

ANNEX G: PROBLEM ANALYSIS

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G.1 Issues and Findings in Provincial Workshops

A compilation of the main issues and findings from the field surveys (questionnaire and RRA) and workshops for each of the five Study provinces is shown in tables from Table G.1.1 to Table G.1.5

G.2 Problem Tree Analysis of Provincial Workshop

In accordance with the Project Cycle Management (PCM) method, problem analysis sessions were carried out by the JICA Study Team and Government counterparts from 12 to 15 September 2000. Dealing with each of the five Study provinces in turn, problems and issues identified from the field surveys and provincial workshops were written down on slips of adhesive paper which were then affixed onto boards under the following four headings:

- Government role and support, laws and regulations;
- WUA management, institutional aspects;
- Irrigation O&M, water management;
- Agriculture, economics, and finance.

The paper slips were then positioned and categorized to determine logical relationships and flow paths between direct causes, core problems and direct effects; by this means problem trees were developed. Results of these analyses, problem trees, are shown in Fig. G.2.1 to G.2.5 by each Study Provinces.

G3 Socio-Cultural Background of Motivations to the WUA Policy

Accomplishments of the irrigation O&M turnover by present are said not being favorable than expectation, which was commenced in 1987 officially combining with components of WUA establishment and activation. Such conditions retarded as present has been caused from both of the Government side that has been socializing the policy in to the people and farmers' side that the policy aims for. There should be both direct and indirect constraints on the both sides.

The socio-cultural background of WUA management especially process of decision making in rural community and among government officials are discussed in Chapter 4, 4.7.1 of Volume I Main Report and they are summarized in the Table G.3.1.

Table G.1.1 Issues and Findings in West Sumatera Provincial Workshop (1/2)

No.	Theme	Issues and Findings	Source
1	Water availability/ irrigation management/ infrastructure	<ul style="list-style-type: none"> • Rules concerning water use/management/allocation; these are not clear in many areas. • Broken and cracked weirs and canals (secondary and tertiary), results in leakages and water shortages • Operation and maintenance along secondary and tertiary canals not optimal. • Water demand for each WUA is not clear. • Cropping plan is not well implemented and water demands for each block are not calculated; blocks differ in size. • Responsibilities for irrigation management not clear, causes conflict over water allocation if dry season is long. • Water shortages can occur if dry season is longer than normal, and this causes conflicts over distribution of water and failed harvests. • No coordination between different WUAs in irrigation system, results in poor water allocation. • O&M is piecemeal. 	RRA
		<ul style="list-style-type: none"> • Under normal conditions there is sufficient water to irrigate areas of <i>sawah</i>. However, water availability can be reduced by climatic changes and the inefficient distribution of water. • In areas where farmers cultivate fish in canals there is a conflict with irrigation farmers over responsibility for water management and maintenance of infrastructure. 	General survey findings
		<ul style="list-style-type: none"> • There are still problems with the construction of irrigation systems which result in insufficient water being allocated to certain areas; there are still many leakages and insufficient rules concerning water use. 	Discussion session
2	Human resources	<ul style="list-style-type: none"> • WUA officials not active. • Human resources not optimal. 	RRA
3	Community participation/ cultural/social	<ul style="list-style-type: none"> • Farmers do not feel they are part of WUA, and are not motivated. • Farmers not involved in O&M decisions and are not prepared to pay operational charge. 	RRA
		<ul style="list-style-type: none"> • There has been little explanation about the functions of WUAs to village communities, and most farmers are unaware of their local WUA. • Farmers who own and cultivate larger land holdings tend to be more enthusiastic about irrigation management and maintenance than farmers with smaller holdings. • O&M is done by <i>gotong royong</i> at villages where the WUA chairman is a prominent village leader, and activities consist of simple repairs and clearing canals of weeds. However, <i>gotong royong</i> is not practiced at all WUAs, and tends to be weak where no sanctions (for non-participation) are applied. • Farmers feel obliged to cultivate <i>sawah</i> because of tradition and cultural reasons (a farmer feels he cannot call himself a farmer unless he cultivates his <i>sawah</i>). 	General survey findings
		<ul style="list-style-type: none"> • Establishment of WUAs must take into account local customs concerning land ownership. • Under traditional system (<i>tujo banda</i>), sanctions could be applied to offenders. 	Farmer group
		<ul style="list-style-type: none"> • Farmer income is closely tied to extent of land ownership; because of this it is necessary to study again the responsibility of WUA members which is proportional to the size of land they own. • There is still competition for water amongst different users, even though several <i>kabupaten</i> have issued regulations concerning irrigation water use. However, people are not aware of these regulations; also no sanctions are enforced for violations. • At village level farmer organizations are usually more than one and run by different government departments; this causes confusion about functions and responsibilities amongst the farmers. • WUA management needs to be tied in with traditional functions since in general <i>sawah</i> ownership in Sumatera Barat is based on traditional norms, ie collective and pass from one generation to another and mentioned as community or clan land. 	General discussion

Table G.1.1 Issues and Findings in West Sumatera Provincial Workshop (2/2)

No.	Theme	Issues and Findings	Source
4	Institutional	<ul style="list-style-type: none"> No sanctions for farmers who do not pay water charges. 	RRA
		<ul style="list-style-type: none"> Although most WUAs are enthusiastic about taking on the role of managing irrigation water, there are weaknesses in organizational management and resources. 	General survey finding
		<ul style="list-style-type: none"> The organization of WUA along administrative (village) boundaries needs to be reviewed; it should be pointed out that WUA working areas would be more effective if based on hydraulic boundaries. 	Discussion session
5	Policies/ Government role	<ul style="list-style-type: none"> Agricultural extension guidance lacking or not coordinated. Agricultural extension is too infrequent. 	RRA
		<ul style="list-style-type: none"> Main problems with WUAs are socio-economic. Traditional ways of managing water developed hundreds of years ago have been disturbed by the many directives from different Government departments in recent years. Government policy concerning irrigation maintenance is not consistent. On one hand irrigation maintenance should be self-supporting, while on the other hand there is a policy (eg, social safety net) that recruits and pays WUA members to clean irrigation canals. 	Discussion session
6	Socio-economic/financial	<ul style="list-style-type: none"> Farmer incomes are too low. For Sumani pump scheme farmers are not prepared to pay operational charge, resulting in no budget to run the pumps. 	RRA
		<ul style="list-style-type: none"> Cultivation of <i>sawah</i> for <i>padi</i> rice forms a relatively small contribution to the average farmer's overall income. No profit in growing food crops because of high production costs. 	General survey findings
		<ul style="list-style-type: none"> For Sumani pump scheme (WUA: Alam Lestari) water charges are not enough to operate and maintain the pumps. Help is needed for the pumps. Although irrigation water management is the main duty of WUAs, other aspects of agricultural input, such as the supply of seeds, fertilizers, etc, are also important. Speaker (Napar village head) implied that WUA should have a wider role than just water management. 	Farmer group

Table G.1.2 Issues and Findings in West Java Provincial Workshop (1/2)

No.	Theme	Issues and Findings	Source
1	Water availability/ irrigation management / infrastructure	<ul style="list-style-type: none"> Water shortages are felt in Tasikmalaya and Lebak; supply system (off-take structure) is not optimal or not functioning. Communities consider that broken facilities are responsibility of Government to repair. Flooding is a frequent problem in Bandung. In Indramayu it is sometimes difficult to dry out the <i>sawah</i>. Inequitable allocation and distribution of water between upstream and downstream areas. Conflicts over water allocation between rice farmers and vegetable farmers (over pests), <i>sawah</i> farmers and duck farmers (Indramayu), and <i>sawah</i> farmers and fish farmers (in Bogor). In Bandung, conflict between farmers and industries over pollution from factories. 	General survey finding
		<ul style="list-style-type: none"> Farmers feel that the quality of construction of irrigation systems is very low. In some places weirs damaged by floods have not been repaired. 	Farmer group
		<ul style="list-style-type: none"> PU has promised water availability in irrigation areas as long as farmers obey planting times as fixed; however, often farmers don't obey the cropping pattern rules as fixed by PU. 	PU central office
		<ul style="list-style-type: none"> Farmers in upstream get more water, and more easily, than downstream farmers. Upstream farmers tend to overuse water. Irrigation facilities are not optimal (many broken). In dry season, water rotation is practiced, especially in downstream areas. O&M, payments to <i>ulu-ulu</i>, <i>gotong royong</i> are better in mid and downstream areas. More potential for water conflicts in downstream areas. 	General survey finding
2	Human resources	<ul style="list-style-type: none"> In areas close to industries (eg, Bandung), it is difficult to find enough labour during busy agricultural periods. In Bandung WUAs do not function because <i>ulu-ulu</i> do not carry out their duties well. 	General survey finding
		<ul style="list-style-type: none"> Ability of WUA officials to motivate members is low. It is difficult to find WUA officials. WUA officials are always changed when there is a change of village head. WUA officials are not active. WUA officials have low management responsibility. WUA officials have low initiative. <i>Ulu-ulu</i> not active. Farm labour is changing function because young generation is not interested in agriculture. 	Discussion session
3	Community participation / cultural/social	<ul style="list-style-type: none"> Farmer involvement in O&M is low, since farmers have view that O&M for large structures is government's responsibility and for tertiary units hand over to <i>ulu-ulu</i>. Farmers are only involved in O&M activities when there is a major problem. Most people in the community see the WUA as a group for <i>ulu-ulu/andir</i> only; involvement of farmers as members is low. Regulations concerning the rights and obligations of the farmers have not been clearly formulated; for example, sanctions for non-payment of water charge, not contributing labour, etc. Generally community leaders are ready to support sustainable irrigation management at tertiary level. Communities are ready to be involved in irrigation management in the form of labour contribution, money, in kind contributions and decisions. Communities consider water to be an important problem for them. In Indramayu and Bandung WUA work together with farmer groups (<i>kelompok tani</i>). Generally communities consider that maintenance for irrigation maintenance at tertiary level is responsibility of the community (Karawang, Indramayu, Bandung and Bogor), while secondary canals and above are the responsibility of Government. Generally communities do not know about irrigation handover program. Communities were not involved in planning of irrigation network, and there is no feeling of 'self belonging'. If there is a conflict over water use, the matter is taken to community leaders to reach a decision. 	General survey finding
		<ul style="list-style-type: none"> Farmers want to be involved in rehabilitation of weirs and canals, both during construction and maintenance. Farmers are not aware that WUA is an umbrella organization for farmers (P3A Mitra Cai). There has been no awareness campaigns about having laws. 	Farmer group
		<ul style="list-style-type: none"> WUA competitions need to be improved; at present competitions do not show any standards, and valuations are not accurate. Participation of farmers in planning and execution (setting up operating groups, maintenance) is poor. Rats are a pest but the culture prohibits the killing of rats. There are cultural traditions that are positive or negative towards agriculture; some traditions can hinder agricultural enterprise. 	General discussion
		<ul style="list-style-type: none"> It is difficult to get farmers together to give advice. 	Extension agency

Table G.1.2 Issues and Findings in West Java Provincial Workshop (2/2)

No.	Theme	Issues and Findings	Source
4	Institutional	<ul style="list-style-type: none"> In Indramayu, Karawang and Tasikmalaya water user and management groups are based on local institutions (<i>ulu-ulu</i> or <i>andir</i>). 	RRA
		<ul style="list-style-type: none"> In Bandung, Bogor and Tasikmalaya it is not clear who is responsible for O&M of tertiary systems; in practice O&M is done on a voluntary basis by whoever is concerned. In Bandung, Bogor and Tasikmalaya water charges for O&M are not collected on a systematic basis; payments for canal maintenance are made when there is a breakage. Generally WUA is not viewed as a formal organization; administration is simple – only books showing list of farmers and ‘financial balance’. Division of work tends to be by informal groups: <i>ulu-ulu</i> (for water management and canal maintenance) and heads of village groups; formal structure comprising chairman, secretary, treasure, etc generally not applied; generally most work is done by one person only. Local institutions are already rooted in the community. Payment for <i>ulu-ulu</i> is not enough except in some areas like Indramayu and Karawang. Communities consider there is potential to modernize traditional water management groups. 	General survey finding
		<ul style="list-style-type: none"> Knowledge and ability of WUAs are low. Leadership/management of WUAs is not optimal. Communication between WUA officials and members is poor. Many WUAs do not yet have articles of association (AD/ART). Sanctions against non-payment of water charge not in force. Definition of WUA needs to be clarified. Village government is too deeply involved in arranging for WUA autonomy. WUA administration does not function; WUA does not have any books on administration. Book-keeping is not complete. WUA activities are still low. Jurisdiction boundaries (work areas) are not clear. 	General discussion
		<ul style="list-style-type: none"> It is difficult (for government agencies) to meet the WUA to give advice and guidance. Extension workers have little understanding of the importance of WUA. 	Extension agency
		<ul style="list-style-type: none"> Knowledge of field workers and village officials about WUA management is still low. 	Farmer group
5	Policies/ Government role	<ul style="list-style-type: none"> Responsibilities between Government and communities concerning irrigation management needs to be clarified. 	General survey finding
		<ul style="list-style-type: none"> Extension is not routine or continuous. 	Farmer group
		<ul style="list-style-type: none"> Coordination between different agencies is poor. 	General discussion
6	Socio-economic/financial	<ul style="list-style-type: none"> For most farmers (87% of sample) agriculture is main source of income, but it is not always profitable because input costs and <i>gabah</i> price are not in balance. Communities consider that for agricultural production what is more important than good irrigation management, is balance between price of <i>gabah</i> and cost of production inputs. Level of income determines whether farmers are ready to contribute towards O&M of irrigation systems. 	General survey finding
		<ul style="list-style-type: none"> No water charges; farmers are not aware about paying water charges. It is difficult for officials to collect water charges. It is difficult to sell bumper harvests of rice quickly; if sold quickly the price is low. Rice sales are controlled by brokers/middlemen. Low capital, so returns are low. 	General discussion
7	Agriculture/ extension	<ul style="list-style-type: none"> Farmers complain of following pests: rats, <i>wereng</i>, <i>tungro</i>, <i>sundep</i> and caterpillars. 	General survey finding
		<ul style="list-style-type: none"> Support from extension staff is poor. Extension visits are very infrequent. Extension advice is poor and lacking in concepts/insights. Perceptions between different agencies about extension guidance is not the same. Courses about WUA do not follow field school system. Monitoring and evaluation is poor. 	Farmer group
		<ul style="list-style-type: none"> Seeds are not premium quality, and there is not much choice. Seed resistance is low. Seeds are expensive. Fertilizers and pesticides/herbicides are expensive and not available in the market. Natural ways of farming are not cultivated. Rice production is generally low, and harvests often fail. Post-harvest handling is poor, and technology is low. DOLOG operation is poor. There are not enough agricultural machines. 	General discussion

Table G.1.3 Issues and Findings in DI Yogyakarta Provincial Workshop (1/2)

No.	Theme	Issues and Findings	Source
1	Water availability/ irrigation management/ infrastructure	<ul style="list-style-type: none"> Water shortages in downstream part (DI Meijing). If water is in short supply in dry season (in lower parts of irrigation system) some farmers sink wells and use portable pumps. Sometimes prominent figures in the village are the driving force for water allocation, with the result that farmers downstream experience water shortages and conflicts occur. Canals need improving; leakages. Erosion problems. Salinity problems. 	RRA
		<ul style="list-style-type: none"> Water is in short supply. Scope of O&M is very wide. Government assistance for O&M is not enough. O&M is more difficult for surface water irrigation schemes than groundwater ones. Relationship between water availability and O&M is complicated. Off-take structures do not function well. 	Discussion group
2	Human resources	<ul style="list-style-type: none"> Technology gap between Government officials and farmers. Young generation is not interested in becoming farmers. Changes in situation and conditions can affect farmers' behavior. 	Discussion group
		<ul style="list-style-type: none"> Labour for harvesting is not enough. 	RRA
3	Community participation/ cultural/social	<ul style="list-style-type: none"> Community involvement in O&M has fallen. 	Discussion group
4	Institutional	<ul style="list-style-type: none"> If irrigation system is in a poor state, WUA is not active. <i>Kooperasi Unit Desa (KUD)</i> do not function; they are not trusted. KUD and WUA are separated Organization of WUA groups has not been carried out. <i>Gotong royong</i> as shown by officials is not a good example. WUA officials are not active. Difficult to manage WUA members in their present condition. Quality of officials needs to be upgraded. Good officials are those who are prepared to sacrifice and struggle. Approach to farmers is not correct. WUA should serve farmers. Officials' honorarium must be discussed with members. A stable WUA organization is much needed. WUA should have simple administration, transparent officials, and good management. There is too much bureaucracy. WUA should bridge the gap between farmers' needs with other parties. WUA should be in accordance with the local conditions. Attitude of upstream farmers can affect workings of WUA. WUAs should be organized according to local conditions, which vary from area to area (coastal area, hilly area, technical system, semi-technical system). With the formation of WUAs farmers feel a burden that they will have to pay water charge and cannot use water freely; however, WUA formation does not improve the supply of water. 	Discussion group
		<ul style="list-style-type: none"> WUA in the area of Meijing irrigation system: before there was WUA there were always struggles over water amongst the farmers, and a lot of stealing of water; after formation of WUA, water distribution is systematic and equality within WUA has resulted in a relatively high social feeling in the community. For small irrigation schemes formal WUA is not needed (farmers can manage themselves). 	RRA
5	Policies/ Government role	<ul style="list-style-type: none"> People consider that Government will always assist farmers. Role of Government should be as facilitator and stimulator, leaving the community to be the main actor for development within its capability. 	RRA
		<ul style="list-style-type: none"> Government authority should not be removed just like that, needed to support weak farmers. Maintenance is more difficult than operation, and should be the responsibility of Government. Non-active WUAs need intervention from Government. 	Discussion group

Table G.1.3 Issues and Findings in DI Yogyakarta Provincial Workshop (2/2)

No.	Theme	Issues and Findings	Source
6	Socio-economic/ financial	<ul style="list-style-type: none"> Water charges not routine. Credit to farmers not smooth. 	RRA
		<ul style="list-style-type: none"> Value of agricultural produce has fallen due to Government policies. Irrigation is not economic. Agricultural inputs (seeds, pesticides and fertilizer) are expensive. Farmers do not want to be charged for water since needs are not fulfilled. Difficult to implement collection of water charges on surface water irrigation scheme. Water charges are generally not paid. If irrigation system is in good working order, water charges would be paid. If farmers make a good profit, can pay water charges. Raising of economic level through cooperatives constrained by lack of capital and limitations in human resources. No capital to buy hand tractors and other mechanized equipment. 	General discussion
7	Agriculture/exte nsion	<ul style="list-style-type: none"> Rice seeds difficult (in Klaten). Fertilizer and chemicals are expensive (high price). 	RRA
		<ul style="list-style-type: none"> Commercial crops not well developed. Organic fertilizers are less and less used because it takes a long time for them to take effect, and farmers depend more on factory fertilizers. Difficult to get good quality seeds. There are many counterfeit products. Farmers do not understand about expiry dates (concerning agricultural chemicals). Extension workers are not synchronized with the farmers. There are no market forecasts. 	Discussion group

Table G.1.4 Issues and Findings in East Java Provincial Workshop (1/3)

No.	Theme	Issues and Findings	Source
1	Water availability/ irrigation management/ infrastructure	<ul style="list-style-type: none"> Shortage of water (dry season), due to deforestation in watershed, use of source (spring) also for domestic supply, and abstraction by pumps in upstream part. Floods in wet season, caused by deforestation. Effects of deforestation felt from 1960s. Broken canals and siltation, causing leaks and distribution problems; canals break quickly because they are also used for other purposes (bathing, washing, toilet) and nobody takes care. Water shortages most felt in downstream part (no water at all) and downstream farmers are suspicious of those upstream (some of whom abstract water from canals by pumps). Downstream farmers mainly rely on rainfall for crops. Land in upstream part higher than water level in canal (poor canal design). 	RRA - Bojonegoro
		<ul style="list-style-type: none"> Dry season water shortages; in some years water is not available when needed; groundwater exploited, but pumps are small. Poor state of tertiary systems (mostly tenant/sharecropper farmers who don't care about maintenance). 	RRA - Jombang
		<ul style="list-style-type: none"> Water allocation in downstream part. Canal system in need of repair. 	RRA – Pasuruan
		<ul style="list-style-type: none"> Some water shortages in downstream area during dry season. Sedimentation in canals in downstream area; erosion and flooding. Farmers in upstream area not active in regulating water (farmers in middle and downstream parts active). 	RRA - Jember
		<ul style="list-style-type: none"> Canals repaired by Government not in accordance to farmers' wishes. No surface water in dry season, floods in wet season (rely on deepwell pumps). Deepwell pumps getting old. 	RRA - Sumenep
		<ul style="list-style-type: none"> Problems of water distribution generally occur in dry season; besides shortage of water supply contributing factors are non-uniformity of cropping schedule and crop type in a single area, low commitment and responsibility of field officials, damaged secondary and tertiary facilities, and behaviour of upstream farmers who tend to overuse water. 	General survey finding
		<ul style="list-style-type: none"> O&M guidelines are lacking. Groundwater pumps often breakdown. Factories take water, causes shortages. 	Discussion group

Table G.1.4 Issues and Findings in East Java Provincial Workshop (2/3)

No.	Theme	Issues and Findings	Source
2	Human resources	<ul style="list-style-type: none"> Poor knowledge about water distribution. Lack of management skill. Low education levels. 	Discussion group
		<ul style="list-style-type: none"> Young generation not much interested in farming. Low skill of pump operators (groundwater irrigation scheme). WUA chairmen are generally not active farmers. 	Discussion group
		<ul style="list-style-type: none"> WUA progress is very much dependent on agricultural technology progress 	Survey finding
3	Community participation/cultural/social	<ul style="list-style-type: none"> Farmers have no 'sense of ownership' of irrigation infrastructure. 	RRA – Bojonegoro
		<ul style="list-style-type: none"> Relationship of farmers with <i>juru pengairan</i> (government employee) who has been accused of unfair water management/distribution practices, particularly when water is in short supply (Aug-Oct). 	RRA – Jombang
		<ul style="list-style-type: none"> Since irrigation water is not used intensively, timely decisions are not made on maintenance of irrigation network. Although the practice of <i>gotong-royong</i> is applied to the community, but for irrigation network management not continuously. WUAs are not deeply rooted in communities; farmers feel WUAs are something not needed. WUAs only develop if they have the support of the community. 	General survey finding
		<ul style="list-style-type: none"> Involvement of farmers in most WUAs is low, because the institution of WUA is not deeply rooted in the community. There is little interaction between manager and farmer members, and WUAs are viewed passively. Farmers only get involved when rehabilitation works are needed. 	Question/answer session
		<ul style="list-style-type: none"> Role of <i>ulu-ulu</i> is dominant. 	Group discussion
4	Institutional/administrative/regulations	<ul style="list-style-type: none"> WUA not active in southern part of area which experiences water shortages (Sidorejo) where no water charges collected. Sidorejo farmers do not want to be organized by WUA. 	RRA - Pasuruan
		<ul style="list-style-type: none"> Involvement of farmers is relatively low in the setting up of WUAs, and articles of association (AD/ART) and work programs are not aspirative. Book-keeping is not optimal, depends on human resources and availability of office facilities. Water distribution in tertiary systems usually done by traditional institutions (<i>ulu-ulu, jogotirto</i>). Allocation of funds for WUA cash experiences difficulties because (a) commitment of block heads and work groups in collecting water charges is relatively low, (b) WUA has little control over the flow of water charges. Difficult to arrange WUA meetings because farmers are very busy, and officials have low motivation to arrange meetings. Farmers consider formal WUA organization (with chairman, vice chairman, secretary, treasurer, etc) to be clumsy and over-the-top; farmers prefer organizations to be simple and in accordance with conditions in the field. Farmers prefer <i>kelompok tani</i> and KUD to WUA. WUA empowerment is seen to be more difficult in wet areas than in areas that suffer water shortages; why is a WUA needed when water is always available throughout the year. Government program with so many regulations kills creativity of WUAs, and can be at odds with traditional customs. Regulations and importance of sanctions need to be explained, and should be based on local traditions. 	General survey finding
		<ul style="list-style-type: none"> Generally there is good interaction between WUA and village government, often through the LKMD/LMD. Villages give freedom of action to farmers to manage water, and villages help out with facilities and infrastructure, preparing AD/ART, etc. However, a negative aspect is the pressure of strong private connections, so that when a village head changes WUA chairman also has to resign; the chosen WUA chairman tends to have strong support of village government. Successful WUAs are characterized by: management is purely by farmers without involvement from village officials, WUA manager has good management skills and abilities, and farmers have high awareness about water charge. 	Question/answer session
		<ul style="list-style-type: none"> Rules are not optimal, law enforcement is weak. WUAs get no assistance. When village head changes, officials also change (nepotism). 	Discussion group

Table G.1.4 Issues and Findings in East Java Provincial Workshop (3/3)

No.	Theme	Issues and Findings	Source
5	Policies/ Government role	<ul style="list-style-type: none"> After handover of irrigation system to WUA assets still belong to Government; WUAs role is for O&M only. Government wants WUAs and other institutions to develop businesses themselves, with access to any bank. 	Dinas PU Pengairan
		<ul style="list-style-type: none"> There needs to be a commitment from Government concerning the price of <i>gabah kering giling</i> because the actual price at farmer level is not in accordance with the fixed price, and because of the imbalance between input costs (SAPRODI) and product prices. 	Question/answer session
		<ul style="list-style-type: none"> Overlap between Government rules and traditions. Monitoring and evaluation is weak. 	Discussion group
6	Socio-economic /financial	<ul style="list-style-type: none"> Farmers are reluctant to pay water charge, particularly in downstream area because of water shortages and poor condition of irrigation system upstream Income from water charges insufficient to cover O&M costs. If farmer pays water charge, consider WUA is responsible for O&M; there is no incentive to assist with maintenance (<i>gotong-royong</i>). 	RRA - Bojonegoro
		<ul style="list-style-type: none"> Water charges are not used for O&M (no attention is given to canals). 	RRA - Jember
		<ul style="list-style-type: none"> Low returns from paddy and <i>palawija</i>. Agricultural inputs expensive, even for tobacco (main source of income). 	RRA – Sumenep
		<ul style="list-style-type: none"> Farmers are semi-subsistent, since the majority of harvest is sold and only a small proportion of harvest is stored for consumption by the family. In principle farmers do not object to paying water charge for irrigation management as long as they see some results and the system is transparent. 	General survey finding
		<ul style="list-style-type: none"> Prices for produce is lower than what Government says. 	Farmer comment
		<ul style="list-style-type: none"> Water charges are not effective. Farmers face many charges in the villages, and already pay <i>ulu-ulu</i>. <i>Ulu-ulu</i> completely uses up money. Farmers own very small areas of <i>sawah</i>. Returns from overseas workers (TKI) much bigger than from agriculture. High cost of O&M. Low awareness about water charges. Failed harvests. Ability of farmers to pay water charge depends on whether agriculture gives profit, if market prices give a return over production costs. Younger generation not interested in agriculture if returns are low. Suggested ways to overcome this problem: <ul style="list-style-type: none"> better water management through WUA federations between upstream and downstream; freedom of farmers to choose crops, to spread the risk -- farmers need accurate market information; improve existing technology or introduce new techniques to increase crop value; involve WUA members in organizing farmer cooperatives to increase communal wealth and assist with introduction of new technology; simplify farmer organizations at village level and integrate activities to make best use of limited number of people who can take on managerial role. 	Discussion group
		<ul style="list-style-type: none"> Extension advice is not on a continuous basis. Activities of extension workers low. Cropping plans are late. 	Discussion group

Table G.1.5 Issues and Findings in East Java Provincial Workshop (1/2)

No.	Theme	Issues and Findings	Source
1	Water availability/ irrigation management/ infrastructure	<ul style="list-style-type: none"> 58% of respondents said that there are problems with water supply (especially in central and downstream areas), mainly because of water being used up in upstream areas, leakages from canals, no control gates for irrigation blocks. 32% of respondents (62% in upstream areas) said that canal system is good; 78% said that there no problems with managing the systems. 	Questionnaire survey
		<ul style="list-style-type: none"> In schemes with WUA, water shortages occur in downstream area in dry season. Irrigation management is still done according to local traditions. In non WUA scheme it is not clear which party is responsible for O&M. 	RRA
		<ul style="list-style-type: none"> Execution of projects is not in accordance with plan. Position of structures and layout of canals not yet in accordance with the wishes of the WUA. Tertiary canals do not function well. Guidelines on O&M have not been well advised to WUA members. O&M is not in accordance with the plan. Violations of cropping plan occur because irrigation network is not good; local government regulations concerning cropping plan need to cover all field conditions. 	Discussion group
2	Human resources	<ul style="list-style-type: none"> There are no problems with availability of labour. 	Questionnaire survey
		<ul style="list-style-type: none"> There are competent and fair figures to manage irrigation. 	RRA
		<ul style="list-style-type: none"> Technical ability of WUAs and communities is low, also capital. Human resources of WUA not ready for O&M. Availability of labour is enough. 	Discussion group
3	Community participation/ cultural/social	<ul style="list-style-type: none"> 50% of respondents said decisions over problems are taken together. Only 42% of respondents said that farmers were directly involved (in WUA affairs). Nearly all respondents said they are ready to repair broken canals and carry out maintenance. 	Questionnaire survey
		<ul style="list-style-type: none"> Rights and obligations concerning irrigation management are understood by (WUA) members Communities feel irrigation management is important. Communities already participate in irrigation management. At the 3 sites farmers are not so involved in O&M activities or decision making. People are enthusiastic about handling irrigation in a self-supporting way. 	RRA
4	WUA management/ institutional/ administrative	<ul style="list-style-type: none"> WUAs originate from old (feudal) systems and farmer groups which generally are handled by village head, traditional rulers and hamlet heads. 54% of respondents said old systems did not serve their function, and 88% said old systems should be replaced by WUA; main reasons are that (with WUA) organization is better, water more available and assistance can be obtained. 75% of respondents said they understand the function of WUA (most said WUAs are for communication, and canal maintenance), and 71% said elections (of officials) are open. 38% of respondents said service of WUA officials was good, 39% average and 23% poor. Main problems cited with WUA were: officials not active, water shortages/water not distributed evenly, legal status, officials' wages, stealing of water, undemocratic, functions of WUA not understood. 83% of respondents said sanctions are not in force. Only 42% of (WUA) managers have a desire to take on responsibility. Only 9% (of WUA?) have bank accounts, in name of WUA federation. Only 1 (WUA?) has a cooperative (KUD). 63% of WUAs levy a water charge on their members (67% of water charges are paid in the form of harvest, 33% as cash). 83% of respondents who pay are not near the control gate. 79% of managers (WUA?) said their income is insufficient considering their duties and responsibilities. 	Questionnaire survey
		<ul style="list-style-type: none"> In non-WUA scheme, management is done by traditional consensus without AD/ART. In scheme with WUA, there are AD/ART but they do not reflect local social, cultural, economic and environmental conditions. At none of the 3 schemes where sanctions about water use violations in force. Management figures at all 3 schemes are in accordance with farmers' wishes; local, formal or religious leaders are ready to manage irrigation. At all 3 sites officials at tertiary level are ready for irrigation turnover and are supported by the community. 	RRA

Table G.1.5 Issues and Findings in East Java Provincial Workshop (2/2)

No.	Theme	Issues and Findings	Source
	WUA management/ institutional/ administrative (cont'd)	<ul style="list-style-type: none"> • Institutional guidance is poor. • WUA formation originates from several agencies, and initially progresses but after that WUAs do not function again. • Regulations concerning the institution of WUAs need to be redefined. • Coordination between different agencies is poor, and there are differences in execution. • Handover should be in accordance with the specific location. • Institutional formation should be from below. • Conflicts over the importance of institutions such as WUA, farmer groups and cooperatives. • There is discriminative behaviour between WUAs, farmer groups and cooperatives; farmer groups (<i>kelompok tani</i>) receive much more input from government than the other two institutions. • There are farmer enterprises which are productive without WUAs, so is there a need for WUAs? • WUAs are not fully involved in design, construction, etc. 	Discussion group
5	Policies/ Government role	<ul style="list-style-type: none"> • It was evenly divided amongst respondents whether the time was right for local government to hand over irrigation systems to become the responsibility of farmers. • What is needed are: training, managers to be active, participation of members, infrastructure/facilities, management of funds, security, and higher production. 	Questionnaire survey
		<ul style="list-style-type: none"> • There is conformity about irrigation management between Government and people. 	RRA
		<ul style="list-style-type: none"> • Government budget is limited. 	Discussion group
6	Socio-economic/financial	<ul style="list-style-type: none"> • Payment of water charge is governed by crop type (with tobacco, payments can reach Rp 750,000/ha). • Contributions for the irrigation system take the form of money (4%), harvest product (33%) and labour (96%). • Very little of farmers' incomes come from non-agricultural activities. • Irrigation water use is primarily for rice, but there needs to be diversification to crops with a higher market value. • Problems are the high price of agricultural inputs, and the difficulty of obtaining capital. 	Questionnaire survey
		<ul style="list-style-type: none"> • At all 3 sites farmers are prepared water charge for operation. 	RRA
		<ul style="list-style-type: none"> • WUAs need to orientate towards socio-economy. • Farmer enterprises need to be equipped with facilities, capital and agro inputs. • In order to ensure that farmer enterprises can be raised, there needs to be partnerships between businessmen and farmers. 	Discussion group
7	Agriculture/extension	<ul style="list-style-type: none"> • Crop pests are a big problem: <i>tungro</i>, <i>penggerek daun</i>, <i>wereng</i>, <i>walang sangit</i>, rats, <i>penggerek batang</i>. • Irrigation water use is still not efficient, and there is need to improve cultivation technology. • Policies concerning cropping plans need to be reformed to take into account specific conditions in each area. 	Questionnaire survey
		<ul style="list-style-type: none"> • At all 3 sites the main crop is rice, and the cropping pattern is rice-rice-<i>palawija</i>. • Attacks by pests and disease are light-average. 	RRA

Table G.3.1 Motivational Characteristics originated by Social & Cultural Backgrounds (1/2)

Profile	Social & Cultural Awareness as Background	Motivational Characteristics Found in Fields	Consequences to WUA Turnover Policy	
			In Case of Standpoint on Farmers' Side	In Case of Standpoint on Govt's Side
Social & Cultural Profile	1. Society & Cultures Reared in High Population Density.	1) NG Fine courtesy avoid neither clear results of discussions nor task demarcation.	a) NG Any discussions in WUA hardly to reach clear conclusions for any improvements.	a) N/P Many discussions conclude on compromising not logical solution, avoiding personal attacks..
		* 2) PS Conclude many discussions as majority's compromise through traditional manners.	b) NG Hardly to adopt democratic discussions while staying in traditional spells.	b) NG Being easy to manage regions if available to keep traditional decision making ways.
	2. Outliving donation based traditional mutual assistance minds.	1) NG Historical social ranking relations obstruct democratic society realization.	a) NG Seems take rather long time to reach self-reliance WUA as GOI intends.	a) NG Seems to be obstructed Govt's rationalization, so that being difficult to realize clear task allocation.
		2) PS To be kept a gentle society seemingly, with compromises behind the gentle.	a) PS Social reformation to be more gradually hence to be avoided social disorders.	a) NG To be obstructed democratic / logical task demarcation hence being incomplete Govt's tasks.
		* b) PS Seems available to solve interest clashes gently, while not logically like Western manners.	b) PS Seems available to solve interest clashes gently, while not logically like Western manners.	b) NG Seems make hard on logical deduction and realization of any policies.
		3) N/P To become more disobedient on private desires and evasion from social obligations.	a) NG To be kept WUA non-democratic managing manners.	a) NG Seems not be done fair evaluation & proper wages while keeping public & private confusions.
		4) NG To be kept Govt Supports dependence ethos of the people.	a) NG WUA management to be kept without members' involvements & contributions.	a) NG To be kept low turn-over progress & Govt's financial burden.
	3. Society and cultures reared in multiracial condition	1) N/P Lowest common multiple compromises to be conclusion besides logical discussion.	a) N/P Traditional decision making to be kept instead of logical / historical approaches.	
		2) N/P Inter-racial separate reign of colonization originated mental antipathy is still kept.	a) N/P Repellencies are there among non-Java people to the central Govt.	
		3) N/P Historical business segregations among races were there.	a) NG Changing business conditions to be heavy burden for farmers.	a) N/P To be expected detailed approaches by agro-ecosystem differences.
	4. Society & culture reared on monsoonal paddy production.	1) NG To obstruct farmers from crop diversification and agri-modernization.	a) NG To keep farmers be timid for business minded new agriculture.	a) NG To obstruct officers to obtain new technology and knowledge for extensions.
		2) N/P Being available stable rice yield but low productivity.	a) NG To have allowed weather obedient life style instead of plan oriented farming.	a) NG To allow low strain necessity to maintain irri.sys. due to yield expectation of rain fed paddy.
			b) NG Farmers judge favor of modern irri. with then incentives due to rain fed paddy basic yield.	b) NG To be expected to find out new incentives due to income diversifications.
			c) N/P Farmers are to be available on Tertiary level O/M as village community asset.	c) N/P Have to show exact favors of primary & secondary level facility, which are far from village.

Table G.3.1 Motivational Characteristics originated by Social & Cultural Backgrounds (2/2)

Profile	Social & Cultural Awareness as Background	Motivational Characteristics Found in Fields	Consequences to WUA Turnover Policy	
			In Case of Standpoint on Farmers' Side	In Case of Standpoint on Govt's Side
Political Profile	1. Blind following is the most concrete survival way during 400-year state power era.	1) N/P Blind following behavior is most safe alternative.	a) NG Farmers to accept seemingly even though opposing ordered instructions against own ideas.	a) NG Being sufficient at sites just convey instructions from the central.
		2) NG To be kept a gentle society seemingly, with compromises behind the gentle.	b) NG To be high possibility to accept unsubstantial WUA establishment.	b) NG Just being expected to pass instructions from the up to downs.
		3) NG To show outward acceptance to upper ranks in society without opposing them.	c) NG Traditional customs & influential men's opinions to be dominant easily than democratic talks.	c) NG Instructions from higher ranks were not opposed due to top-down system, though being contradict.
	2. Blind following era rubbed out democratic minds & ways.	1) N/P Doesn't know how to express opinions and to unite into one direction democratically.	a) NG Being hardly to accept private and social responsibility due to rapid democratization.	a) NG Seems losing job motivations at WUA sites due to lack of proper budget.
		2) NG Setting clear demarcation on Govt activities in recognition, so called blind following.	b) NG Recognize favor of irri. projects as donation strongly and their precious asset weakly.	b) NG Being strong intention to big budget construction while weak for O/M aspects.
	3. GOI had to set the multiracial country into one direction after the independent.	1) N/P Conqueror's position succession was shortcut to unify the country in short period.	a) N/P Being beyond from social responsibility recognition though grasping need of democracy.	a) NG Officers seem losing directions while denying previous Govt system.
		2) N/P Nepotism was rapid way to realize the concrete centralization.	a) N/P Many WUA executives were appointed under nepotism.	a) N/P Difficult to upgrade local Govts because employed without performance assessments.
		3) N/P Being Top-down ways better to keep the centralization than democratic ways.	a) NG Not familiar with democratic management though being introduced it with top-down way.	a) NG Seems misunderstanding as responsibility free after introducing democratic managements.
		4) N/P Food originated projects were most effective to steady the country rapidly.	a) NG Farmers understand widely many projects are for Govt not for them, due to Top-Down approach.	a) NG O/M schemes were neglected due to smaller interests than constructions.
	4. Paddy production with water & land resources was the most concrete way to build the new country.	1) N/P Being not necessary particular techniques and knowledge for paddy production.	a) NG Have kept traditional life stile because low necessity for new technology and education.	a) N/P Confused task allocation on assistances among agencies has never been integrated.
2) N/P Farming & W/M aspects were decided with traditional consultation in a community.		a) NG Fairness and transparency on Govt's assistances have never been kept.		
5. GOI have to concentrate rebuilding within limited revenues.	1) NG Being confused ISF and traditional O/M fee and collection is sluggish.	a) NG Being understood further payment than present fee is quite heavy burden for farmers.		

Note : NG : Negative Consequence, PS : Positive Consequence, N/P : Not being classified

Above table was provided to clarify social & cultural consequences to both sides of farmer and government, basing on "Motivational Characteristics Found in Fields".

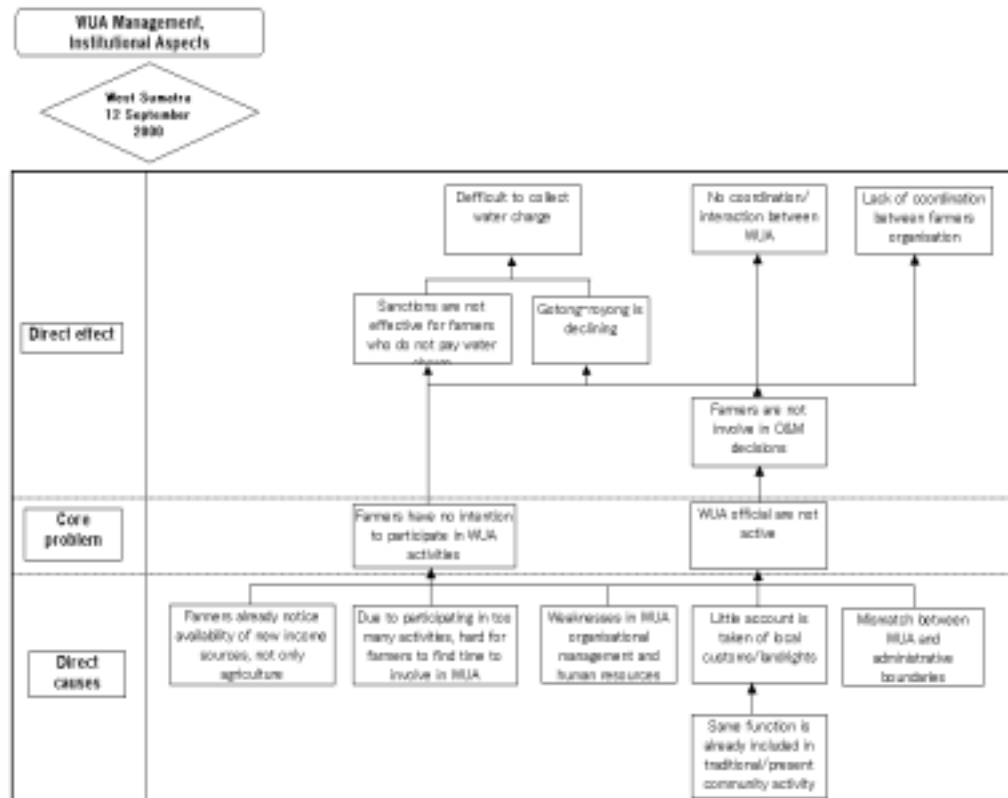
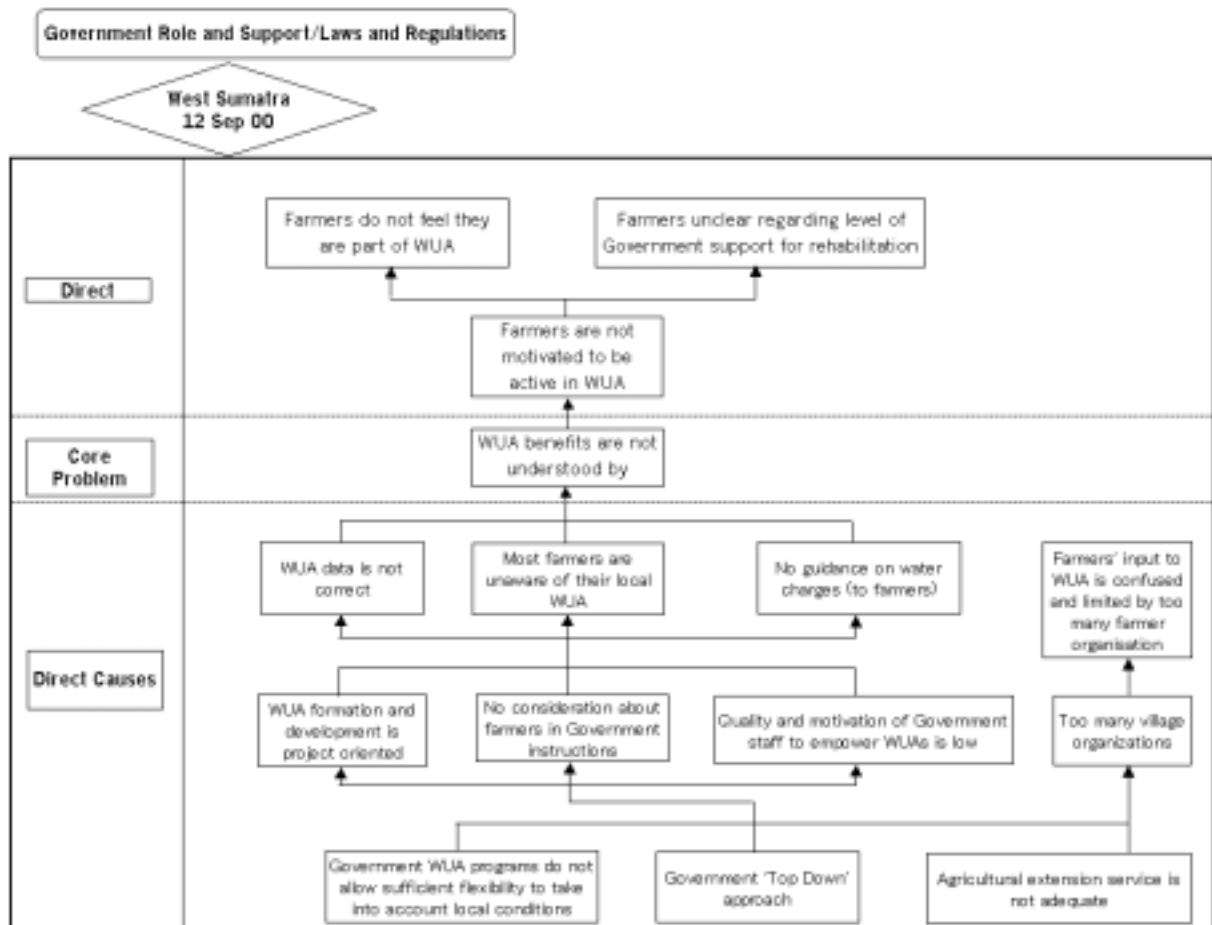


Fig. G.2.1 Categorized Problem Trees of West Sumatera Province (1/2)

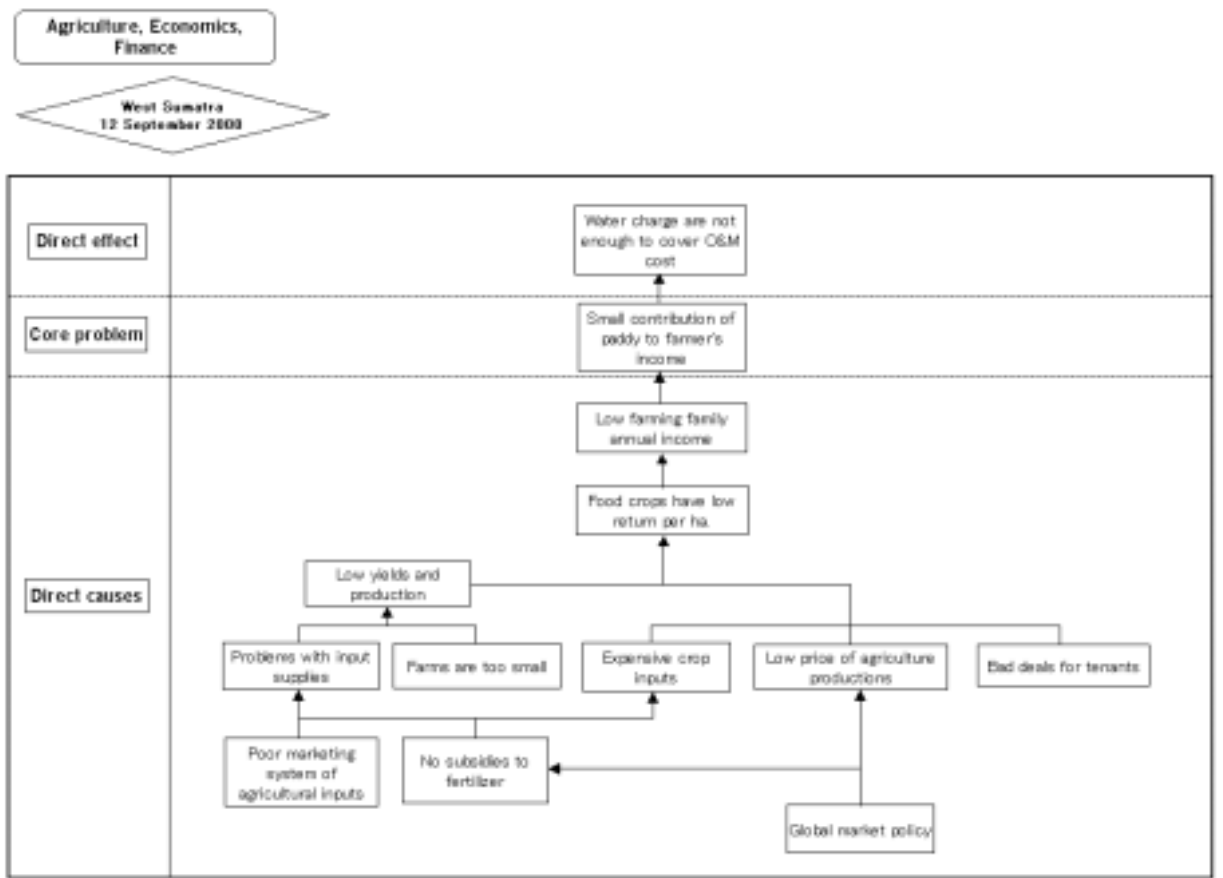
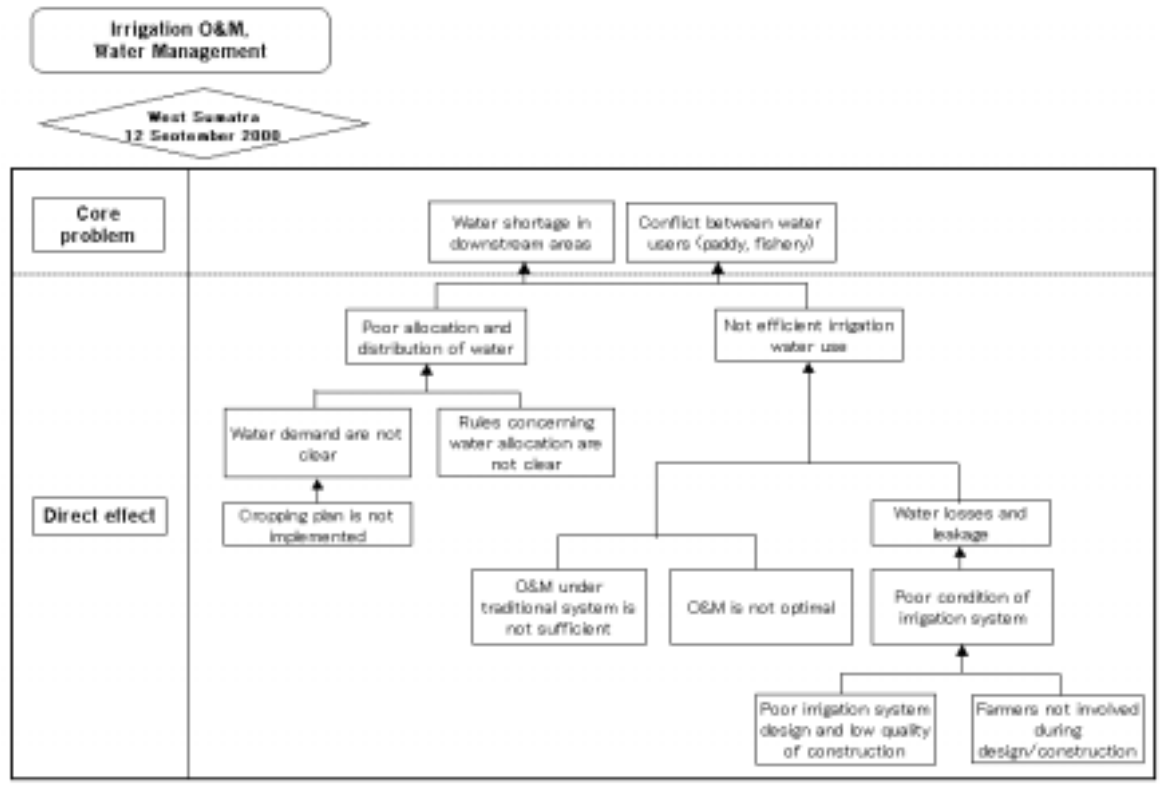


Fig. G.2.1 Categorized Problem Trees of West Sumatera Province (2/2)

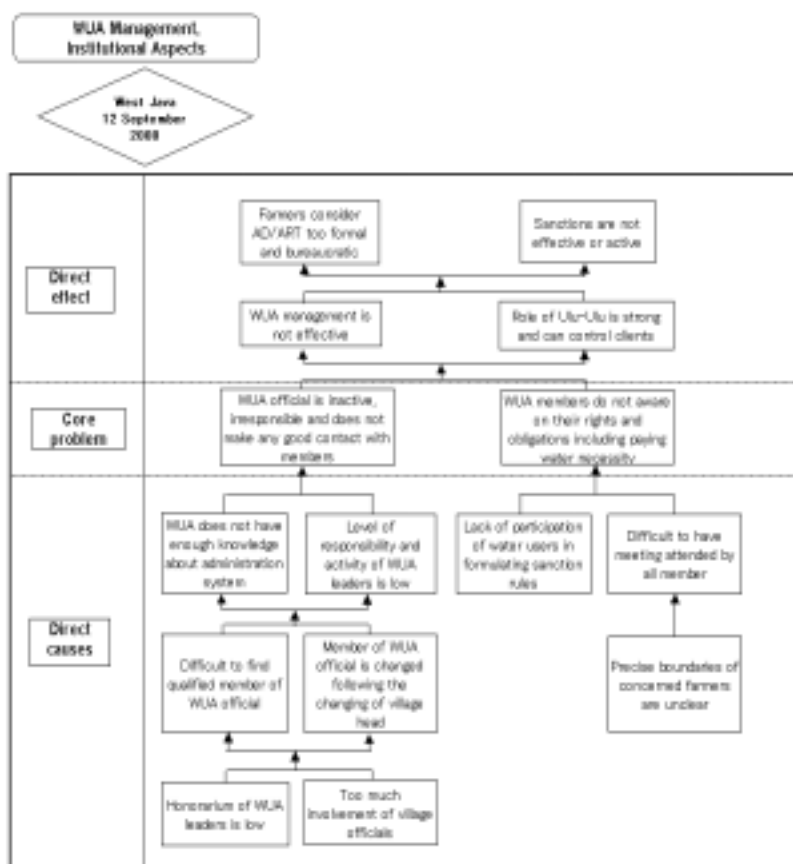
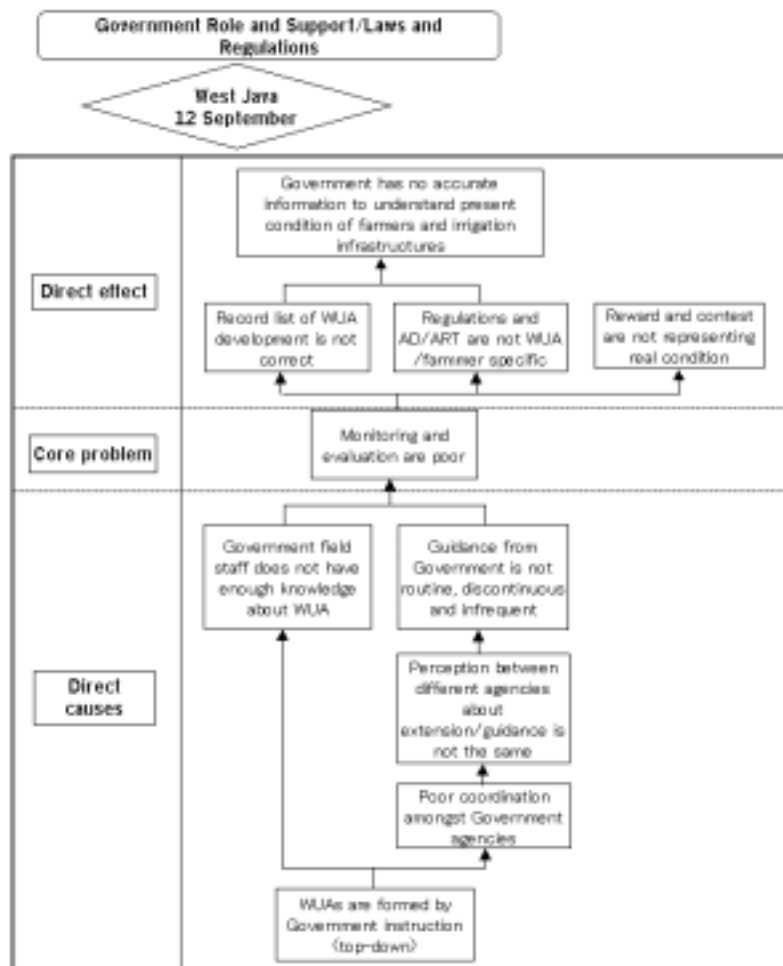
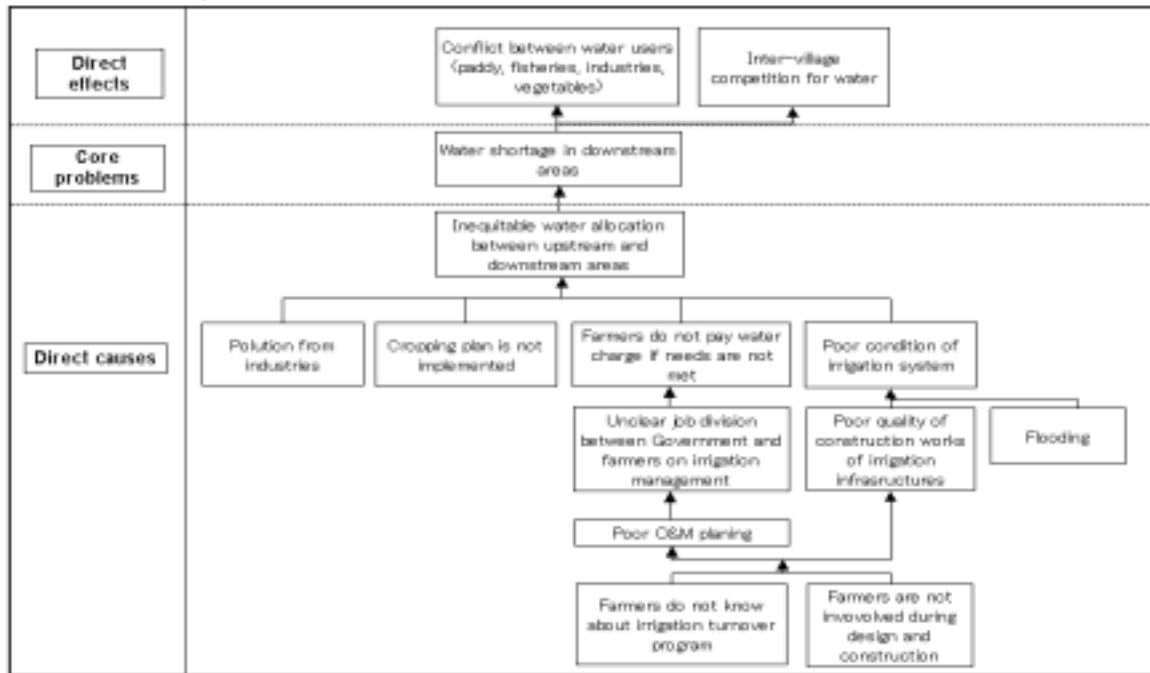


Fig. G.2.2 Categorized Problem Trees of West Java Province (1/2)

Irrigation O&M,
Water Management

West Java
12 September 2000



Agriculture, Economics, Finance

West Java
12 September 2000

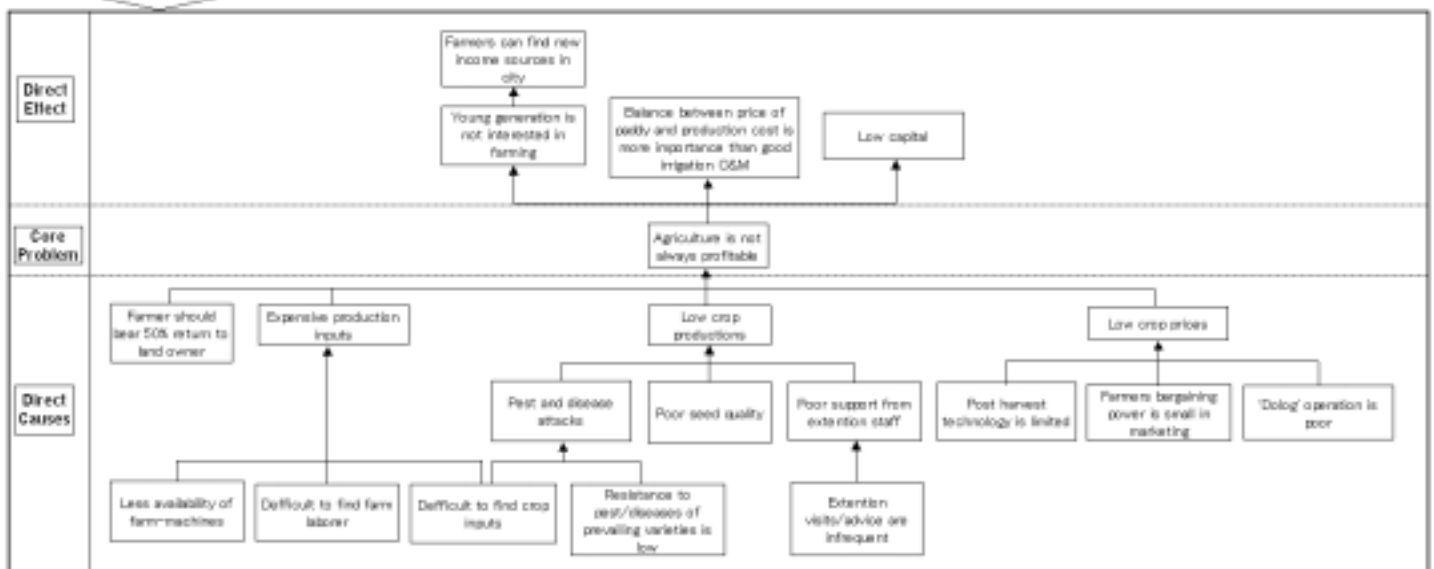


Fig. G.2.2 Categorized Problem Trees of West Java Province (2/2)

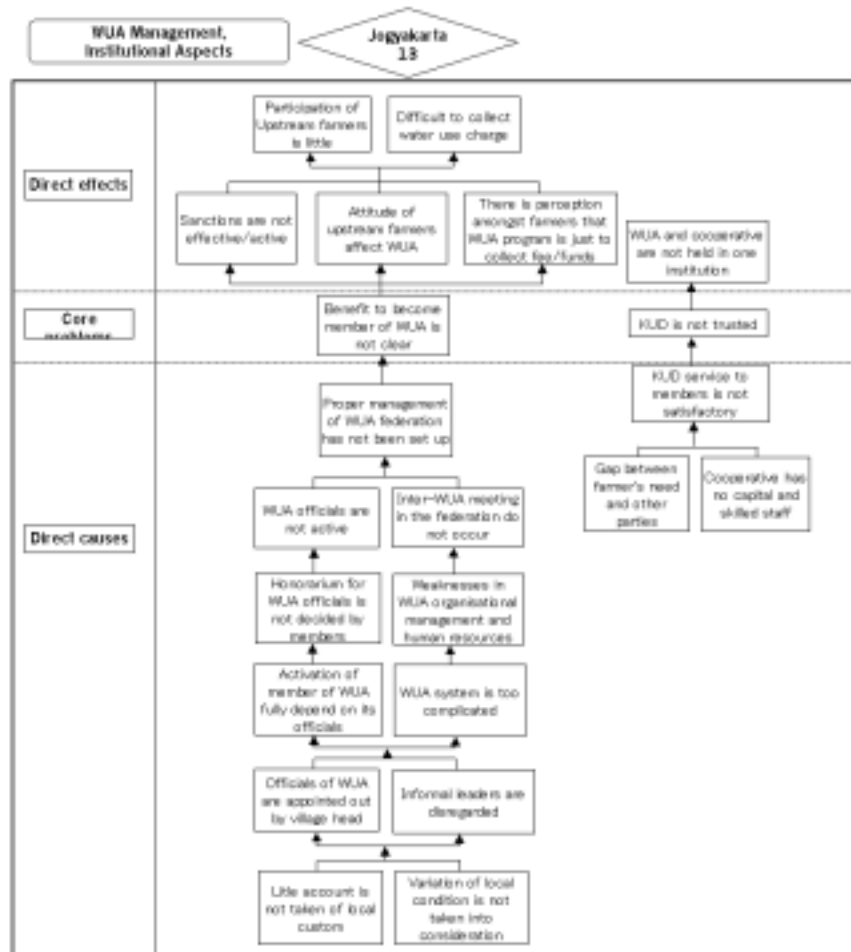
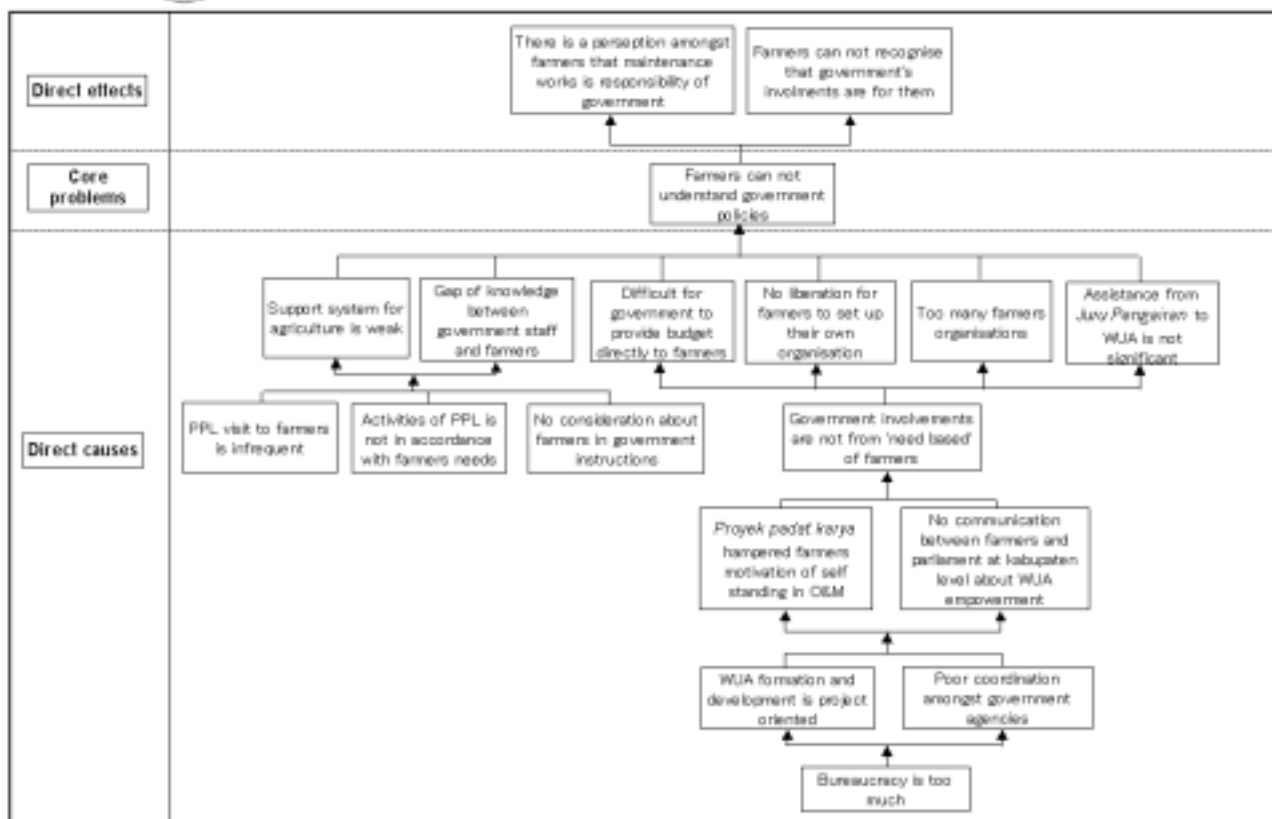


Fig. G.2.3 Categorized Problem Trees of DI Yogyakarta Province (1/2)

Irrigation O&M,
Water Management

Yogyakarta
13 September 2008



Agriculture, Economics, Finance

Yogyakarta
13 September 2008

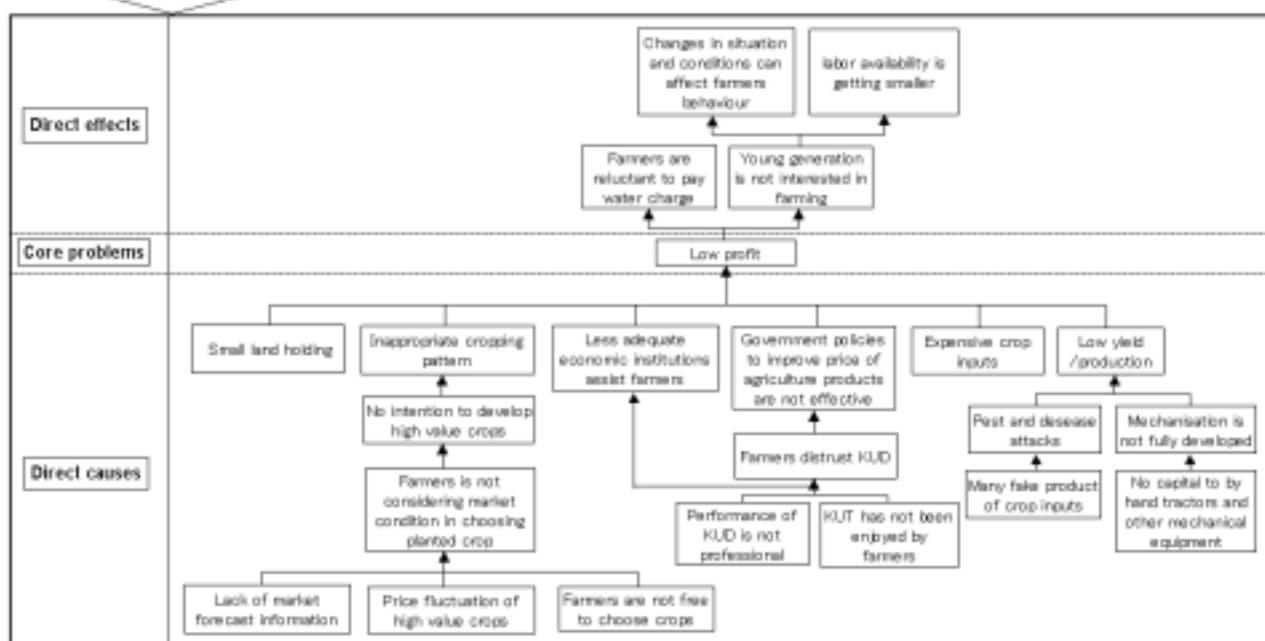


Fig. G.2.3 Categorized Problem Trees of DI Yogyakarta Province (2/2)

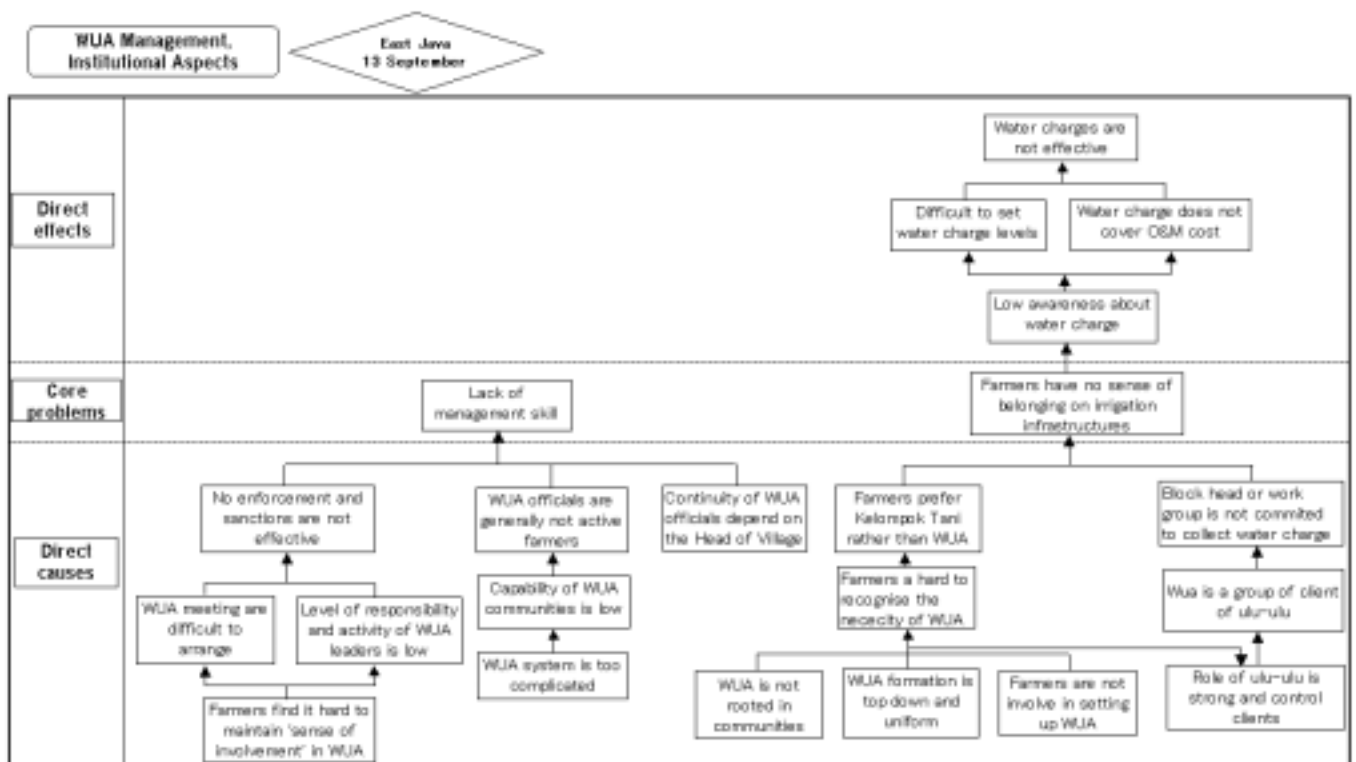
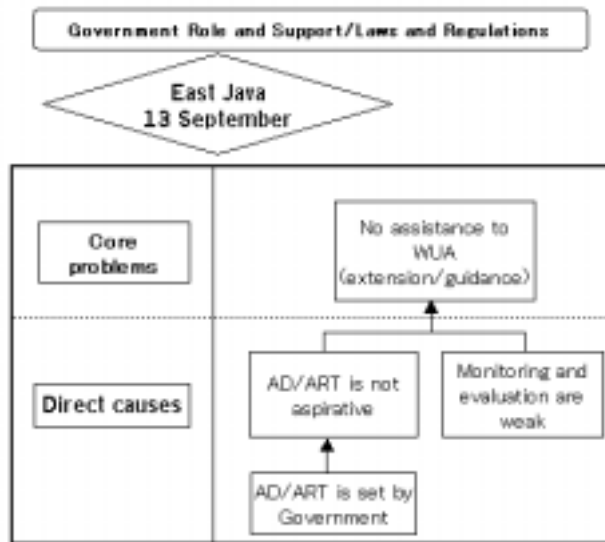


Fig. G.2.4 Categorized Problem Trees of East Java Province (1/2)

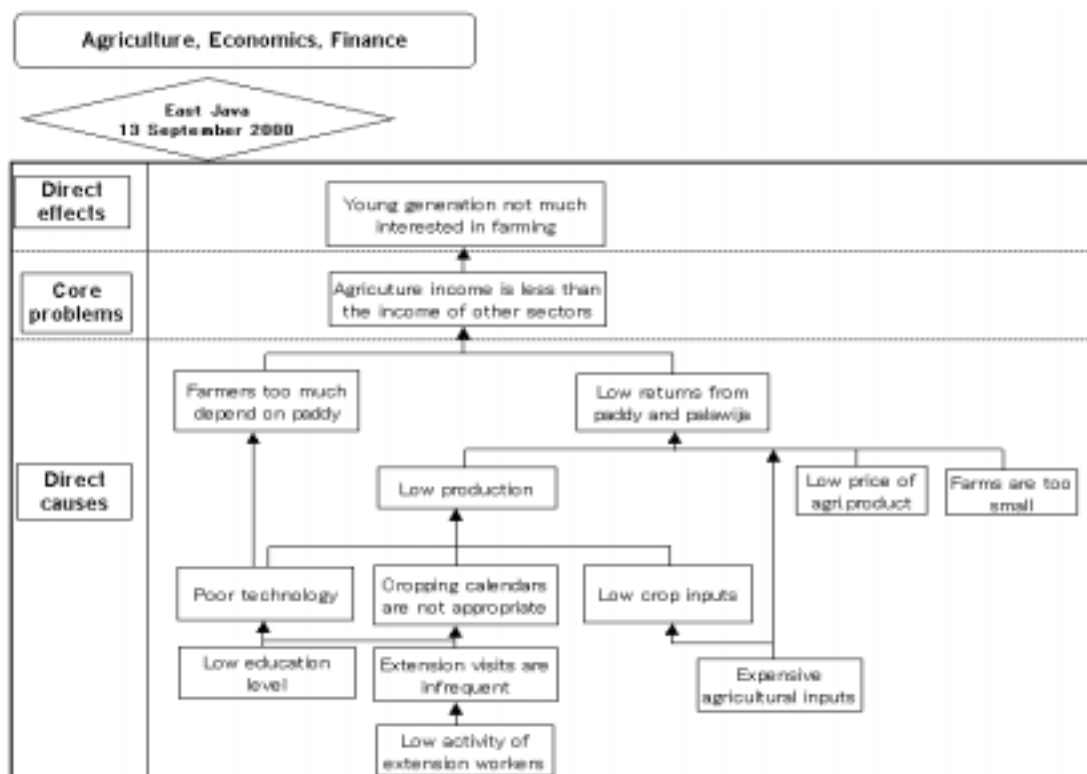
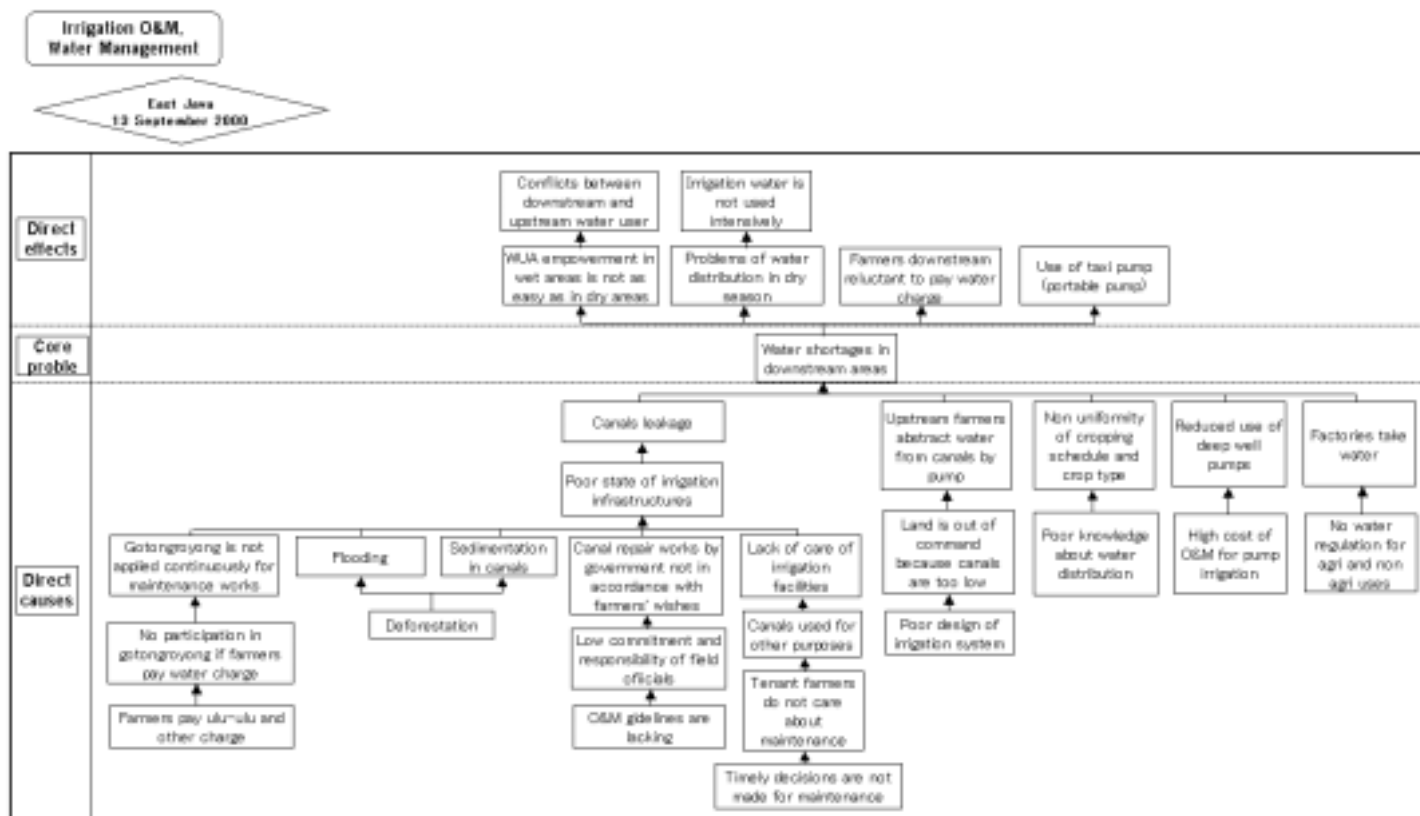


Fig. G.2.4 Categorized Problem Trees of East Java Province (2/2)

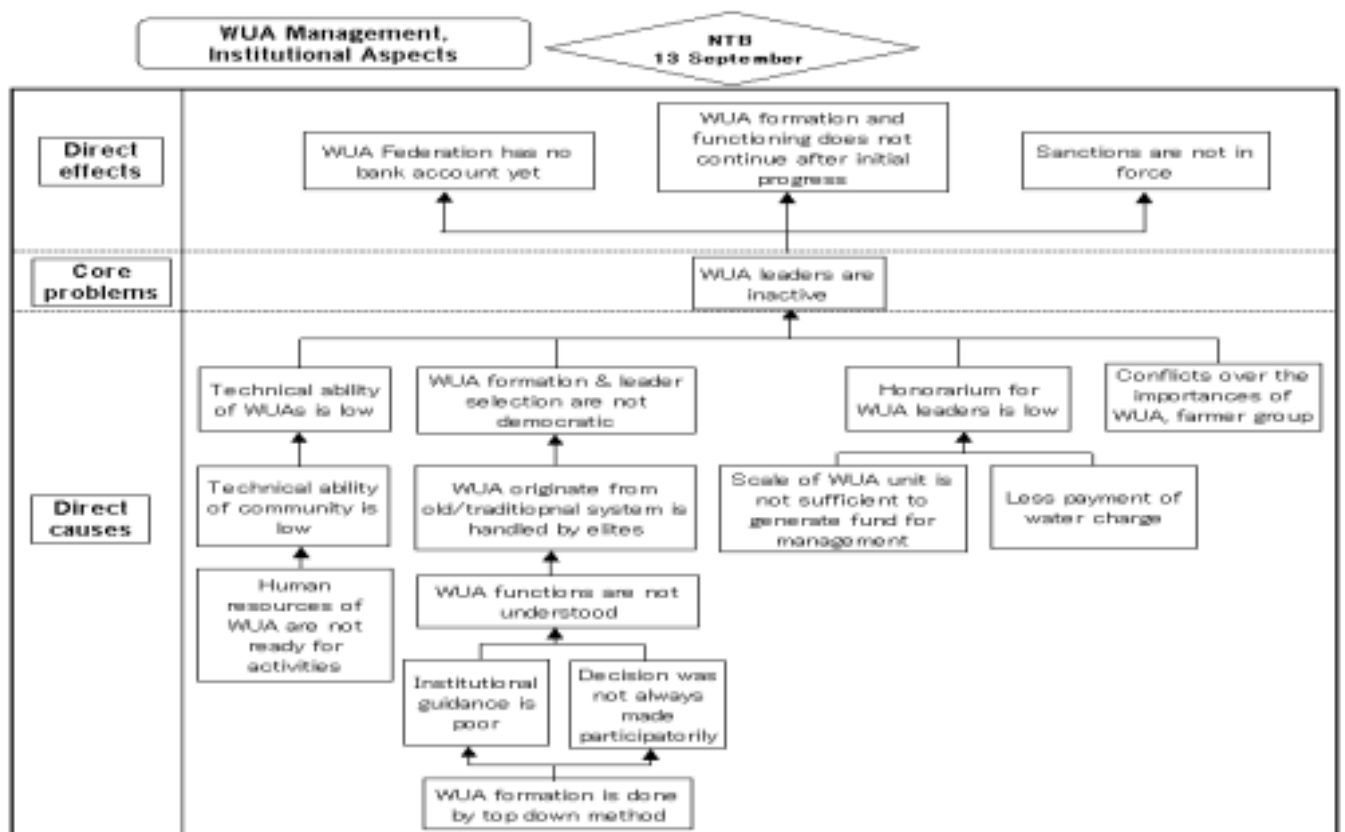
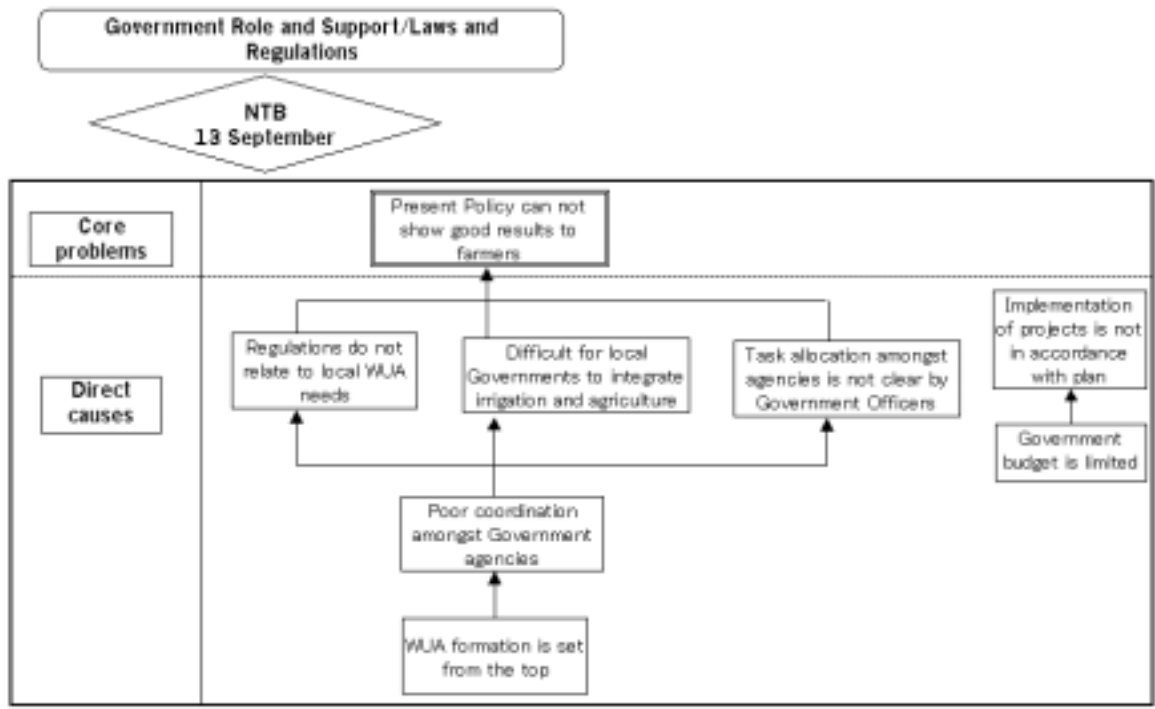
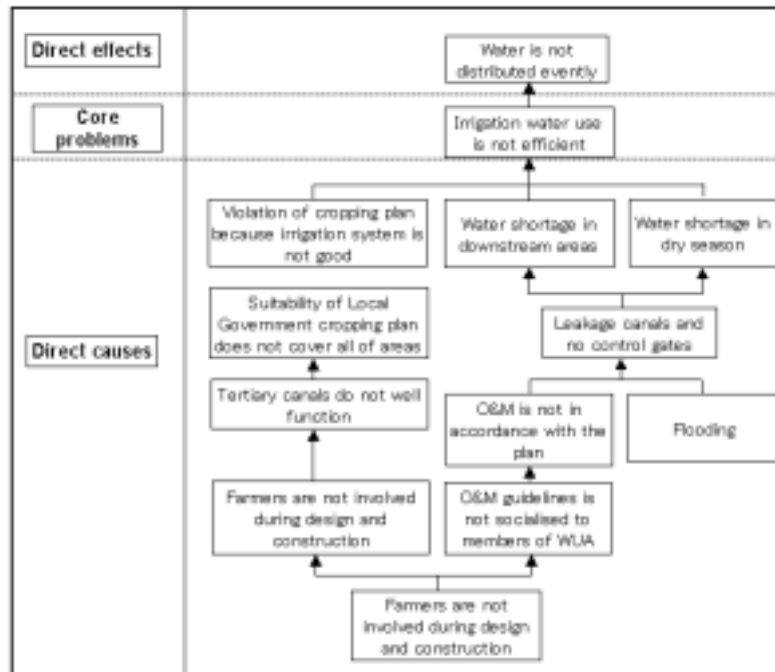


Fig. G.2.5 Categorized Problem Trees of West Nusa Tenggara Province (1/2)

Irrigation O&M,
Water Management

NTB
13 September 2000



Agriculture, Economics, Finance

NTB
13 September 2000

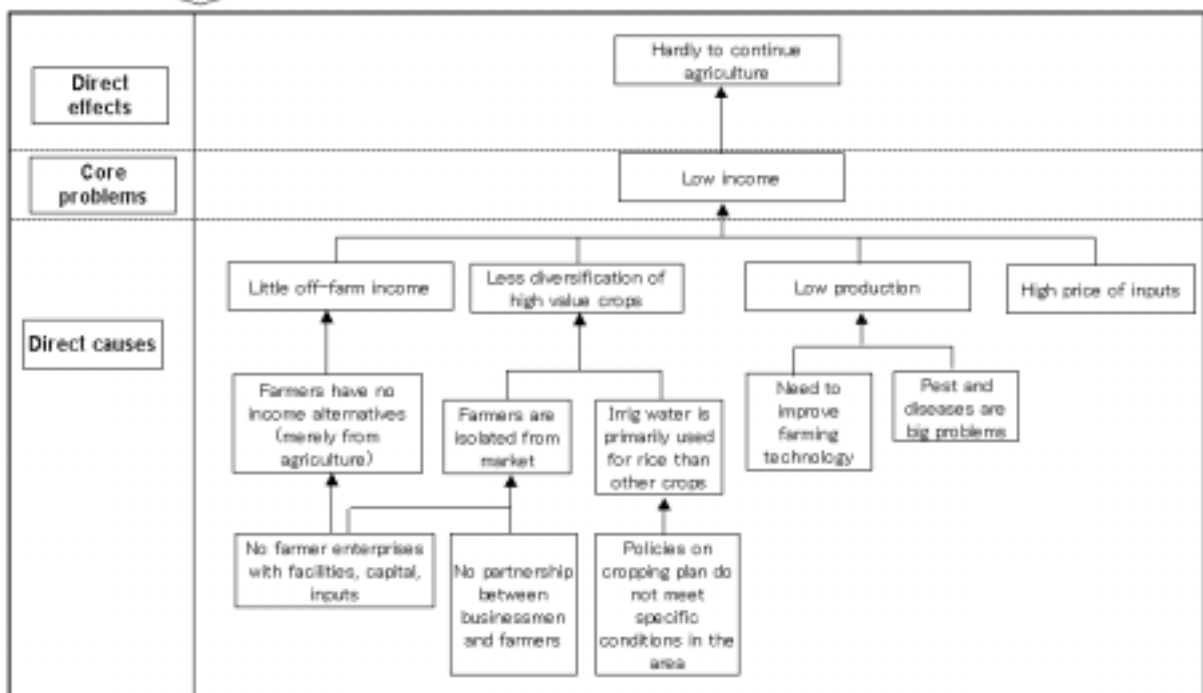


Fig. G.2.5 Categorized Problem Trees of West Nusa Tenggara Province (2/2)