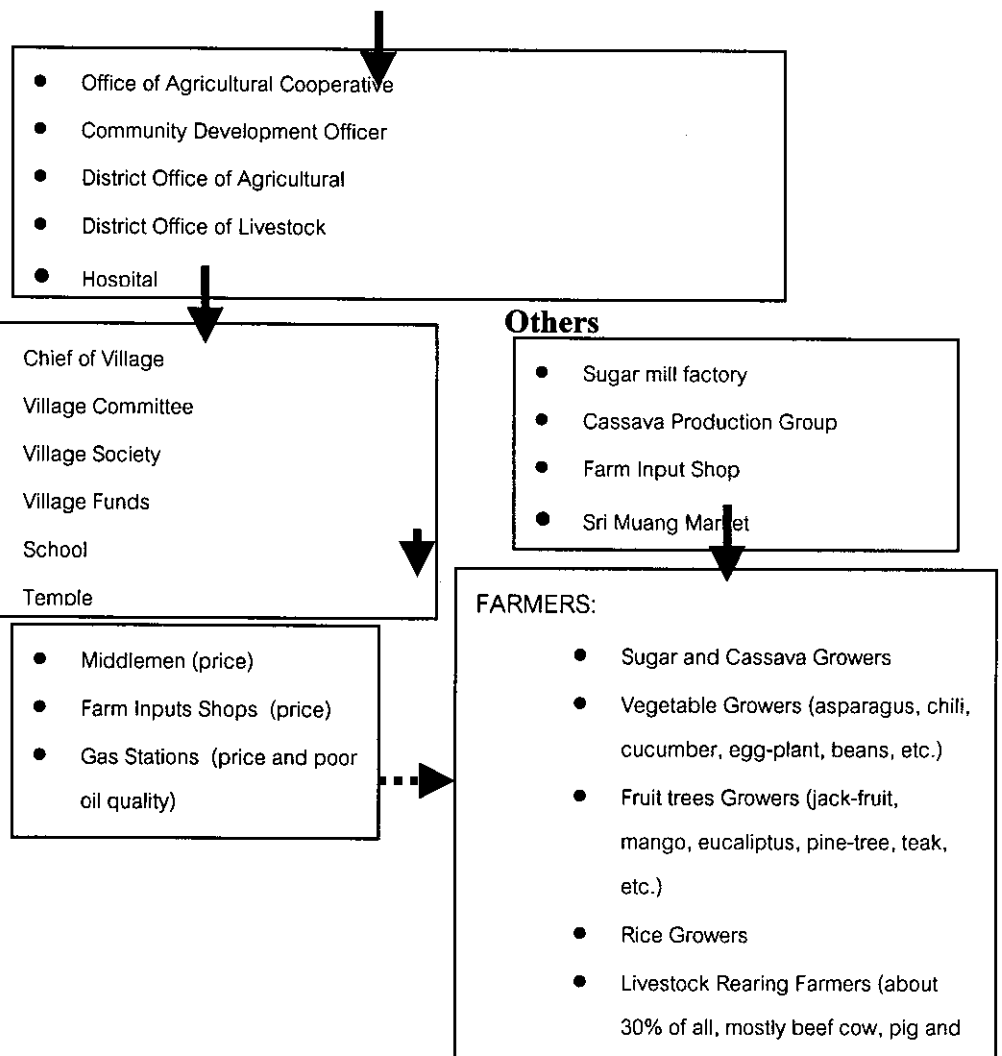


Provincial

District

Tambon
(Sub-district)
Village

External Groups
Negatively affecting
The farmers



3. Prioritization of Problems by Different Groups of Farmers

3.1 Rice growers

- Shortage of water resources
- Irregular rainfalls
- Flood
- Poor/problem soils
- Insect and pest problems
- High production cost
- High prices for fertilizers and pesticides
- Rental paddy fields
- Low crop prices
- Unstable crop prices
- Price distortion by middlemen
- Limited access to farm credit due to land title deeds
- Low crop yields
- Expenditures higher than revenue
- Limited knowledge on production

3.2 Fruit trees growers and livestock rearing farmers

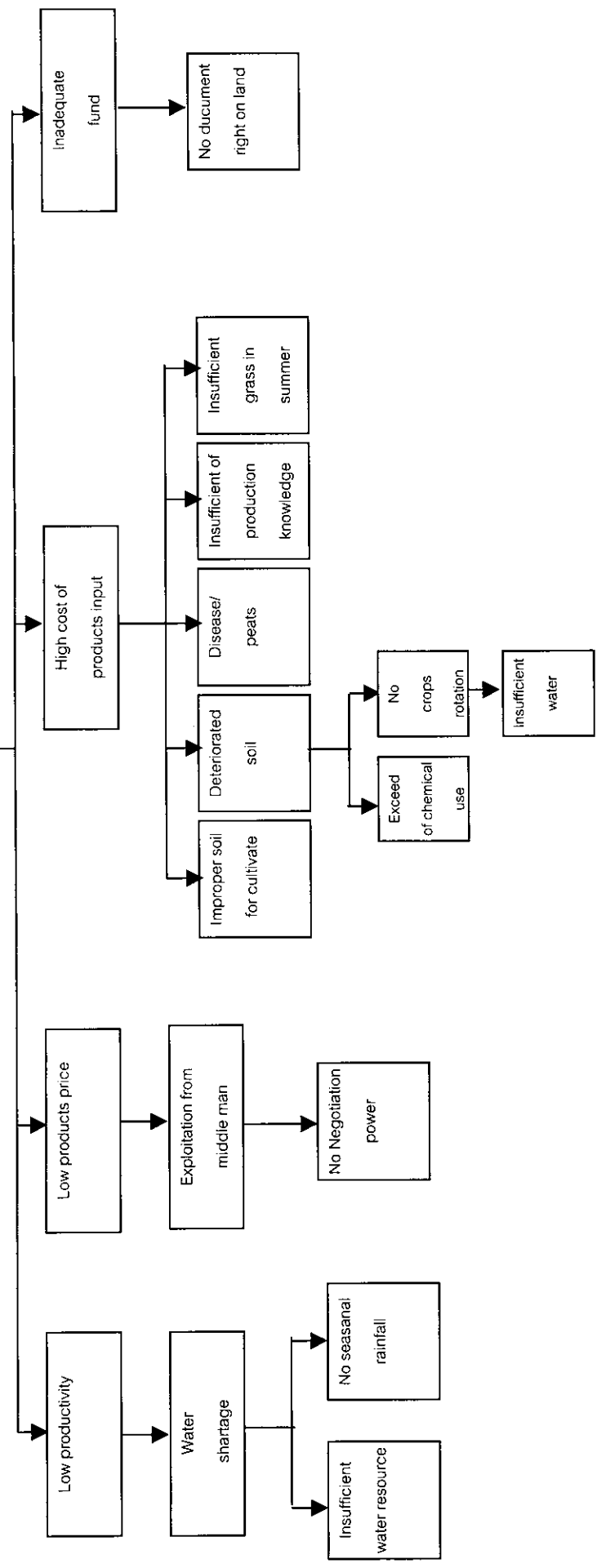
- High production cost
- Low production prices
- Uncertainty of prices
- Lack of negotiation power
- Middlemen take advantages
- Shortage of water
- Disease/pest problems
- Shortage of grass in the dry season
- Lack of common lands for grazing

3.3 Cassava, sugarcane and vegetable growers

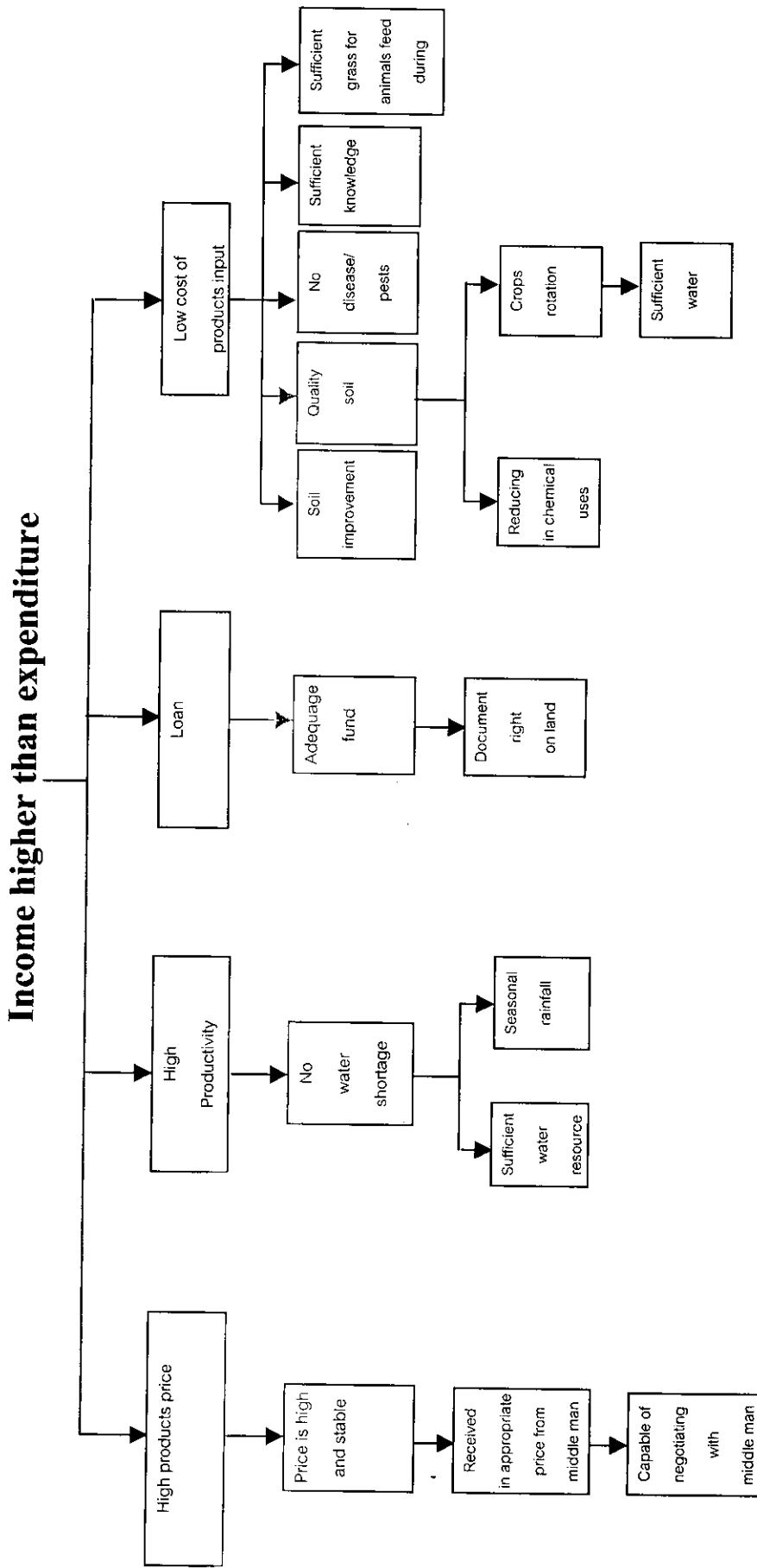
- High price of gasoline
- High prices of fertilizers and chemical
- High labor cost
- Low price of the productions
- Low land productivity
- Shortage of water
- Insect problems
- Deteriorating soil fertility
- Drought problem

Problems Tree - Chorakhe Phuek

Expenditure higher than income



Objective Tree: Chorakhe Phuek



Component	Urgent (within 2-3 years)	Within 5 years	Long term (more than 5 years)
<ul style="list-style-type: none"> ● Water 	<ul style="list-style-type: none"> - Electric pumping station - Reservoir and pumping on a high elevation - Distribution system 	<ul style="list-style-type: none"> - Weir - Dredging sediment in existing river, canal 	<ul style="list-style-type: none"> - Big reservoir - Reafforestation
<ul style="list-style-type: none"> ● Soil 	<ul style="list-style-type: none"> - Expert gives advice - More use of green manure - Crop rotation 		
<ul style="list-style-type: none"> ● Farm Input 	<ul style="list-style-type: none"> - Expert gives advice on appropriate uses of fertilizers, chemicals and good seeds - Produce green manure for own uses - Use of insecticide made of natural herbs 		
<ul style="list-style-type: none"> ● Production prices 	<ul style="list-style-type: none"> - Support from government in establishing farmers' organization related to marketing - Establishing information network on marketing and new markets - Setting up farmers' group to do joint crop plan and marketing - Establishing central market for farm products 		
<ul style="list-style-type: none"> ● Disease/pests 	<ul style="list-style-type: none"> - Extension farm for hydro-vegetables farming - Using of insecticides/pesticides made from natural herbs - Using of other technologies of pollution-free nature 		
<ul style="list-style-type: none"> ● Knowledge 	<ul style="list-style-type: none"> - Training in crop planning - Training in farm budget - Training in making green manure - Training in marketing 	<ul style="list-style-type: none"> - Study visits to other areas of successful cases 	
<ul style="list-style-type: none"> ● Investment funds/credit 	<ul style="list-style-type: none"> - PR and provision of knowledge on banking at Tambon level 	<ul style="list-style-type: none"> - Government support in establishing the bank/ saving group - Establishing the saving group of Tambon 	<ul style="list-style-type: none"> - Establishing the bank at Tambon level

PCM Reporting/

Problem and Need for the Development at Tambons

4.16 Tambon Klom Do, Kanchanaburi

1. Major problems and needs of the farmers

The core problem of the farmers at Tambon Klom Do is **low income**. The following were quoted as the causes:

- (1) Low price of agricultural product;
- (2) Sub-standard production;
- (3) Low yields;
- (4) High prices of production inputs; and
- (5) Crop damages.

Some 80% of the farmers in Tambon Klom Do grow upland crops, such as, sugarcane, cassava and (upland) rice. To sell their sugar-cane, they have to do it through "sugar-cane quota holder". In the case of cassava and rice, they may sell them to middlemen or directly to cassava pillet plant/rice mill. In view of these different modalities, a problem related to low crop prices due to the lack of bargaining power on the side of the farmers was widely discussed. It was believed that the problem has been caused also by:

- Inadequate help/assistance from established associations/groups. An example of the Sugar-cane Growers' Association (Region 7) was raised. The farmers used to ask their Sugar Mill to increase the price of the sugar-cane from its current price of 460 Baht/ton, without any support from the Association;
- Over production. Without planning, the farmers normally grow the same kind of crop/plant, particularly seasonal crops that used to enjoy a good price in the previous season;
- Unorganized farmers. Most of the farmers sell their products individually.

The second group of major problems to the farmers was quality of the productions and low yields. These related to various causes, such as, pests and insects, diseases (to livestock), deteriorating soil fertility, shortage of water, etc. Another important cause was mono-culture agricultural practice. The farmers in this Tambon normally grow the same crop all year-round. For

small farmers of less than 10 rai land holding, this means that there is no time for the lands to be left idle and their fertility improved.

Regarding the production inputs, the problem of high prices involves fees for electrical pumping for agricultural water, labor 's wages in the harvest season and transportation cost. At the present, the fees for electrical pumping are 90 Baht/hr. and expected to be 150 Baht/hr. in the near future. In each harvest season, the demand for labor is always high particularly for the sugar-cane and cassava plantation, causing the increase in wages. Transportation costs for the sugar-cane and cassava is on the average of 100-120 Baht/trip.

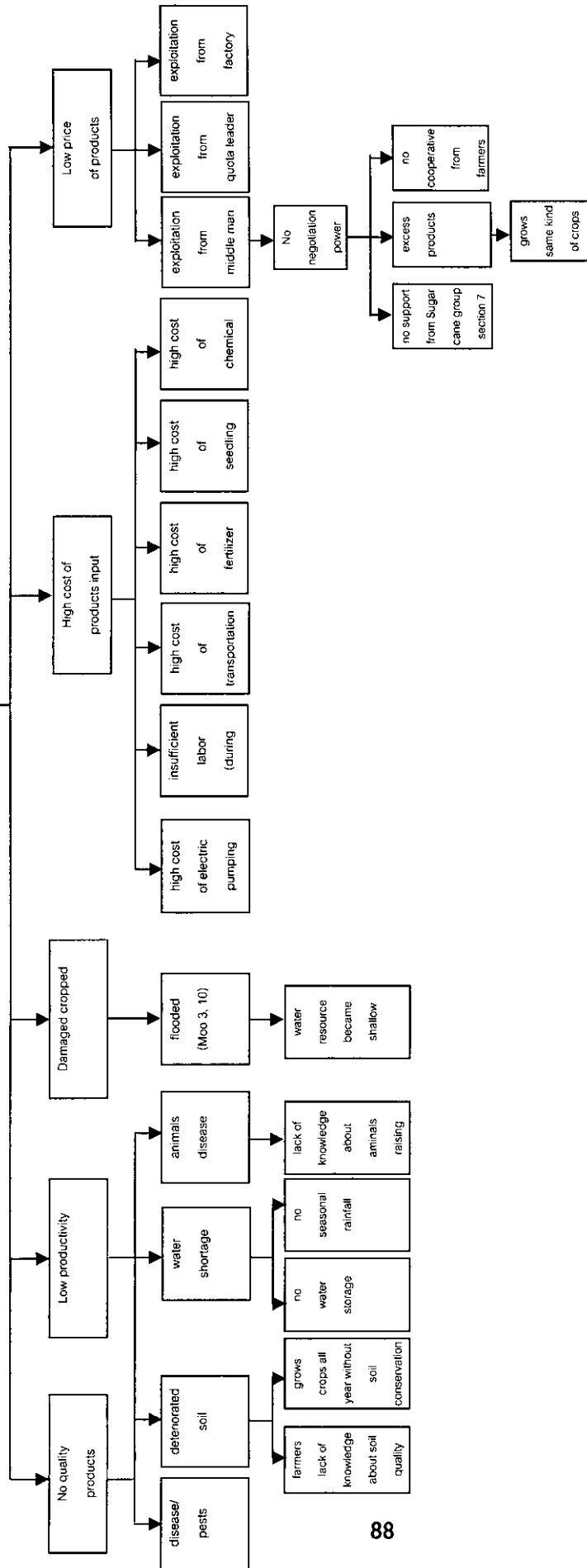
Crop damages are normally caused by flood, particularly in Mu 3 and 10. Flood duration is about one (1) month. This kind of flood usually causes a total damage to crops. However, with support from the Royal Irrigation Department, several canals in the villages, such as Huai Thalung, Khlong Lam Phraya and Khlong Lam Takhian, have been excavated/cleaned up. They have helped mitigate flood problems in many parts of the Tambon. Because of the limited budget, however, some parts of the Tambon are still subject to flooding.

On the development needs, it was found that as a top priority, the farmers at Ban Klon Do preferred to have the problems related to "water" solved first of all. For immediate future (2-3 years period), it was suggested that a pumping station with adequate distribution system be constructed, taking the advantage of many canals in the area. Furthermore, there should be small ponds for domestic uses. For the longer term (5 years), construction of reservoirs and weirs was recommended.

Apart from the above, the farmers expressed their need for technical advice and guidance from experts on such subjects as appropriate use of production inputs, standard of productions, control of pests and insects, diseases of livestock and improvement of soil fertility. It was also suggested that training courses and extension farms should be organized by relevant agencies to enhance practical experiences of the farmers and to increase their farming skills.

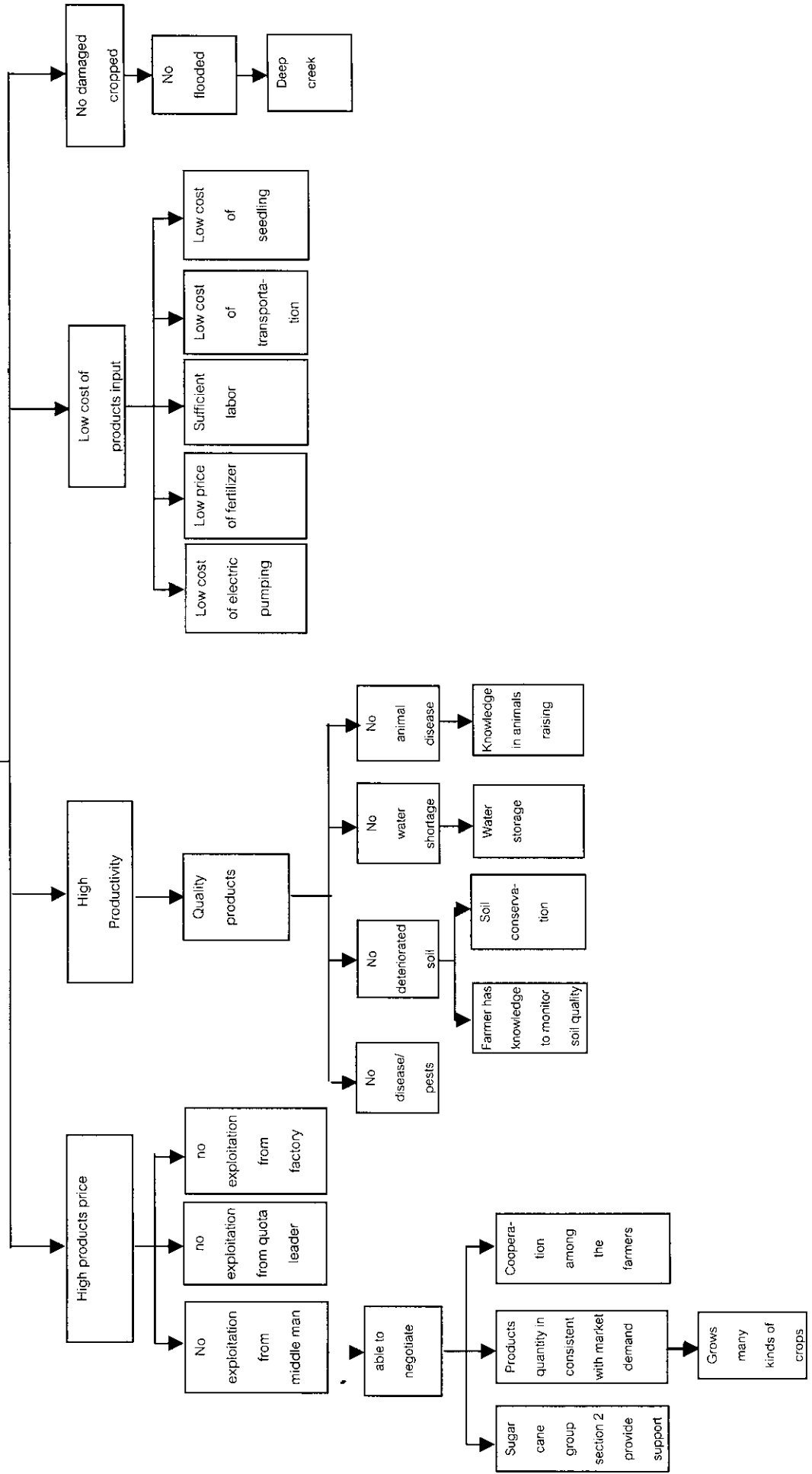
Problems Tree - Klon Do

Expenditure higher than income



Objective Tree: Klon Do

Income higher than expenditure



Priority/Issue	Urgent (within 2-3 years)	Medium term	Long term
<ul style="list-style-type: none"> Water 	<ul style="list-style-type: none"> Irrigation system and electric pumping station Pond 	<ul style="list-style-type: none"> Reservoir Weir 	
<ul style="list-style-type: none"> Soil 	<ul style="list-style-type: none"> Expert gives advice Training for volunteer about soil preservation Growing leguminous crop Crop rotation 	<ul style="list-style-type: none"> Demonstration Plot 	
<ul style="list-style-type: none"> Farm Input 	<ul style="list-style-type: none"> Expert gives advice on appropriate uses of products input Government agencies perform as an agent for production input Farmers joining as a group 		
<ul style="list-style-type: none"> Production prices 	<ul style="list-style-type: none"> Producing quality product Expert gives advice about products quality requirement i.e. sugar cane content or percentage of starch in tapioca 		
<ul style="list-style-type: none"> Disease/pests 	<ul style="list-style-type: none"> Expert gives advice/knowledge Using bio.extract 		
<ul style="list-style-type: none"> Animals disease 	<ul style="list-style-type: none"> Expert gives advice/knowledge 	<ul style="list-style-type: none"> Provide training 	
<ul style="list-style-type: none"> Bargaining Power 	<ul style="list-style-type: none"> Crop planning 		
<ul style="list-style-type: none"> Flooded 	<ul style="list-style-type: none"> Dredging sediment in creek 	<ul style="list-style-type: none"> Making drainage channel from flooded area to creek 	