

CHAPTER 6

ACTION PLAN

CHAPTER 6 : ACTION PLAN

6.1 Participatory Survey Approach and Formulation of Action Plan

This JICA Study has been careful to maintain the investigation and development at the grassroots, where our use of the term WUA refers to unit (either village or tertiary unit) based groups. It is from this basic approach that all Study initiatives including the generation of the Action plan has been developed. In generating the plan a process of staged development has been undertaken, review, problem and constraints identification, analysis, hypothesis, and confirmation, developing the grassroots condition in terms of physical, institutional, organisational and financial, aspects. It should be noted that all processes used on the Study and proposed by it, are generated from needs based assessment (AKNOP) and participatory methods. This process has been successively introduced and developed at each level of administration from the field to National level. Within this process the term WUA has been used in its generic sense, allowing it to encompass all structures currently envisaged as water user development.

In formulating an Action Plan, it needs to be borne in mind from the outset that this Study is not embarking on a new venture. The process of WUA formation, empowerment and irrigation system turnover has been on-going for many years, and virtually all the recommended initiatives have already been tried out in some form or other. The on-going IDTO program has applied many of the obvious approaches.

The following aspects are to be considered for the formulation of Action Plan.

(1) Financial Background

The move towards turnover started long before the monetary crisis of 1997 and the introduction of regional autonomy. These two events, however, introduced a greater sense of urgency. It is no longer a matter that Government would like to channel its funds away from O&M and focus more on new development; there are now very few funds available for almost any purpose. It is now an urgent matter that farmers take on a significant part of the burden of O&M and that irrigation systems are kept in, or brought back into, good working order and the need to constantly rehabilitate them is greatly reduced.

(2) Result of Previous Approach

Whilst it is desirable that the turnover should be implemented rapidly, in reality this will not be possible. Both Government staff and the farmers have, over many years, become used to relying heavily on Government funds to subsidize O&M and to cover completely the costs of rehabilitation. Most farmers simply do not have the experience of O&M beyond the tertiary level, or of handling the financial aspects. The situation is made worse by the fact that with some of the programs which have been introduced in the past, although their concepts were generally sound, their implementation was poor and a difficult legacy remains. Such programs included the failed ISF, the very unsuccessful top-down creation of WUAs and the rehabilitation-before-turnover programs. Past memories of these initiatives make it doubly difficult to convince the farmers that this time Government wants to get it right, that it is serious about issues such as farmers' participation and integrity.

(3) Constraints of Government Human Resources

Many Government staff, with pitifully low basic salaries, have learned to survive, and in some cases, to prosper from their role in administering the substantial routine and development budgets channeled towards the irrigation sector. With the major reductions in funding and the move towards farmers taking on more responsibility, the outlook for many Government staff is bleak. In many cases, it is these people who have fared amongst the worst from the monetary crisis. At the same time any existing or potential skills, which such staff possess, are urgently needed to assist during the transitional period. It will not be easy to harness the co-operation of these staff..

(4) Implementation under Hard Conditions

It will, therefore, not be possible to implement the turnover process quickly. Furthermore, funds will be required during the transitional period to implement the process of turnover. It is envisaged that Government will find it very difficult to find the necessary funds for the following:

- to continue to subsidize O&M;
- to continue to rehabilitate irrigation schemes which are in urgent need of repair, and
- at the same time, also support the turnover process.

In addition, it must be understood that there are so many other, possibly more urgent demands for the scarce funds available and it will be difficult to give irrigation high priority. Consideration should, however, be given to the fact that a huge investment has been made in the irrigation sector, and that if its condition is allowed to further deteriorate significantly, future rehabilitation costs will be very high and a rapid reduction in agricultural productivity and farmers' incomes is likely to occur.

(5) Settlement of Government Institutions

Action related to the turnover program is currently being taken at many levels; often the approaches are not ideal and the results are not as successful as would be hoped. There is considerable confusion, from the national level downwards, regarding the precise course of action that should be pursued and the roles that the various Government agencies should be adopting. In many cases the original Government structures have been changed, making it more difficult for staff to perform as effectively as they might if their roles were more clearly defined.

Despite the far-from-ideal situation it is believed, however, that much can be done to improve the situation. Whilst, in theory, a number of activities should be undertaken before the field work commences, in reality it will not be necessary to follow a rigid critical path. Progress can be made along several fronts.

(6) Constraints of Participation

It is evident from the lack of success in the past that, in any future initiative, farmers' participation is necessary. Whilst the wisdom of such an approach is self-evident, there is also a need to accept the reality of the situation. It is desirable that farmers take on as much responsibility for O&M, and rehabilitation, that they can bear. This will save Government money, make farmers more responsible for the condition of their system and possibly improve scheme productivity. On the other hand, it will require significantly increased contributions from the farmers in terms of cash or in-kind payments, provision of voluntary labour or gotong-royong for maintenance works and time spent in participating in the management process. For many farmers these tasks will be unwelcome requirements, particularly for those who have received adequate and reliable supplies of water over

many years, at little or no cost. It is difficult to envisage that such farmers would welcome many aspects of the turnover program and the only way they will be brought on board is when they realize that they are facing an inevitability. If, in the process of turnover, they can see that their future could be better than their past, this would be a bonus. For many, however, this will not be the case. The hard facts of the case are that Government can no longer assist irrigation to the extent it has in the past and the only way in which farmers can maintain the status quo is for them to take over much of the responsibility by themselves. Considerable care should be taken not to leave the farmers with the impression that somehow, or other, Government will always be there to bail them out.

(7) Role of Government

Although farmer participation is the watchword, given that Government will have a major role to play during the transitional period there will still be considerable influence from the top. Decisions will need to be made on such aspects as where the turnover approach should be focused, how much subsidy should be provided for O&M and where and which schemes should be assisted with rehabilitation funds. In larger schemes it is unlikely that WUAs will be in a position to operate and manage the primary and secondary canals, and major structures, for many years to come, and there will be continued reliance on Government. There will be some opportunities for farmer participation, but in many such cases their influence could well be quite minimal.

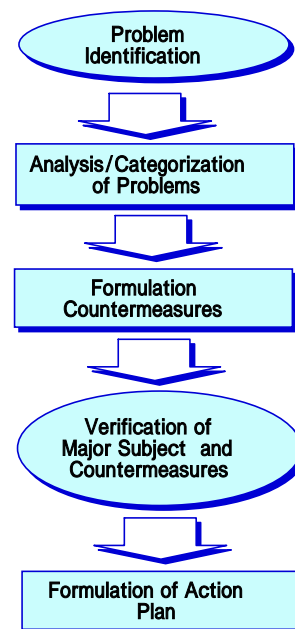
6.2 Countermeasures and Action Plan

In identifying problems at the field, kabupaten and provincial levels, formulating and testing countermeasure hypotheses, a number of potential countermeasures have been identified and recommended. Whilst attempts have been made to accommodate the most important problems, not every aspect is covered in the Action Plan. In some cases, for example, the issues are already being addressed and/or action is pending and the outcomes are being awaited.

The main components, related to WUA and O&M issues, mostly involve training and supporting Government staff at various levels, and farmers' groups. Also included are some public awareness campaigns, the establishment of some institutional structures and procedures and the provision of WUA start-up financing.

Another series of countermeasures related to agricultural support have been identified; whilst desirable that they be implemented, they do not form part of the proposed Action Plan. The successful implementation of the above-mentioned activity does not directly depend on the implementation of the agricultural support program.

As mentioned in Section 4.1, there is a need to approach the problem from several fronts, and whilst there is some requirement for a structured approach, in general this need not be a rigid one. Whilst, for example, there is a need to make Government staff, particularly at the Kabupaten level, aware of the fundamental changes being introduced into the irrigation sector there are already many staff who understand the situation, some of whom are already making significant contributions to the turnover process. Many existing WUA are little more than token units, and possibly unrecognized by the majority of farmers who they are supposed to represent; such WUA may need to be dismantled and reformed, starting from



Action Plan Formulation Process

the basic principles. On the other hand there are some WUA, albeit far from perfect in terms of their establishment procedure and their activity, which are beginning to function and may well become fully functional in a short time. The Action Plan should provide assistance at all these levels – in some cases it will need to start at the beginning, elsewhere it will be needed to support on-going activities. With the devolution of power to the Kabupaten level, the starting point for much of the Action Plan is at this level.

Recommended activities include the following:

- support of the PTGA to implement awareness campaigns for local Government staff, (also including some provincial staff)
- establishment of a Kabupaten Coordinated WUA Support Forum,
- inventories of irrigation schemes and WUAs,
- inventories of people, organizations, companies, commercial contacts, who might assist in WUA empowerment
- implementation of introductory/refresher training for local Government staff,
- development of procedures related to the Kabupaten Irrigation Improvement Fund,
- determination and review of Joint Management agreements for specific irrigation schemes,
- review of turnover criteria,
- monitoring and evaluation

Lower level activities include the following:

- recruitment and training of Community Organizers,
- implementation of WUA level public awareness campaigns,
- implementation of on-the-job participatory training of WUA officials and members,
- provision of technical assistance to WUAs,
- establishment of guidelines for the provision of WUA start-up funds,
- strengthening of co-ordination between PPL, *juru pengairan* and farmers regarding water scheduling and cropping calendars,
- monitoring and evaluation

6.3 Basic Concepts for Formulation of Action Plan

6.3.1 Objectives of Action Plan

The main objective of the Action Plan is to assist Government to structure its approach in a manner that eventually leads to the successful turnover of irrigation schemes. In order to provide the guideline for the implementation of Water Resources Management Policy Reform, the Action Plan shall be formulated based on the analysis of present problems and countermeasures to solve these problems. Then it will be able to achieve the realization of WATSAL results.

The evidence of success will be:

- that the schemes operate productively over many years;
- that the costs of O&M are transferred from the shoulders of Government to those of the farmer/water user;
- that rehabilitation costs are minimized, with farmers making significant contributions, and
- that farmers' incomes are maximized.

In the process of achieving this main objective, it is envisaged that numerous WUAs and groups of WUAs would be formed, which would be sustainable, democratically established, capable and active. It is hoped that such WUA, in the future, could also be capable to stimulate communal activity, beyond that related to their prime function of irrigation O&M, which would have

beneficial impacts on members' incomes; this consideration is, however, of secondary importance.

6.3.2 Component of Action Plan

The proposed Action Plan will comprise three plan aspects, as follows:

- a Preparatory Activities Plan, mostly concerned with promoting public awareness of the benefits and necessity of the turnover program to Government staff and farmers;
- a Core Action Plan concerned with Irrigation Management and Turnover, and
- a Supporting Agricultural Action Plan.

There will be considerable interaction between the three Plans as shown in Fig. 6.3.1.

(1) Preparatory Action Plan

The Preparatory Activities Plan will comprise mainly activities designed to make all of the parties, who should be involved in the overall Plan, aware of Government policy, of the role that each party is expected to play, and of the overall urgency of the situation. It will:

- highlight the financial and management problems facing Government's support for irrigation O&M and rehabilitation,
- explain the inevitability for the introduction of the turnover program,
- promote the creation of WUAs as a means of achieving sustainable farmer irrigation management, and of possibly improving farmers' incomes,
- explain what services existing Government staff should provide to the farmers and WUAs, and the need to provide the necessary training,
- create, at the Kabupaten level, a forum where the activities of all parties concerned with the overall objectives of the Plan can be coordinated,
- promote the necessity and importance of the process of irrigation scheme inventories, WUAs and personnel of relevance to the Plan, and create a prioritization plan.

(2) Core Action Plan

The Core Action Plan would be mainly concerned with providing the follow-up to the Preparatory Activities Plan, where the emphasis would be to:

- recruit and train community organizers,
- establish or re-establish WUAs,
- provide key WUA officials and farmers with training, as required,
- provide WUAs with technical support, much of it through existing Government agencies, but some through external agencies,
- co-ordinate and promote the activities of agencies concerned with WUA activities,
- provide nurture to the WUAs during the formative period,
- constantly assess the turnover program, and recommend modifications, where applicable,
- promote the creation of a Kabupaten Irrigation Improvement Fund and develop the skills required to prioritize its utilization,
- monitor and evaluate.

(3) Agricultural Enhancement Plan

The Agricultural Enhancement Plan comprises numerous recommendations for activities to be undertaken, at national, kabupaten and local levels. None of these activities are included in the Core Action Plan, as they mainly concern ministries other than the one to which this Study is responsible. If some or all of the recommended activities were to be implemented, this could have a considerably beneficial impact on the success of the Core Action Plan; if the activities are not implemented the Core Action Plan can still achieve some success. Virtually all the proposed activities are concerned with increasing farmers' net revenues, through:

- the promotion of higher value cropping,
- the promotion of improved technology,
- increasing yields,
- increasing and/or stabilization of crop prices,
- decreasing crop costs.

Despite the fact that the Study will not be directly involved in these supporting activities, it should be borne in mind that the issue of farmers' incomes is of prime concern to the success of the turnover program. Although, in theory, most farmers should be able to generate sufficient revenue from irrigated cropping to enable them to cover reasonable O&M costs, for many, particularly those on very small land holdings, and for tenants who have struck bad deals with their landlords, there simply is insufficient cash revenue to cover the O&M cost. For many, particularly where there are few alternative sources of off-farm income, it is vital if such farmers are to make their full contribution to the O&M account, that their incomes are increased. The Kabupaten Irrigation Coordination Forum proposed under the Core Activity Plan could play an important role in influencing those responsible for improving, for example, the timely availability of key agricultural inputs such as fertilizers and seeds.

6.3.3 Basic Concepts of Action Plan Formulation

(1) Water Rights and Basin Water Management Policy

The main objective of the Study is enhancement of the 'Irrigation Management Turnover Program'. The turnover of irrigation management does not mean that WUAs/farmers can use the water freely or as they so desire. The water resources shall be distributed and controlled under the coordination of water user stakeholders. The coordination committee or group of stakeholders requires legislation governing regulations for control of the various institutions and water user stakeholders. Primary level WUA (IWUA) that are to be formulated under the concept of 'One scheme, one management', shall be legally empowered to divert water to its command area because it will be granted its water right within all stakeholders. For the formulation of the Action Plan, it will be necessary to clarify the water right and basin water management systems/policies.

1) Water Rights

Water rights have always been a contentious issue. The right to abstract water has been written in law for some considerable time, including the interpretation of the constitution of Indonesia (UUD 1945) that stipulates that '*All water is owned by the Nation's people and must be managed by the state for the greatest welfare of the people*'. A water- rights' system providing mechanisms for among others;

- security of supply;
- obligations for the supplier and user;
- protection of social amenity usage;
- resource allocation and accounting;
- efficient and environmentally safe use and
- mechanisms for conflict amelioration.

Law No.23/1982 made the issue of rights clearer, however the real problem has always been the implementation of applying this law.

PP No.23/1982 authorized the management of water at the regional levels on the basis of water basins. It also specified that 2 or more natural drainage basins could form a river basin for the

purposes of planning or management. Authority may be delegated from the Minister of Public Works to the regional/local government for river basins, which are in their jurisdiction, except where prior legislation exists. Priority of use and the right of use is given to drinking water and the individual. Article 15 stipulates,

“in the case of water users community should be licensed to abstract water from a specified intake on the river or canal and that allocation of water among the members of the community should be arranged by the concerned group based on guidelines provided by the Governor”.

Under this law, clear instructions for the delegation of authority from central to regional and down to water basin level has been determined and given. The delegation of authority has also been given to the Governor so as to enable him to license water user groups for the abstraction of water from specific locations. However, this aspect of the regulation has never been enacted, possibly due to the Government centralist policy thinking of that time (1982/83) and also the Government centralist interpretation of the capabilities of both provincial and district levels.

Regional Autonomy Law No.22/1999 has now empowered local government with these responsibilities. Law No.34/2000, which is the follow up of Law No.18/1997, gives the Provincial authorities the right to raise taxes on both ground and surface water abstractions but does not say how this may be accomplished. Again the problem of how to implement the law is apparent.

Presently, there is not one WUA in Indonesia who has been granted responsibility for the management of water in line with a legal or allocated water right. It is expected that a water right will be granted to IWUA under the ‘One-scheme, one-management’ policy. Hence a WUAF or an individual WUA responsible for irrigation management at tertiary or secondary system level does not have a legal right, for the abstraction of water for their irrigated area of responsibility, as would be possible by the granting of a lawful water right. This means that Government presently does not require a detailed operational water right for the regulation/distribution of water within irrigation schemes. Now, Government must clarify and detail the application, understanding and legal aspect of a water right as granted to an IWUA for the abstraction and distribution of water within an irrigation scheme.

2) National Water Resources Management Program(NWRMP)

The Government request to IBRD for technical and financial assistance to the water resource sector, detailed the concept for a National Water Resources Management Program (NWRMP) that would govern, administer and regulate the quantity and quality of both surface and ground water resources. The policy of the NWRMP would be structured on river basins from the watersheds to the estuarine areas and would embrace water rights, efficient use, conjunctive allocation, water quality, and basin planning, thus enabling strategies for community development, private sector participation, environmental sustainable development, and inter sector coordination. Some 18 months after the request, the bank has formulated a program for NWRMP, with implementation proposed after the successful completion of the WATSAL recommendations and conditions plus the follow up legislation that may be enacted.

Following the formation and development of WUA and WUAF, the IWUA will be formed as the entity responsible for the O&M of the irrigation scheme, under the one-scheme, one-management principle. It will then be necessary for the IWUA, as the legal farmers/water users’ irrigation area (scheme) representative, to be one of the representative stakeholders at the level of river basin

water management, under the NWRMP.

The Water Right and Basin Water Management are further discussed in Annex C3.

(2) Requirement of Progressive WUA Development and Selective Application of Action Plan

The present stage or level of development and the actual problems, administratively, technically, financially, etc, faced by each existing WUA are variable between WUAs and are, in general, WUA specific. For example, some tertiary units have no WUA; the WUAs are not active, and the majority of WUAs are not legally registered. In addition, there are many WUA-federations that have been formed within a program’s terms of reference or by the direction and guidance of regional government, and in some instances without farmer/community participation.

WUA development cannot be implemented within set specific time periods. Development to sustainability requires several processes and an extended period of time to implement, i.e. from the public awareness up to self-reliance and democratic farmers organization. Through the New Order Government, irrigation systems were constructed with zero to minimal participation from farmers; designed and constructed mostly on technical issues, and less attention made to the existing farmers organization and traditional socio-cultural background. After the construction of the irrigation system, farmers were not informed in detail on irrigation system management procedures (O&M). Irrigation system management was the responsibility of and implemented by the government officers, such as *ranting dinas, juru pengairan, juru pintu*. Farmers were responsible for the tertiary or village unit and therefore were only concerned with the “receipt of the water”, expected a service without payment. This system of irrigation management cannot be repeated.

If the farmers are involved in the irrigation system planning stage, farmers can therefore understand the incentives, that they have the ability, in most years, to produce second season paddy during the dry season. The incentive, understood by their participation, they are able to accept responsibility for their contributions to the irrigation system construction and O&M. Now, the Government policy of the irrigation turnover program is intended to transfer the responsibility for O&M of an irrigation system from government to the farmers/water users. For farmers to accept the turnover policy and develop a spirit of belonging, positive incentives are needed. Actually farmers, up to now, have received the incentive of increased cropping without any administrative or financial burden being requested from the government. There is a need for a different approach; not a hand-over of the responsibility of irrigation management but to allow the farmers to consider and decide to take over and accept the responsibility. Through the empowerment of farmers, allow them (WUA) to be able to discern and prioritize his problems; to look for solutions, and to identify themselves as the food providers of Indonesia. Empowerment starts by the intervention of a facilitator; it then takes time to start, nurture, and develop the empowerment, which has numerous activities. The quickest way to start the empowerment of farmers for irrigation management is through the existing farmers’ organization of *Kelompok Tani*, if functional and successful, and other farmer organizations at each level of WUA as shown in the table.

Typical Level of WUA, Irrigation system and institutions

WUA level	Irrigation system level	GOI Admi. level	Farmers organization
WUA	Quaternary	Dusen	Kelompok Tani
	Tertiary	Desa	-
WUAF	Secondary	Kecamatan	KUD
IWUA	Primary	Kabupaten	PUSKUD

The following table shows the stage of WUA development and governance within the irrigated area. The development of WUA shall be progressively conducted through the continuous intervention of

the facilitator, stage by stage. During the progression of the development process, the necessary partnership between farmers and government officials will be strengthened with trust, which will accelerate WUA development, resulting in sustainable irrigation management and the successful turnover irrigation management.

Stage of WUA Development

Stage of WUA Development	Governance	Source of Finance	Management capacity
Transitional period for formulation WUA = socialization	PU & WUA & farmers, Existing farmers organization (<i>Kelompok Tani</i>)	Government and Iuran	Non – joint Government & farmers
Formulation of WUA	Transition PU to WUA	Transition PU to WUA – formulate Government financial input and adoption of WATSAL – Kabupaten Improvement Fund	Formulate institution and management. Implement the JICA Study concept of a Kabupaten WUA Coordination Support Group
ISF (<i>Iuran</i>) collection step by step, impossible full O&M cost of irrigation	WUA with support from Kabupaten – On-the-job training	WUA	Developing the WUA capability, and extend field activity – Kabupaten WUA Coordination Support Group to assist
Transitional period of formulation of Federation	WUA & farming community with PU assistance – Kabupaten WUA Coordination Support Group	WUA & Government if socialization programs are required	WUA and Government joint management – Kabupaten WUA coordination Support Group
Formulation of federation of WUA	WUA with PU assistance	WUA and WUAF	WUAF & Government Joint Management
Participatory rehabilitation	WUA under PU assistance	Government and contribution of labour forces & farmer funds with submission of a plan and financial report to the Kabupaten Improvement Fund	Management of participation by the farmers with assistance from the Kabupaten WUA Coordination Support Group – PU, <i>Pertanian</i> & Local Govt.
Formulation of Induk WUA	WUA, WUAF, farming community with PU assistance	WUA and WUAF & Government for the purpose of socialization & facilitation of farmer acceptance	WUAF & Government Joint Management
Post turnover activities	IWUA, WUAF & WUA with assistance from the Kabupaten WUA coordination & Support Group.	WUA, WUAF and IWUA & Government under joint management	Empowerment but assistance from the Kabupaten WUA Coordination & Support Group until the WUA or WUAF or IWUA is self-standing and self-sustainable

The Action Plan, formulated in the Study, is the detailed activities that need to be taken for the improvement of irrigation management and the empowerment of WUAs for the enhancement of the turnover program. The flow chart of activities is shown in the following table. The application of each activity is referenced, stage-by-stage, and is based on the condition of WUA development as shown below.

PREPARATION STAGE	Activities at WUA level	Activities at higher levels
	<p>Public made aware through social preparation</p> <p>WUA leader/farmer given initial training</p> <p>Temporary committee prepares end-of-year report</p> <p>WUA leaders/farmers given basic principles training Technical assistance provided: <ul style="list-style-type: none"> - cropping plans - operating plans - maintenance plans - loan setting methodology, etc </p> <p>Start-up package provided (schematic/other assistance, etc)</p> <p>Technical assistance provided: (legal aspects)</p> <p>Govt registers new/reformed WUA</p>	<p>Policies and priorities finalized H</p> <p>Govt staff awareness H</p> <p>Irrigation systems/WUAs inventoried H</p> <p>Job Irrigation Co-ord Forum established H</p> <p>PTGA staff given refresher training H</p> <p>Temporary committee established H</p> <p>CO recruited & trained by PTGA H</p> <p>CO trained by PTGA ?</p> <p>TOT</p> <p>Technical training provided</p> <p>Operational funds provided</p> <p>Inter-agency coordination provided</p> <p>Schematic prepared</p> <p>Technical training provided</p>
	<p>WUA leaders/farmer given technical training (as required)</p> <p>Technical assistance provided, (as required)</p> <p>WUA prepares annual report</p> <p>Govt assesses annual WUA progress,</p> <p>Technical assistance provided: (legal aspects)</p> <p>Govt registers new GWUA</p> <p>GWUA prepares annual report</p> <p>Govt assesses annual GWUA progress</p> <p>GWUA agrees its O&M responsibilities</p> <p>Govt agrees its O&M responsibilities</p> <p>Joint Management agreement prepared</p> <p>Scheme turnover registered</p>	<p>TOT</p> <p>Operational funds provided</p> <p>Operational funds provided</p> <p>Operational funds provided</p> <p>Govt O&M funds earmarked</p>
	<p>Technical assistance provided: <ul style="list-style-type: none"> - scheme potential assessment - rehabilitation proposal </p> <p>Cost sharing formula agreed</p> <p>WUAs contribution collected</p> <p>Govt funds provided</p> <p>Govt assesses construction progress/quality assurance</p> <p>Govt assesses post-rehab performance</p>	<p>Technical training provided</p> <p>Proposals vetted</p> <p>JDF established</p> <p>H Preliminary activity</p> <p>Core activity</p>

The implementation of the three aspects of the Action Plan will be site specific with respect to each Kabupaten and each irrigation scheme area (DI). During the public awareness programs, at all designated levels, and during the inventory of the irrigation system and WUAs, “needs based assessments” and PRA will determine the status of the level of development of Government officers and agencies, WUA and farmers.

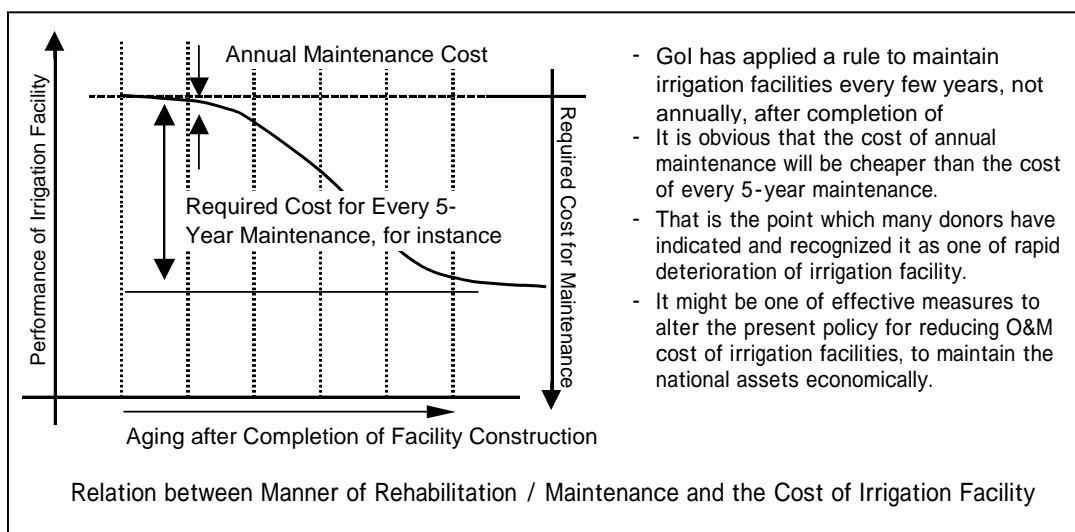
It is not intended that the preparatory and core activities be implemented as a regimented stepped process from Action 1 to Action 11. From the information obtained via the WUA inventory, PRA and “needs based assessment”, it can be determined at what level or what Action number is the starting point. For example, through the participatory involvement of the farmers, it may well be requested to start at the WUAF formation stage and progress from there or it may be deemed far wiser to commence at the farmer level of WUA reformation or new WUA formation. The methodology of implementation must be done subjectively and wisely. The training or development of an already successful WUA is a waste of resources, whereas the development of a

WUAF without farmer and community understanding may create an unsustainable position. Government officers need to be sensitive to the status of farmer and WUA development so as to be able to provide guidance and support with wise and appropriate counsel.

(3) Progressive Reduction of Government Subsidy

For many years almost any expenditure on secondary and primary irrigation system O&M was provided by Government, apart from those funds which were collected as ISF and which found their way back into the coffers of the irrigation sector. Given that the subsidy was generally insufficient to cover real O&M costs in the first place, because some of the funds never reached as far as field level or were used for other purposes, particularly minor rehabilitation, it was inevitable that conditions often deteriorated rather rapidly.

Under ideal conditions, given it is now being appreciated that it is vital for irrigation systems to be given full O&M treatment, Government would be increasing its estimate of the overall full O&M cost, attempting to maximize farmers' contributions and making good the difference through the provision of a subsidy whose utilization would be carefully monitored. The next step would be to gradually increase farmers' contributions, to reduce O&M costs as the Government administrative element of the cost would be reduced, as the opportunities for misappropriation are reduced, as more tasks are undertaken using *gotong-royong* rather than hired labour, and to reduce the Government subsidy accordingly. It should also be borne in mind that it is generally cheaper to operate and maintain a system when its condition is good rather than when it has deteriorated, and that overall productivity on a good system is higher than when it is only functioning partially.



In reality, the situation could not be much further away from ideal. Government simply cannot afford to set realistically high O&M estimates; farmers' contributions have dwindled to almost nothing, and there is increasing pressure to use O&M funds for repair activities, as the budgets for rehabilitation have been substantially reduced.

(4) Target Years and Phasing

It is the responsibility of Central Government to provide guidelines with regard to which schemes will be turned over and the extent to which the assets on each scheme will be turned over. In times past, given the wide range of potential external supporters and the huge overall size of the

development budget, it would have been a relatively easy task to prepare a phased turnover program. The situation is now completely different; there are only a few programs in the pipeline, the prospects for obtaining new support are very uncertain and domestic funds are very meager.

Government's best approach appears to be one where it targets its efforts towards turnover in those areas where there is the most likelihood for success, (probably where, for example Government staff are best prepared; where WUAs are already operating reasonably efficiently, and where the irrigation system is in reasonably good condition and is relatively simple in design and operation). If systems that are currently in reasonable condition can be kept in good condition, it should then be unnecessary to subject such systems to rehabilitation in the short to medium term. In general, it is suggested that lower priority be given to those schemes where there are major rehabilitation requirements or where there are major problems, for example with sharing water.

Whilst it might be relatively easy to draw up a schedule of schemes where the turnover process could be initiated, it is impossible to estimate how long it will take for each scheme to achieve full turnover or the impact this will have on the requirement for O&M subsidies and rehabilitation funds.

(5) Turnover Criteria

Irrigation Management Turnover as one of the components of the Irrigation Management Policy Reform, includes the following principles:

- Adhering to the principle of one irrigation system – one management, the government shall deliver the irrigation O&M management role as well as the irrigation financial management for all irrigation systems to WUA in a gradual, selective and democratic way.
- For irrigation systems that have not been delivered to WUA, the management shall be carried out jointly between the Government and WUA, until such management and financing can be fully delivered to the WUA.
- For irrigation systems that have been delivered, the Government shall still monitor and evaluate these systems, and offer technical assistance as well as financial support for any matters that cannot be resolved by the farmers.

Basically, the principles envisage; 1) a flexible approach which is not rigid, 2) a partnership relationship between the Government and the farmers/WUA, 3) continued Government involvement, 4) mutual agreement regarding irrigation management turnover and 5) no limitation of the scale/size and the type of irrigation scheme.

With regard to the WUA, as the farmers' organization to whom the systems will be turned over, the following aspects should be considered:

- WUA should be formed based on the willingness of farmers, formed by farmers and to fulfill the needs of farmers. WUA should have its roots in its members/farmers.
- Administratively, the turning over of an irrigation scheme from Government to WUA should be addressed to WUA as a legal body. The status of WUA should be a legalized and registered body.
- Because the farmers' organization, i.e. WUA is not an expert in irrigation management, then it is necessary that Government should remain involved in providing assistance and expertise in irrigation management and should be a condition for turnover.
- According to the size of the irrigation scheme, the organization of WUA could be single WUA (small scale), federation of WUAs, a WUAF (medium scale) or a federation of WUAF, (IWUA) (big scale). Turnover could be addressed to WUA, WUAF or federation of WUAF

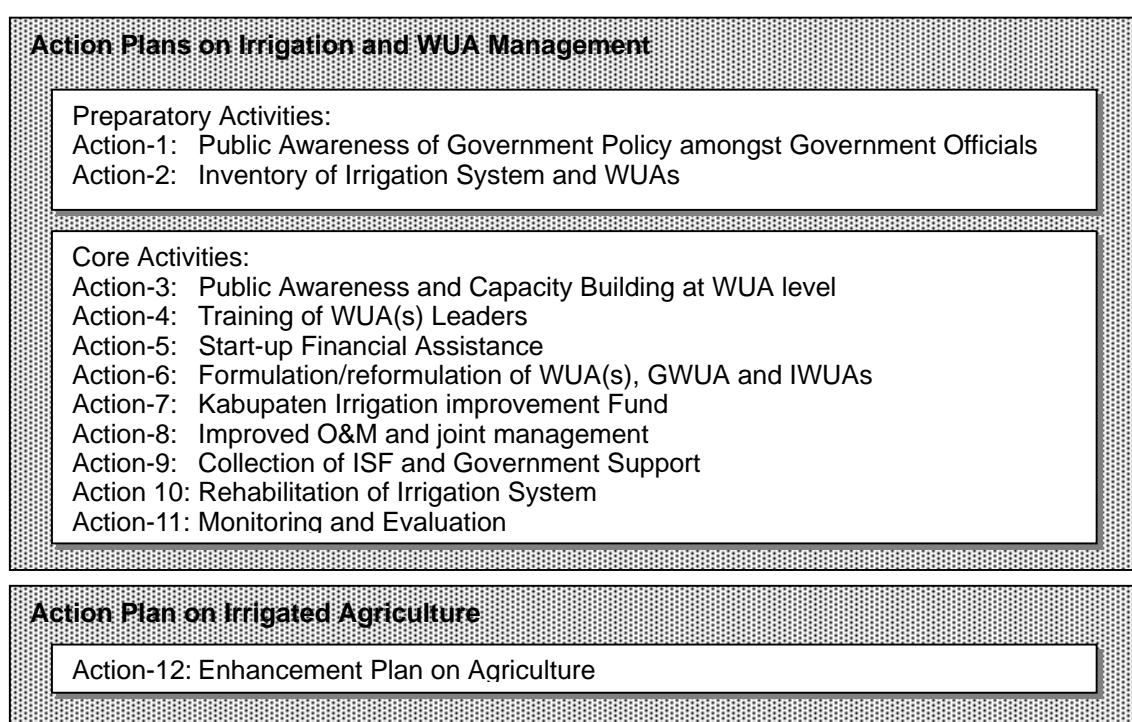
(IWUA) depending on the size of an irrigation system.

According to the above, turnover criteria are as follows:

- WUA/WUAF/IWUA who will receive the turnover should be a farmers' organization that has its foundations rooted in its members.
- WUA/WUAF/IWUA should declare that they are happy to receive the responsibility of turnover.

6.3.4 Basic Course for Provision of Action Plan

As shown in Fig. 6.3.1 in the previous sub-chapter 6.2 of this report, the Action Plan is provided with a time schedule and task allocations from analyzing the irrigation related problems of both Government and farmers, examining the countermeasures determined by objective analysis and confirming those results *insitu*. The Action Plan is composed of 11 actions, as follows:



6.4 Preparatory Works on Irrigation and WUA(s) Management

6.4.1 Public Awareness of Government Policy amongst Government Officials

(1) General

Taking into account the scope of works as specified below, and the necessities to commence PPI implementation, 6 months is recommended for the duration of the public awareness program.

(2) Program Description

Basically the program deals with a participatory needs assessment, program design and plan, and implementation to enable Government officers in the selected Kabupatens and Municipality to be able to adequately facilitate the PPI implementation. Therefore it is our considered opinion that program activities need to include the Government administration system inclusive of a change in the attitude of Government officers' to one of facilitation and guidance rather than one of implementer.

(3) Executing Agencies

As mentioned above, this program is participatory. This means that the executing agencies are mainly Government Agencies that will be targeted themselves by a competent Consulting Team at Provincial level, which is responsible to JICA and the Government of Indonesia. The executing agencies are as specified in the table below:

Field level:	<i>Pengamat/Ranting Government Agency, Kecamatan Government, and Village Government.</i>
Kab/Mun level:	<i>Kab/Mun Government and Bappeda, Pengairan and Pertanian Government Agencies.</i>
Provincial level:	<i>Provincial Government and Bappeda, Pengairan and Pertanian Government Agencies.</i>
Central level:	<i>Ministry of Kimpraswil.</i>

(4) Program Background

The irrigation policy reform has been formulated from the Government side, thus it is the Government that must be prepared to put the irrigation reform policy into operation.

Unfortunately, findings from the field within the Study Provinces, indicate an inadequate Government administration system, either inter or intra sectional and sector, inadequate office and field management capacities, and in some instances, inappropriate orientation and approach, i.e. top-down, sector interest, Program approach, target oriented etc. are extremely prevalent.

Countermeasures must be considered in accordance with the new paradigm of decentralization and democratization. Government is no longer to be the implementer of development. A change must be made by enabling and facilitating the people (water users) to develop to a level so as to recover both the trust of the people through true participatory development and economic growth.

It is however important to note that currently some actions have been already taken, 1). the issuance of *PERDA* (Kabupaten and Municipality regulations in particular) corresponding to regional autonomy laws and regulations (Law No.22/1999, Law No.25/2000, etc). 2). Reorganization of Kabupaten and Municipality Government organizational structure and the redefinition of regional Government and sectoral Government Agencies accordingly, 3). socialization in a limited sense for irrigation policy reform, and 4). inclusion of the Province and the selected 6 Kabupatens and 1 Municipality into the JICA Study 2000/2001.

The on-going different Programs are also important and need to be accounted. The Government's attitude change must be supplementary to the comprehensive change of Government to the application of the KDP methodology of implementation, the P3DT scheme and the support shown for the irrigation-related Programs such as PTGA, WATSAL, and the Batang Hari and Batang Anai schemes etc.

(5) Target and Verifiable Indicators

The overall goal of the program is to improve and support the preparedness of the Kabupaten and the Municipality Governments and their related sectoral Government agencies to adequately disseminate and facilitate the irrigation reform policy for successful implementation.

To ascertain the achievement of the overall above goal, the following outputs are considered: (a) the ability of the Kabupaten and Municipality Governments to prepare adequate Action Plans for dissemination and facilitation of PPI implementation, (b) the ability of the Kabupaten and

Municipality Governments to produce materials, instruments and tool-kits as required for dissemination and facilitation of PPI implementation, (c) the ability of the Kabupaten and Municipality Governments to prepare financial resources and arrangements accordingly, (d) hire and train COs as required, (e) initiation of Kabupaten/Municipality Irrigation Coordination Forum, and (f) ability of the Government officers to be highly motivated civil servants for the purpose of facilitation and guidance.

(6) Beneficiaries and Others

And as a result of the above, approximately 631 Government officers, at Provincial and Kabupaten/Municipality levels, will directly benefit from this program. For details refer to Table 6.4.1.

Following a needs assessment, assistance should be provided by the Consulting Team at Provincial and Kabupaten and Municipality Government levels so as to enable them to prepare, by themselves, plans and implementation methodologies for the listed outputs as above, during the 6-month program period.

PTGA teams will receive refresher training via a one-week training so as to enable them to facilitate CO recruitment and adequate training at the Kabupaten and Municipality level. The hired COs must be graduates from University with minimum 3-year field experience in rural development and irrigated farming in particular.

Priorities must be given to irrigation schemes, therefore a maximum of 3 schemes per Kabupaten and Municipality must be selected so as to allow efficient management. Local Government must therefore select from the existing schemes using the acceptable screening parameters.

6.4.2 Inventory of Irrigation System and WUAs

The JICA Study found many errors and incorrect inventories of both irrigation infrastructure and WUA status. Field investigations revealed outdated and incorrect information. Efficient, factual and accurate inventories are a necessary requirement for WUA empowerment. The following six (6) inventory Action Plans are proposed within the program, “Inventory of Irrigation Systems and WUAs”.

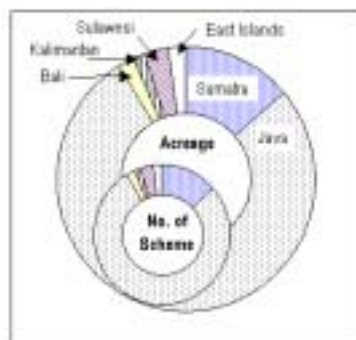
- Action Plan INV - 1 Major Irrigation Scheme Inventory Updating Program
- Action Plan INV - 2 Small Scale Irrigation Scheme Inventory Updating Program
- Action Plan INV - 3 Water Resources Related National Asset Database Installation Program
- Action Plan INV - 4 WUA Inventory Provision Program
- Action Plan INV - 5 Irrigation System Assessment Program
- Action Plan INV - 6 Irrigation Scheme Rehabilitation Proposal Competition Program

Details of the program background, the necessity for Action Plans, implementation schedules, and the necessary funds for the Program implementation are described in this section.

(1) Background of the Program

Government asserted a maximum effort to achieve “Food Self - Sufficiency” from independence up to the beginning of the 1980s. After the declaration of “Food Self-Sufficiency” in 1984, the efforts were continued to meet with demands of yearly population increases. Some 18,769 irrigation schemes encompassing 3,946,000 ha was the achievement by 1996. But even though the

investment for irrigated crop production infrastructure was massive, details of the present condition of the irrigated infrastructure national assets is not known at either the central or provincial capital cities. The latest detailed



Irrigation Schemes Over The Country (Acreage and Number of Schemes)

Region	Acreage		Irrigation Schemes	
	[ha]	(%)	[Number]	(%)
Sumatra	754,054	19.1%	2,596	13.8%
Java	2,578,799	65.4%	14,748	78.5%
Bali	79,782	2.0%	402	2.1%
Kalimantan	53,438	1.4%	229	1.2%
Sulawesi	367,029	9.3%	585	3.1%
East Islands	204,586	4.9%	448	2.3%
Total	3,946,652	100.0%	18,769	100.0%

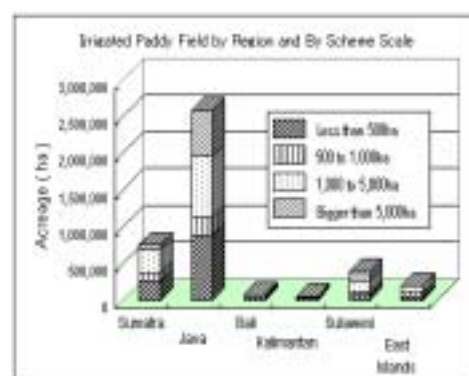
Source: Arahjoko, Chandra, dan Sidiyasa, Direktorat Jenderal Pengairan, Departemen Pekerjaan Umum

information was summarized in 1993. The information is quantified in the tables, excluding map, oriented information. After 1993 the inventory was not updated at central level.

Acreage and Scheme Sharing Among Regions by D.I. Scale

Region	Acreage Sharing by D.I. Scale & Region				Scheme Sharing by D.I. Scale & Region			
	A < 500 ha	500 < A < 1,000 ha	1,000 < A < 5,000 ha	A > 5,000 ha	A < 500 ha	500 < A < 1,000 ha	1,000 < A < 5,000 ha	A > 5,000 ha
Sumatra	19.70%	23.30%	21.70%	9.40%	12.40%	25.50%	27.50%	16.30%
Java	66.80%	51.40%	59.20%	73.20%	80.80%	44.10%	49.20%	62.70%
Bali	3.30%	2.20%	1.50%	0.70%	2.10%	2.20%	2.10%	0.70%
Kalimantan	2.00%	2.80%	1.00%	0.00%	1.00%	4.70%	2.30%	0.70%
Sulawesi	4.80%	10.60%	10.40%	14.70%	2.00%	13.20%	11.70%	17.60%
East Islands	3.40%	9.70%	6.20%	2.00%	1.70%	9.90%	7.20%	2.00%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Arahjoko, Chandra, dan Sidiyasa, Direktorat Jenderal Pengairan, Departemen Pekerjaan Umum



To determine the present condition of the national irrigation assets requires a visit to the scattered *Kabupaten* and/or *Ranting Dinas* (branch) offices of the provincial *Dinas* KIMPRASWIL, in an endeavour to obtain the “as-built” drawings. For a number of irrigation schemes (areas) most of the information has been lost. The only way to determine the present condition of an irrigation scheme is via a “Walk-through” survey.

Measures for routine maintenance have never been a serious activity in previous Government irrigation sector O&M management and budget programs Hence “objective oriented” scheduling/planning for regular maintenance of an irrigation system has never been nurtured within the irrigation sector.

The total WUA targeted is approximately 110,000¹ throughout Indonesia and to date formation of some 35,500 has been achieved, around 30% of the target. Of this 30% only some 7000 are classified as active and some 500 as legally registered. The reasons for such a low achievement has been examined previously and further examination will be continued. But a most serious issue for the local government administration of WUA is a lack of accurate information regarding the present condition of the WUA and/or the farmers. And there is difficulty in setting concrete annual targets on progress for establishing new WUA or strengthening their institutional maturity (both new and existing). Currently this is the

WUA Formation Progress by Region

Region	WUA Developing Stage			%
	SBH	BBH	Total	
Sumatra	362	8,108	8,470	4.3%
Java	35	20,895	20,930	0.2%
Bali	215	1,396	1,611	13.3%
Kalimantan	35	604	639	5.5%
Sulawesi	243	3,549	3,792	6.4%
East Islands	127	2,562	2,689	4.7%
Total	890	34,552	35,442	2.5%

¹ Total area over the country of PU irrigation scheme: 5,300,000 ha. If being assumed 50 ha per unit WUA at tertiary level, 106,000 WUAs are estimated (= 5,300,000 ha/50 ha)

responsibility of local administration in an environment of a lack of knowledge and a lack of participatory methodology.

The important information needed at present, to satisfy the direction of irrigation scheme O&M policy and irrigation reform policy is 1) potential blocks where WUA should be established within respective irrigation schemes, 2) present conditions of WUA that are keeping farmers from cooperating with WUA or present conditions that are preventing farmers from agreed WUA formation, 3) constraints of existing WUAs that prevent farmers from participation in low level activities and 4) information relative to the available lessons of failure and experience of success so as to adapt, facilitate and guide the not-yet matured WUAs or to assist and advise on possible formation scenarios and block (area) size so as to enhance WUA establishment.

Under the new paradigm of Government re-construction and autonomy, the issue that requires the most intensive input is the application of awareness and delivery of the principle of irrigation benefits to the welfare recipients, i.e. farmers/water users and the local community. The lack of accurate irrigation scheme, WUA and agricultural information which should be available from well kept and accurate inventories does make judgments difficult in ascertaining the necessary measures and solutions for each irrigation scheme, community/farmer and WUA case. It is expected that a national inventory is the measure needed for the compilation of the present constraints of farmers and WUA empowerment. A WUA inventory will not only contribute for setting the necessary measures, constraints and solutions for the subject of WUA empowerment and enhanced turnover but will also contribute to related aspects; national asset management, regional development, and basin water management etc.

(2) Necessity of Those Action Plans & Implementation Schedules

Three (3) inventory Action Plans are prepared for the clarification and collection of fundamental information of irrigation schemes nationally that will assist national asset management. Action Plan INV-1 "Major Irrigation Scheme Inventory Updating Program" aims to cover irrigation schemes bigger than 500 ha, while Action Plan INV-2 "Small Scale Irrigation Scheme Inventory Updating Program" is set for irrigation schemes less than 500 ha. The reason for such deviation is to let farmers be involved in providing the irrigation system inventory as much as possible. An irrigation area of less than 500 ha can be handled and completed by a farmers' inventory. Action Plan INV-3 "Water Resources Related National Asset Database Installation Program" is proposed as a tool to compile results of these two inventories into a computer system database to ensure public utilization. Hence, the program might be a part of the "Water Resources Related National Asset Database" which will be completed later and in parallel, including other sector's facilities.

Action Plan INV - 4 "WUA Inventory Provision Program" aims to complete the WUA inventory that the JICA Study Team initiated during the Study. The issue of turnover of the responsibility for the O&M of irrigation systems is an important subject, not only for the Government's financial management viewpoint but also for the farmers' viewpoint of realizing their self-reliance.

Action Plan INV - 5 "Irrigation System Assessment Program" is proposed to clarify the reference points or procedures to assess and appraise the necessary rehabilitation works of irrigation systems. Also the program will assist in the determination and establishment of rules and regulations of task allocation (responsibilities) for each Kabupaten where one irrigation scheme covers more than one Kabupaten. It will also allow the establishment of rules and regulations so as farmers/WUA can

coexist with other water use sectors.

Action Plan INV – 6 “Irrigation Scheme Rehabilitation Proposal Competition Program” is a participatory proposal for the implementation of the actual planned program; allowing farmers to be involved in the maintenance and/or rehabilitation planning for their irrigation schemes while showing the real incentive of planned irrigation management through regular O&M and/or the needed rehabilitation. Also a concept of “Competition” is adopted as part of the program implementation. This is adopted as a means to train and guide the WUA/farmers for the presentation of maintenance and rehabilitation proposals to the Kabupaten and through this concept of competition they are able to recognize the importance of strengthening their own institutional capacity through their individual participation. And, not through a reliance on continued Government assistance in the form of “donations (financial, material etc.)” but by working jointly with Government on the technical inputs.

(3) Considerable Aspects on Implementation For Regional Characteristics

There are no noted differences between the regions or provinces with respect to the issue of program implementation, except that the application of the implementation is not rigid so as to accept any encountered variables.

6.5 Action Plan on Irrigation Management and Turnover

6.5.1 Public Awareness and Capacity Building at WUA level

(1) Expected Implementation Period

It is envisaged, once an irrigation scheme prioritization plan has been prepared, that this program would be introduced at an early stage in the selected DI. The activities envisaged are ones that are required at the very beginning of any WUA empowerment initiatives being launched. The public awareness element would be phased over a few months; the capacity building component would probably extend for longer, depending on the requirements and capabilities of the target group. In some cases the farmers on a particular DI might be completely unfamiliar with the WUA concept; elsewhere there may already be a WUA where little or no public awareness and/or capacity building would be required.

The WUA public awareness initiative would generally only be introduced in DIs where it is intended to follow-up with other initiatives that eventually would lead to system turnover. There would be little point in making farmers aware if there is little immediate prospect of them participating in a WUA empowerment and turnover process.

This activity would be an integral part of any WUA empowerment program and would continue for as many years that the overall program extends.

(2) Executing Agencies

It is anticipated that, in general, a much more flexible approach will be taken with regard to WUA empowerment than has been the case in the past. The general principle will be, once initial contact has been made with farmers and farmer groups, as far as possible Government will respond to farmers’ needs as they are requested. Whilst it is initially envisaged that Community Organizers (COs), COs working with a temporary committee assisted by a consultant group, will provide the initial public awareness service. With regard to the capacity building activities, COs may be

primarily responsible, but other sources may be involved if the situation requires it.

(3) Program Background

The main problem being faced is that many farmers are either unaware of, or are misinformed of current Government's policies regarding WUA formation and irrigation system turnover. Whilst the basic principles have been established, to some extent the policies are still being developed and the public awareness program will need to keep astride of the emerging policies.

1) Public awareness of changing the farmers' attitudes

The main message will be that a complete change in farmers' attitudes is required with regard to the irrigation system that supplies their water. At present, many farmers view their irrigation supply as a virtually free gift from Government, and one for which they have little responsibility or over which they have little authority. The intention is that farmers will understand that they can no longer expect to receive water at little or no cost, and that they will accept the routine financial and management responsibility for the O&M within specified sections of the system. In return, they will be given rights, as yet not clearly defined, over the system and the opportunity to organize water distribution in a manner that maximizes benefits to the user. The concept of empowerment has to be promoted at this point.

A less clear aspect of Government's policy relates to the rehabilitation of irrigation schemes. Given the past experience of under-providing for O&M and the alacrity with which funds were made available for rehabilitation, a culture of doing as little maintenance as possible has developed. Farmers are now being requested to improve maintenance standards well above those that Government has practiced in the past, in order to reduce the extent and frequency of future rehabilitation works. The message that needs to reach the farmers is that, although Government may well have to provide some assistance, it is definitely in the farmers' interest to reduce the need for rehabilitation as much as possible. No longer will rehabilitation be provided freely and farmers will be required to make substantial contributions towards the cost. The problem arises when the rehabilitation requirement is substantial say for example Rp 10 million/ha. It has to ask farmers to share more than a token percentage of the overall cost.

2) Public awareness of irrigation management requirement

An associated message will be that it is in the farmers' interests to keep a system in top condition for as long as possible, as this minimizes the extent to which annual productivity falls. It is very difficult for those farmers at the margins of a system where water availability falls off rapidly once rehabilitation has been completed. Farmers also need to be made aware of the fact that the process of rehabilitation is in itself disruptive, and the less frequent the better it is for the farmer.

Whilst the intention is that the situation will return to that which existed in the past where farmers with their own irrigation systems took on complete responsibility for O&M and rehabilitation, and to promote the sense of belonging, the reality is not so simple. Whilst this might be of relevance on schemes where, in the past, Government provided some assistance to an existing farmer-constructed scheme, many irrigation systems have been built in areas which previously either supported rainfed cropping or which were virtually uninhabited. Some of the systems would never have been built if farmers themselves had had to cover the cost themselves. To expect farmers in these areas to re-adopt a full responsibility attitude is not realistic.

3) Public awareness of farmers' organization

Having convinced the farmers of the need for a complete change in attitude, the next step is to convince them of the need to organize themselves so as to face the challenges ahead. This is where the concept of the WUA, whether it is based on traditional systems if such exist or existed, on other existing communal organizations or on the more formal systems which have been the main focus of more recent WUA promotion activities, needs to be introduced and clarified. Whilst every attempt should be made to encourage farmers to form the organization that they want, it is likely that many of the basic elements will be fairly standard. One particular feature that is likely to be standard is, as long as the concerned irrigation system is expecting to receive some Government assistance, for routine O&M of parts of the system or for rehabilitation, that the organization will have to be legally recognized. Creating such a legal organization and complying with the conditions which such a body demands are matters which can make considerable demands on farmers who have had no previous experience in such matters. Along with the numerous other responsibilities of organizing and implementing such matters as cropping calendars, operation plans, maintenance plans, Iuran fees and sanctions against non-co-operators, farmers should be made aware of the challenges they face.

4) Public awareness of Government's role

Having given a glimpse of the extent of the challenge, an important part of the initial approach to the DI will be to explain what assistance is available to the farmers from existing Government agencies and from outside. Such agencies will have already been prepared to provide any requested assistance under the activity mentioned above. It is likely that all the potential service providers will be introduced to the farmers, descriptions of services on offer will be provided and channels of communication identified. If, for example, it is considered appropriate to use the services of a CO, this person could coordinate the provision of such services. It is anticipated that Water Resources Service staff will be able to assist in preparing/refining operating schedules and maintenance schedules and in estimating realistic levels of O&M charges. Agricultural staff, in association with Water Resources Service staff, would assist in preparing cropping calendars and providing other agricultural services, as they are expected to do as their routine duties. Kecamatan staff would usually attend such initial visits; their main task would be to report activities to the *Camat*. Legal staff would probably not be required initially, but farmers should be made aware of the legal steps that they will eventually have to follow, and of the various agencies that could assist them in completing the process. Representatives of various non-government agencies, who consider they might have a role to play in assisting during WUA formation, might also be introduced during the initial visits.

5) Participatory approach

During the public awareness initiative, it will be necessary to both inform farmers of the issues mentioned above and to ascertain what are the farmers main interests, concerns, problems and requirements. To ascertain farmers' views, it is recommended that Participatory Rural Appraisals (PRA) be conducted, leading to the preparation of Project Design Matrix of PCM. It is possible that the CO would organize such surveys.

(4) Program Targets and Monitoring

The specific targets of this particular activity are to have:

- made contact with as many farmers as possible within each of the selected DI,

- adequately explained current Government irrigation policy,
- ascertained farmers' reactions and concerns and
- obtained the co-operation of local Government and non-government agencies staff, who have already been adequately trained and prepared.

It is suggested that it is not a target of this activity to establish WUAs; this is the target of a subsequent activity whose specific objective is WUA formation.

By the nature of its targets, this is not an activity where it is easy to assess progress. The real progress would be achieved at a later stage when the WUA is actually formed and is seen to be working at a level of self-sustainability. At the initial stage, success can only be measured in terms of the numbers of farmers who have been contacted and who have understood the message they have been given, the numbers of farmers who have been surveyed and who have provided meaningful responses and the extent to which those who could provide services to the farmers have shown that they are willing and able to co-operate with the current activity, and with any further activities if and when they are called upon to provide services.

There is no guarantee, and it should not necessarily be considered that the activity has been a failure if, farmers decide that they do not want to heed the messages with which this activity is concerned. There are many experiences that it is going to be particularly difficult for some farmers to accept the new responsibilities being thrust upon them and for them to fall in line with the new policies. It is likely that it will not be until they realize that Government really no longer has the money to continue subsidizing O&M and rehabilitation, and the systems have fallen into serious decline that many farmers will eventually understand that times have changed.

(5) Program Activities

This activity is primarily concerned with public awareness and capacity building. The first activity would be a relatively short input whilst the second one would probably be a phased activity over a year.

The public awareness activity would comprise identifying clearly the messages that have to be given, providing training to the staff (Government and others), identifying which irrigation schemes are to be covered during the current campaign and conducting the campaign.

This would be followed by activities aimed at enabling farmers to identify their problems, in particular in light of their new appreciation of Government policy, and of identifying solutions to these problems. The participatory survey methods used during the current Study would be applied and farmers would be encouraged to participate at all levels. At this point the main focus would be on institutional building, encouraging farmers to see the need for a coordinated approach and an appreciation of the desirability of identifying people who are capable and willing to adopt a leadership role, and at the same time who are willing to serve the interests of the community.

(6) Program Benefits

The benefits of this activity would be, if farmers accept the messages being given, that the door is then open for the remaining WUA development activities, discussed below, to be introduced. In some cases this initial process would not be required, to any significant extent.

In some DI farmers are already aware of the general gist of Government policy and they may have

already formed a WUA that, to some degree or other, is working. In such cases farmers/WUA officials may only need assistance on specific issues, which would be handled under one or more of the other activities discussed below.

(7) Pre-requirements

Before embarking on this activity it would be necessary for the following steps to have been taken:

- Agreement would have been reached on the content of the main message being delivered to the farmers,
- Specific DI within a particular Kabupaten would have been selected, on the basis of some rational selection criteria,
- Government staff, at Kabupaten and at lower levels, would have been suitably informed and trained,
- A Kabupaten Coordinated WUA Support Group would have been formed,
- A CO would probably have been recruited and trained, with regard to the main message, the survey methodology, the services which Government could provide, and the staff concerned,
- Contact would have been made with non-Government agencies who might be of assistance,
- Funds have been earmarked to cover the cost of implementing the activity, and any subsequent activities which would ensue, should the initial approach prove to be successful.

(8) Risks and Sensitivities

As mentioned above, there is no guarantee of success in terms of farmers accepting the message that would be given under this activity. The message is not one that is welcome to many farmers and they have seen what Government has done in the past. From Government staff's viewpoint, they may also not appreciate the shift in policy.

6.5.2 Training of WUA(s) Leaders

(1) General

The training of WUA is a program categorization as part of irrigation scheme development, either by Program application or Government funded incentives. The training of WUA Leaders' program is can be instigated as part of other programs, in particular the application of the PTGA program. At all times the training of farmers who are elected WUA leaders should be applied at all times, where possible, as on-the-job training, as requested by farmers in statements of "we learn by doing".

(2) Implementation Period

By taking into account the scope of works, as specified below and the necessity to commence PPI implementation, the program needs a duration of about 6-month for implementation.

(3) Target Area

The program needs to be applied locally for the all irrigation areas of Indonesia. Using West Sumatera as an example, it is important to consider the site selection on local needs which for ease of administration means application based on "the request" basis. Thus a decision of approval, i.e. accepted with remarks, or not accepted (also inclusive of remarks), can easily be made by using a set of local standardized and suitable criteria for local needs and with consideration of regional and national prioritization.

(4) Program Description

Basically the program deals with; a participatory needs assessment to establish training needs,

program design and implementation of WUA leadership training, enhancement of WUA leaders' capacity for organizing and strengthening their WUA efficiently and effectively so as to achieve sustainable WUA and thus sustainable irrigated agriculture within their DI of responsibility. Thus the proposed training curriculum needs to include both WUA management (administration and financial) and irrigation O&M.

(5) Executing Agencies

As mentioned above, this program is participatory. This means that the executing agencies are mainly the targeted Government agencies who themselves are being assisted and coordinated by a competent Consulting Team at both Provincial and Kabupaten levels, who in turn are responsible to the JICA and the central Government, as specified in the table below.

Government Admin.	Executing Agency	Role
Field level:	Consulting Team's Training Facilitators	T
	Kab PTGA Team, CO, KPL	L-R
	Sub-Kab Dinas Pengairan & Kecamatan Government	I-Pr
Kabupaten level:	KICF (Kabupaten Irrigation Coordination Forum)	I-D-A-F
	Kab Government, Bappeda, Dinas Pengairan, Pertanian etc	B-T
Province level:	Prov Government, Bappeda, Dinas Pengairan, Pertanian etc	B-C-ME
	PTGA	B-C-ME
	Consulting Team	T
Central level:	Kimpraswil, Bappenas	B-C-ME
T – Technical Assistance L – Local Facilitator R - Resource Person D – Decision A – Action F - Funding		I - Initiative Pr – Proposal B – Beneficiaries C – Control ME – Monitoring & evaluation

(6) Program Background

The field study findings of the JICA Study within the 5 Provinces indicates the current problems that need to be addressed by the program, are mainly: 1) WUA/WUAF is inactive, limited or non functional, 2) irrigation management fund (ISF/IMF) collection for O&M or *IURAN* payments from the farmers is not in process or is minimal, and 3) O&M applications or programs are inadequate. The problems are interrelated with each other and with agricultural production and which in turn leads to increased sedimentation, a lack of water, low production, and low farmer income, etc.

A countermeasure must be made. Assuming that WUAs were formed or reformed democratically, i.e. WUA leaders were elected and legalized by the WUA, i.e. the farmers' General Assembly, it is evident that WUA leaders are a representative critical point that must be addressed by this program for changes to be permanent.

It is important to note that many kinds of irrigation and WUA-related training, in the past, were addressed to the WUA leaders, but there were no "follow-up" activities afterwards. Thus training needs analysis must be made carefully and the training designed accordingly to address the requested "training needs" of the farmers and WUA (inclusive of Government field operatives responsible for WUA formation and development extension) before implementation.

Both formal and field (on-the-job) learning must be appropriately combined so as to enable the

WUA leaders (Board) to compile a draft Action Plan of proposed O&M and rehabilitation needs, the end of training. It is also recommended that additional field assistance and guidance (extension) be available to the WUA following the completed training, as a follow-up of the training so as to ensure that actions will be readily undertaken by the WUA and water users community.

Training must be relative to the prevailing policies and priorities, but it also must be such that the subjects and the materials must deliver and understanding and familiarization of the practical aspects of field, administrative and technical requirements. Thus it is our considered opinion that the prevailing turnover requirements of; procedure, approval conditions, administration forms etc. must already be prepared at and by the Kabupaten/Municipality Governments and disseminated. Standard O&M activities were formulated and O&M calculation formula were defined and field-tested and simple examples were socialized accordingly for the determination of the ISF rate definition.

(7) Target and Verifiable Indicators

The overall goal of the program is to assist WUA leaders to be able to organize local participatory planning and implementation with their members for the achievement of sustainable irrigated farming. It should be shown from a number of WUA's annual Action Plans that result from an annual review and planning workshop of WUA and farmers and an individual WUA's annual General Assembly that must be reported annually to the local Kabupaten/Municipality Governments with copies to lower Governments that the goal is either being achieved or not.

To ensure the above goals are achieved a WUA leadership training program needs to include the following activities, namely: 1) Training needs assessment and analysis, 2) Training program and curriculum design, 3) Training implementation, and 4) Follow up as outlined above. For details see Table 6.5.2.

(8) Beneficiaries

Using West Sumatera Province as an illustration, it is evident that statistically, by including 6 Kabupatens and 1 Municipality, 21 schemes and 105 WUAs that approximately 675 WUA leaders, and 4,220 WUA members plus KPL, CO and PTGA teams will benefit directly from this program. The Provincial and Kabupaten governments and their various responsible sectors, departments and sections will receive an indirect benefit.

6.5.3 Start-up Financial Assistance (ref. Table 6.5.3)

(1) Start-up Subsidy

During the transitional period and particularly at "start-up", a time when socialization and community awareness programs are being instigated to obtain farmer acceptance through a "bottom up approach" to WUA empowerment and responsibility for irrigation management, Government financial subsidies may well need to be provided. These will assist WUA financially and ensure that EOM work programs, in particular the maintenance and rehabilitation program of works, are progressively addressed and implemented. A lack of financial assistance at start-up may well defeat the progress of empowerment or allow irrigation systems to further deteriorate.

As previously stated, farmers who are owner operators, generally receive a sufficient return from

farming to pay this study's estimated *IURAN*² even under current 2001 economic conditions and costs of farm production at all levels of cropping intensity. The ability of sharecroppers to pay the *IURAN* is very dependent on the economic costs of production; if these are high and gross returns are unfavorable, they receive a negative return from farming and are, therefore, unable to pay.

Past WUA formation and development has been instigated without consideration of the necessary finances to cover general administration, basic O&M management costs, board member's honorarium and gatekeeper salaries. In some cases the WUA board members and gatekeepers have met these costs themselves, for reimbursement at harvest, or the WUA activities have not been realized or the WUA has become inactive. In these instances the WUA development has been at the tertiary unit or village based irrigation system of less than 500ha, level. Costs were manageable and maintenance costs minimal due to *gotong-royong* or other self help inputs. Now that WUA irrigation management responsibility extends to the secondary and primary canal levels and head-works, expected maintenance costs and/or rehabilitation costs will be high. Even with a water user acceptance of and an agreement to pay the *IURAN*, payment may not be made to the WUA until the next harvest, or even later.

In these instances, WUA do not have a financial basis from which to fund general WUA activities. And for that reason, it is therefore recommended that Government financial assistance, in the form of a start-up fund, be granted to each WUA, WUAF or IWUA for a minimum period of two years, with an evaluation of WUA financial sustainability determining the need for continuation of the start-up fund. This assistance could take the form of a subsidy or a loan; since water users, as shown above do have the ability to pay, then it is not unreasonable for the assistance to be in the form of a repayable loan. This would allow the WUA to function administratively and to implement basic O&M management programs; once *IURAN* payments are received, the WUA would be capable of accumulating a cash fund and repaying the loan.

Initially the Program should be implemented in the 5 pilot provinces. Once procedures are understood and accepted by both the farming communities and local government staff the Program should be expanded to the 12 Provinces selected in the IDTO Program. Initially, two kabupaten, in each of these provinces, will benefit before a more general approach is made.

Executing agencies are expected to be the responsible Government sectors through the Kabupaten Coordinated WUA Support Forum.

(2) Program Background

The above activity discussed the provision of financial assistance for initial WUA start-up operations. The intention is to encourage and motive newly formed WUA and in particular assist those WUA who presently, for whatever reason, are inactive or have minimal activity to become and identifiable, democratic and sustainable organization. In these instances assistance will be needed to cover administration and O&M costs, say for the first two years, in order for WUAs to accumulate a cash-fund (from their own *IURAN* collections) thus enabling operations to proceed with a positive cash balance after the "start-up fund" financial assistance has been removed. The

² The *IURAN* referred to in this chapter is a yearly payment, paid either yearly or seasonally by farmers to the WUA is inclusive of the required O&M payment, the old payment system to WUA Board members, *Ulu-ulu* or *Ili-ili*, in kind, for services rendered. The term *IURAN* has during the course of the Study, under WATSAL, been renamed IMF – Irrigation Management Fee (*Iuran Pengelolaan Irigasi*).

financial assistance could take the form of a subsidy, loan or credit. Awareness training for both WUA personnel and local government officials is viewed as a necessary part of this process. A needs based budget (AKNOP) will be prepared as part of this assessment.

(3) Problems Addressed

The Non-WUA condition is caused through a number of conditions that can range from cultural to technical or even from family feuds to inter-village problems. It is intended that a protocol and procedure can be worked through along accepted participatory pathways to first gain confidence, acceptability, and cooperation from the local peoples, while they select and agree on their local representatives. Once this is achieved it should be possible to commence the start up process and the formation of WUA. This program addresses the probability that in Non-WUA areas there are initially no contact persons in the village and in areas where the farmers do not possess the capability to start up a viable accounting and disbursement system to carry out maintenance and repair of their irrigation network.

(4) Significance of Program

In specific Kabupatens, Kabupaten Irrigation Improvement Funds will be established in order to encourage regional government responsibility to ensure efficient maintenance works and prevention of costly rehabilitation investments. This would establish a matching reciprocity for WUA contributions to their own capital reserve funds. This fund is open to registered WUAs with a service agreement where such WUAs are well developed advanced in the development process and represent only about 19% active and 1.7% legally registered of the previously formed 38,000 WUA, as stated in section 6.4.2. The majority of farmers are as yet not organized into representative groups (non-WUA areas).

The non-WUA areas are in greater need of assistance than those who already qualify for assistance. This activity is to develop procedures and guidelines for assessing the non-WUA areas and getting them to the point where the non-WUA groups can apply for registration. Once this has been achieved these newly formed WUAs will be in a position to avail themselves of the advantages open to already formed WUAs. A part of this program must ensure that local government officers are capable of understanding the special needs of non-WUA areas and/or disbursing the assistance in terms of encouraging and funding of activities.

(5) Program Relationship with National Policy

Part of the National Irrigation Policy requires the development of WUA institutions to accommodate sustainable development in this sector. The current programs operating under IDTO have effected some change in the development and efficiency of WUAs as organizational tools through which various improvement initiatives can be channeled. This action will cater for that larger portion of the farming community that have not yet started organizing into WUAs and motivate them towards this goal, so that they may become part of the mainstream of development.

(6) Program Targets and Monitoring

Overall Goal: To achieve primary moves towards WUA capability improvement.
Performance Indicators: Adoption of systematic approach and methodology, time needed to complete the individual task, presentation, clarity, decision-making processes, implementation times, and performance supervision.
Output: Numbers of new WUA formed from base level, quick, effective and

accurately costed reporting, is relevant to the existing field condition.

(7) Activities

Non-WUA identification and prioritization, Awareness exposure, WUA startup and representative selection procedures, field inspection and reporting, cost evaluation, negotiation and discussion, contract formulation, bid evaluation, contract supervision.

(8) Assumptions

Assumptions that WUAs, *Gabungans* or *Induks* (with assistance from local government staff) do not already have the capability to carry out these actions themselves and require assistance and training to complete these tasks to an acceptable standard.

(9) Program Inputs

Staff Allocation: The program should be introduced over 12 Provinces, 5 provinces as a pilot scheme and the remainder to match the IDTO provinces. Staff numbers will depend on the number of Non WUAs and the demand from these less developed areas for development. This will be on the basis of individual Kabupaten and the local area demand for assistance.

Provisional Equipment: Transport, local office provision, training materials etc

(10) Program Benefits and Impacts

Direct beneficiaries: These would be the members of the WUAs affected in the pilot Provinces, who would benefit from improved and sustainable irrigation supply.

Indirect Benefits: Through improved incomes, better livelihoods could be expected from the members' families. Local government would benefit from improving the communities development under more equitable conditions.

(11) Others

Related Programs: IDTO (AKNOP methodology)

Pre-Requirements: AD/ART is not a requirement for entry to this scheme, in fact only those areas that do not have recognizable development, should qualify.

Risk and Sensitivities: Conditions of approval for access to assistance are a willingness to join in the methods and programs to be carried out in order to organize and motivate the farmers.

Special Remarks: Such funds have been available under Program components in the past and these Programs should be reviewed. Methods used for training should include and undertake existing guideline materials. The rate of adoption and success should be assessed before launching a new initiative.

6.5.4 Formulation/reformulation of WUA(s), GWUAs and IWUAs (Table 6.5.4)

As described previously, the formation of WUA in unit areas (e.g. tertiary unit) of an irrigation scheme should be based on the willingness of farmers, formed by farmers and to fulfill the needs of farmers. In the process of formation, the involvement of facilitators is needed to guide them, particularly in socio-economic, technical and institutional aspects.

Resulting from the public awareness activity it is expected that farmers will become aware that the organization of WUA should provide benefits. After the awareness campaign farmers would discuss among themselves whether or not they are keen to form a WUA. If they are willing to form a WUA, they would then democratically select their representatives. The following activities would be undertaken:

- The representatives would request local government to provide guidance.
- Government would provide trained field staff for guidance.
- Government field staff would train the representatives to become guides for their people and training would cover socio-economic, technical and institutional aspects
- Using the participatory rural appraisal (PRA) method the representatives would guide their people to discuss the needs, problems, potential resources and prepare profiles of existing socio-economic, technical and institutional conditions. The result of this discussion would be the base data and information for further development of WUA.

Utilizing the base data, mentioned above, and in particular the socio-institutional profile, a series of farmers' meetings would be held to discuss; structure of organization, articles of association, election of officials, work program etc. including detailed management of the organization, such as fee and sanctions to be determined. The outcome would be the formation of a WUA in the designated unit area of an irrigation scheme that is supposed to manage the tertiary or village (unit) level. Government field staff should always provide assistance during these processes.

By reporting to the head of Kabupaten/Municipality the legalization of WUA organizations can be processed through the registration either with the public notary or local court.

Based on the socio-economic and technical profile, government field staff will continue to provide guidance and training to further increase the capability of WUA in tertiary or village unit management. Indicators that can be used to evaluate progress of WUA development are; more frequent meetings of both officials and plenary/members meetings, increased cropping intensity, eliminated illegal off-take, increased coverage of irrigation service fee, and EOM, for example, construction of possible additional tertiary canal system, equitable water distribution, tidy canals, structures repaired and operational, sediment removed, etc.

That process of WUA formation is applied to all areas within a particular irrigation scheme.

It is expected that by having experience in managing tertiary unit(s) – on-the-job training, it will become evident to the WUA that there is a downstream area dependency for water on the upstream areas. By realizing this problem and their understanding of 'the one-irrigation system, one-management' policy (from training), it is expected that they will see the need to form a federation of WUAs, i.e. a WUAF and up to a IWUA, to coordinate total management of the irrigation system. This kind of realization, which arises from practice of WUA responsibilities, will be more fruitful than just receiving knowledge through training. But, such a process takes time.

To form Federation of WUAs (WUAF), officials of individual WUAs, established on one secondary canal level, should set up regular meetings to discuss possible similar WUA requirements and needs, such as the structure of the WUAF and its management principles of administration and O&M, articles of association, election of officials, and the workable application of work programs and areas of responsibility etc. Again, registration through public notary or local court is a prerequisite.

Before the turnover to WUAF, the management of the main system of the irrigation scheme is still the responsibility of local Government. After turnover there will be either a WUAF management of a joint Government and WUAF management. There needs to be a consensus of agreement as to the roles and responsibility of Government and WUAF, if joint management is to be part of a particular

turnover scenario. But, the possibility of granting local government contracted rehabilitation work for the main system to the WUAF, instead of using common contractors as has been practiced in Cimanuk irrigation scheme, should be considered. This kind of guidance and transfer of responsibility is very effective to encourage WUAF to develop the organization, as seen by the Cimanuk irrigation scheme experience. The encouragement may be due to the fact that the WUAF is entrusted to manage the work and generate its own capital and is appreciated by its members because employment is created.

After the implementation of the contracted rehabilitation work it is expected that WUAF would be motivated to participate in O&M programs of the main irrigation scheme infrastructure. Local government has to encourage the willingness of WUAF to be responsible for the O&M because it is a critical process of turnover, acceptance of responsibility.

It has been noted that such kind of encouragement for WUAF, using budget for the contracting of works, is also needed for the initial formation or reformation of WUA at the tertiary level. The Kecamatan Development Program (KDP) described in paragraph 3.2.2 of this report, may be transferable to the tertiary unit maintenance program. For KDP, the community is encouraged to participate in the KDP program because there is a budget provided by Government to be managed by the community itself. Such a budget might be made available for farmers in a tertiary unit to be used for rehabilitation or constructing new tertiary system, as long as a legalized WUA has been formed and registered.

6.5.5 Kabupaten Irrigation Improvement Fund (KIIF) (Table 6.5.5)

(1) General

It is proposed under the IBRD supported program of IDTO to implement a pilot development of a Kabupaten Irrigation Improvement Fund (KIIF). It is intended to implement this in two kabupatens, in each of 12 Provinces within the scope of the current IDTO program. The objective of this is to test operational procedures for WUAs applying for assistance from this fund and to test the management and accounting procedures of local government who will be in charge of the fund. The expected output is a set of guidelines and criteria that will help both the WUA officials and the local government officers with the management of the fund.

The fund should operate on the principle of participatory design where the selection of sites is done by the WUA (not by Dinas staff) and that a comprehensive listing of these sites is worked into the local irrigation reform program. Those WUA participating in the design process will have to be properly established and be participating in a service agreement with Dinas. The following guideline topics need special attention and clarification:

- Concept Principles demand based assistance, not to be used as a substitute for O&M funds.
- Eligibility Criteria
- Proposal Preparation Procedure
- Review Procedure
- Selection Criteria/Priority Criteria
- Implementation Procedure
- Cost sharing principles

Under the pilot approach to this scheme various principles need to be clarified. If eligibility is to be maintained as a selection criterion, some thought should be given towards the fact that such strict

screening procedures are excluding assistance to those most in need. While it is appreciated that standards must be set and that such standards act as targets for others to strive to achieve the real element here is one of capability. For example, if a WUA has capability but does not have registration, owing to the time taken by the procedures, should it be excluded from applying for assistance? Will the application of this fund and assistance create a double class situation whereby those WUAs, which are registered and hold a service agreement, are the WUAs who will get the benefit from the KIIF as well, while non-registered WUA are not eligible to apply to this program for assistance. It is quite easy to imagine a situation whereby the scarce resources of trained and experienced Dinas staff will be concentrated on the leading and best developed WUAs, helping with participatory service agreement, or applying KIIF criteria, while other less fortunate WUAs fall further behind through lack of attention.

The possibility of this condition occurring and the fact that if it does occur it would adversely affect the larger proportion of the irrigation community has prompted this Program to focus an action on those areas without recognizable or functional organization. These areas loosely grouped as Non-WUA areas have been identified for special Start –Up Assistance.

Initially the target area of the program is in the 5 Provinces selected as the Study Provinces

Executing agencies are expected to be the responsible Government sectors through the Kabupaten Coordinated WUA Support Forum.

(2) Program Background

In accordance with WATSAL proposed recommendations, Irrigation Improvement Funds will be established in order to encourage regional government responsibility so as to ensure efficient maintenance works and the prevention of costly rehabilitation investments. This would be established with a matching reciprocity from WUA contributions to their own capital reserve funds.

(3) Problems Addressed

This activity is to assist WUAs to prepare proposals for the request of financial assistance from the Kabupaten Irrigation Improvement Funds for maintenance and rehabilitation priority programs. The proposals should include full details on designs, the work required, drawings, cost estimates, and the matching contributions to be made by the WUA (in cash, labour, provision of materials, etc). The greater the contribution from farmers either financially or in kind (labour and materials) or both, the more likely that the proposal will be granted financial assistance. Monies would be disseminated through the existing KDP pathways.

(4) Program Relationship with National Policy

Once the WUA organizations have been involved in preparing, designing, constructing, contributing and supervising the rehabilitation work, there should be an improved 'sense of ownership' of the irrigation scheme.

(5) Program Targets and Monitoring

Overall Goal: Maintenance and rehabilitation with transparency.

Performance Indicators: Amount requested, amount dispersed, achievement recorded on the ground, length of canal involved, type of structure maintained, (an inventory by the Kabupaten Coordinated Support Group and the WUAF).

Output: Efficient operating irrigation systems.

- Activities: Request compilation, field inspection and reporting, cost evaluation, negotiation and discussion, contract formulation, bid evaluation, contract supervision.
- Assumptions: that WUAF or IWUA (with assistance from local government staff) do not already have the capability to carry out these actions themselves and require help to complete these tasks with authority.

(6) Program Inputs

- Budget: A needs based budget (AKNOP) will be prepared as part of the request document
- Staff Allocation: This will be on the basis of individual Kabupaten and the local area demand for these funds. NOTE: This will be directly influenced by the awareness programs, which are run in conjunction with this program.
- Provisional Equipment: The availability of word processing would be a bonus in order to help maintain records, neatness and clarity of presentation of the requests. Other equipment would be part of the contractor's responsibility, for supply.

(7) Program Benefits and Impacts

- Direct Beneficiaries: Initially the beneficiaries would be the members of the WUAs affected in the pilot Provinces, who would benefit from improved and sustainable irrigation supply.
- Indirect Benefits: **Through improved incomes, better livelihoods are expected for the members' families. Local government would benefit from improved communities developed under more equitable conditions.**

(8) Others

- Related Programs: IDTO and KDP.
- Pre-Requirements: Registration of the WUAs and WUAFs in terms of articles of association (AD/ART) giving the board the right to a formal bank account, to make legal applications for credit, and loans, etc.
- Risk and Sensitivities: Conditions of approval for access to the fund are the acceptance of a presentable action plan and the proof of some level of matching funds, not expected to average more than 20%.
- Special Remarks: IBRD is expected to make funds available to start this program. It is expected that after the first 2 years of pilot assistance the funding will be entirely taken over by the local authorities

6.5.6 Improved O&M and Joint Management (Table 6.5.6)

(1) Expected Implementation Period

For a particular Kabupaten it is anticipated that approximately three years would elapse between initiation and final evaluation of the impact that the activity has had on a particular irrigation scheme. This is, of course, an on-going activity and would be implemented throughout the period of the proposed Program.

(2) Target Area

Although this Study has confined its activities to five, important, rice producing provinces, the activities included within the recommended Action Plan are required nationally. It is recommended that, having borne in mind where any other similar activities are being undertaken, the target areas should be where the successful achievement of the Action Plan objectives are likely to lead to the maximum saving in Government funds in the long term, related, if realistic, with the maximum

increases in farmers' returns.

Whilst support is required everywhere, given the enormous potential investment that would be required to support this one activity, plus the other related activities, it is suggested that attention is again focused on the same provinces. Consideration could, however, be given to extending to other provinces where there are significant areas of irrigation. Within a particular province there would need to be careful selection of the Kabupaten to be included, and within the Kabupaten which schemes should be targeted. Care should be taken not to adopt a blanket coverage approach. In some Kabupaten there may be few schemes with good chances of creating high 'with-Program' benefits. Each DI has its own characteristics and it could well be that some should be given low priority.

(3) Program Description

This activity is pivotal within the overall Action Plan. Once a farming community has agreed to adopt the new irrigation O&M policy and has formed or is in the process of forming a WUA, it moves into a transitional period. O&M improvement at the individual WUA level would occur during this period, mostly from the training activity, and the associated follow-up training. The activity described in this section relates to O&M improvement of the WUAF, the secondary level WUA formation. It assumes that the entire component WUA are in place and that they have reached a point in their development where they see the need to form a federation. It should also mean that they understand pretty clearly how to organize proper O&M at the tertiary level; that they are willing for turnover; for participating in a joint management agreement, and for preparing rehabilitation. The main objective of this activity would be to provide technical support to the WUAF in preparing O&M plans covering the secondary system. While WUAs may have already determined their own cropping calendars, it does not, necessarily, follow that the overall WUAF cropping calendar should simply be the sum total of the individual WUA totals. It could well be that adjustments would need to be made to the individual WUA calendars, to ensure that water is equitably and efficiently distributed throughout the WUAF command area. Assistance might, therefore, be required on WUAF level cropping calendars.

The above mentioned technical assistance would all be part of the process required to arrive at a position where the WUAF is ready to enter into a joint management agreement with Government with respect to the sharing of O&M responsibilities for the secondary level infrastructure NOTE: It is assumed that in most cases, joint management at WUAF level would leave the primary system as Government responsibility. The sharing of this section of the infrastructure would be sorted out when a joint management agreement is established at the IWUA level.

During this period, WUAF are expected to improve their capabilities, and possibly an IWUA might be formed so as to prepare proposals for any required primary scheme rehabilitation. And the WUAF may be at a level so as to be empowered to generate income from other activities. At the same time, the concerned Government agency would have learned to respond to requests for technical assistance, on matters concerning system O&M, WUAF operation and agriculture.

(4) Executing Agencies

The main agency concerned would be the local irrigation service, supported by the local agricultural extension service. Activities would be coordinated through the Kabupaten Coordinated WUA Support Forum. Other agencies might be called in, as and when their services are required.

(5) Program Background

The program's rationale has emerged from a consideration of recent changes in Government policy towards irrigation management and regional autonomy, along with an analysis of the problems expressed by farmers and by others, particularly, although not exclusively, from various levels of Government. Whilst there has been significant activity in this field for many years, as a consequence of the continued financial crisis, the need is now urgent. Past attempts have not been very successful, with neither Government nor the farmers really accepting the main principles. It is now hoped, against a background of the new policy emphasizing farmers' participation and the stark reality that Government cannot afford to continue to heavily subsidize irrigation that all parties concerned will participate, despite the fact that farmers will be expected to make substantially greater contributions towards the costs.

(6) Program Targets and Monitoring

The target of this particular activity is to maximize the number of hectares of irrigated land which are fully turned over to the farmers or for which final agreements are made between farmers and Government, defining the extent of each party's responsibilities, in perpetuity.

An intermediate target would be to maximize the number of successfully operating WUA/WUAF that are capable of managing their systems in such a way that the target mentioned above is achieved.

(7) Program Activities

The main activities within this component would be to identify in which irrigation systems WUAF have been formed, to ascertain that they are prepared to enter into joint management agreements, and to prepare staff in anticipation of being requested by the WUAF to provide technical assistance related to WUAF level O&M planning, cropping calendars and joint management agreements. It is not anticipated that there would be a need for any significant preliminary socialization activity, as by the time WUA are ready to form a WUAF, the leaders should be well aware of the overall situation and understand well the necessity for improved O&M at the secondary level. Base line information would be prepared against which 'with-Program' progress would be assessed during the monitoring and evaluation of the activity.

(8) Program Inputs

The main inputs are:

- Services provided by Government staff and possibly by other agencies, mostly in the form of technical assistance,
- Community level support, with particular emphasis on encouraging farmers/WUA to identify their needs and to seek assistance from the appropriate source,
- Co-ordination support from the Kabupaten Coordinated WUA Support Forum.

Other inputs, related to this activity, would be provided through other related activities.

(9) Program Benefits and Impacts

The long-term benefits will be reduced or eliminated O&M subsidies; hopefully reduced expenditure on rehabilitation, and improved crop returns. In the future, whether farmers will actually be any better off than they are or not, is not possible to judge under current conditions. They will be involved in considerably more O&M expenditure, but whether or not this would be

compensated for in terms of improved productivity depends very much on the scheme and on the location of a particular farmer's plot, within the irrigation scheme. What is in little doubt, however, is that farmers who cooperate with the program are likely to be much better off in the future than those who do not – there are few prospects that Government will ever again be able to provide the continuing support for irrigation that it has in the past.

(10) Related e past. Programs and Programs

All the other activities within the Action Plan are related to this activity.

The ongoing IDTO program has many of the same objectives and has adopted many of the approaches being recommended.

(11) Pre-requirements

Where there are no WUAFs or where they are currently weak, considerable work will have had to have been done in terms of making farmers aware of recent Government policy changes, the desirability of WUAF creation and the need for farmer cooperation, before this activity could proceed.

If there is a reasonably successful WUAF already existing, decisions would have to be made whether or not it would benefit from support under this activity. This activity is not a rigid one; it can provide support at any time, from the point when a WUA is just about to be formed through to when the WUAF is ready to take on its final responsibilities. At this latter point it could be that a WUAF needs some technical assistance to make the final step, or advice on a specific technical issue. As the program proceeds, it is envisaged that the relationship between WUAFs and Government would be strengthened on a long-term, routine basis and that WUAFs would become accustomed to calling on Government assistance, as a normal course of events.

When a particular irrigation scheme is being prepared to enter into a joint management agreement, it will be necessary to make preliminary estimates of the funds that will be required from Government for O&M and rehabilitation over a number of years. Whilst these can only be preliminary estimates, it will be important that tabs are kept on the total future fund requirements for all schemes in a particular Kabupaten, whether they are within, or plan to be within or are outside the Action Plan. A prerequisite of this activity is that there are sufficient funds available to ensure that Government does not extend its financial commitment beyond its future means.

(12) Risks and Sensitivities

As with most activities of this nature, the chances of failure, or partial failure, are relatively high. An inspection of what has happened in the past can only reinforce this view. The hope is that with new policies, a participatory approach and a call for greater integrity, results will be better in the future than they were in the past.

6.5.7 Collection of ISF and Government Support (Table 6.5.7)

(1) Irrigation Service Fee - ISF

Since 1984, the division of responsibilities and obligations for O&M were at the tertiary unit or village boundary. That is, farmers were responsible for the O&M management of the tertiary unit and village irrigation system through their democratically elected WUA organization while the Government irrigation department, was responsible for the O&M management of the main,

secondary and primary, irrigation system.

1) Paying ISF in Cash or in Kind.

Another issue that needs to be addressed during socialization, formation and development of WUA, is the how to pay the ISF. Farmers have, in the past, paid the ISF in cash and the WUA honoraria and Ulu-ulu payments in kind, as kg of paddy per unit of irrigated area. Farmers have for centuries paid for services rendered by payment in kind. Farmers appear to accept this method of payment far easier than cash payments possibly due to the ease of transaction. Also, since payment is being paid to the WUA and not to Government, the WUA is capable of selling the rice received, at a time and a price that is favorable. It is recommended by the JICA Study Team, that much of the ISF be paid in kind. For example, the above estimated ISF payment would be equivalent to 334 kg/ha per year at a wet paddy farm gate price of Rp.1,000/kg.

2) Nomenclature

PRA field surveys, farmer and JICA Study Team discussions seem to reflect an image of poor acceptance by farmers for the name Irrigation Service Fee (ISF). And, there appears to be a consensus amongst farmers, WUA Committees, consultants and Government officials that a name change is needed to allow farmers to reaccept an O&M service charge, i.e. an irrigation management fee. Farmers perceive ISF, as a tax and *IURAN* as a payment for service, so there may be validity in renaming the ISF to *IURAN*. This is the recommended name change by the JICA Study Team.

(2) Expected Implementation Period

This activity is an integral part of the Improved O&M and Joint Management Activity, with similar implementation periods.

(3) Program Description

Whilst the Improved O&M and Joint Management Activity is mainly concerned with the technical aspects of improved O&M and is somewhat general in coverage, this activity, which would take place at the same time, is specifically related to O&M costs. The main components of this activity concern:

- Explaining the case for promoting full O&M effort,
- Calculating realistic O&M costs, based on a needs-based-budget,
- Sharing O&M cost between the WUAF and Government,
- Farmers ability to pay,
- Practicalities.

Whilst, during initial public awareness campaigns at the WUA level, farmers would be made aware of the need to improve O&M effort and that an increasing amount of the cost burden would be placed on their shoulders, more explanation would be required at this stage. In particular, efforts would be made to convince farmers of the benefits that would accrue if water is more efficiently and fairly distributed and if the periods between rehabilitation activities are extended.

The method of assessing O&M costs based on system walk-through would be explained, and practical examples of how to prepare an overall cost estimate of O&M, related to those parts of the infrastructure for which the WUAF is responsible, would be prepared. Attempts would be made to identify clearly which items should be included under routine annual O&M, periodic O&M,

emergency repairs and rehabilitation.

Discussions would be held, during the preparation of the joint management agreement, as to how much each party would contribute and in what form. Agreement would have to be made regarding the phasing and channeling of O&M contributions, from both parties. As part of this exercise, attempts would be made to determine what would be a reasonable amount for farmers to pay, in the light of the returns they obtain from their irrigated cropping. Having determined this, it would then be necessary to determine whether it is reasonable that Government picks up the remaining amount. It would also be necessary to estimate how the farmers' contribution could be increased, and the subsidy gradually reduced. It will also be necessary to take account of the fact that full cost recovery will not be possible from the beginning.

It appears that the *gotong-royong* culture has, in some areas, weakened and farmers are becoming less willing to provide their own labour for maintenance work. This is, perhaps, an unfortunate tendency. O&M costs are going to increase and yet much of the cost is for the hire of unskilled labour. Farmers, understandably, will find it increasingly difficult to find the cash to pay increased O&M charges, but if they were to provide their own labour, the cash element of the O&M charge could be reduced. For many farmers, particularly on smallholdings, the one resource they do have is spare time.

Numerous practical issues would require attention including the following:

- Book keeping,
- Determining in what form farmers wish to contribute, (cash, kind, labour)
- Payment scheduling and collection,
- Dealing with reluctant payers and undisciplined water users, applying sanctions,
- Dealing with absentee landlords, and easing the burden on sharecroppers and tenants,
- Charging other water users,
- Preparing an all-inclusive rate, covering primary, secondary and tertiary system costs, including WUA/WUAF honoraria and water bailiffs allowances,
- Inclusion of WUA/WUAF membership fee within the all-inclusive rate,
- Determination of differential rates according to service level provided,
- Administering maintenance contracts,
- Deciding what to call the charge, *IURAN* is one suggestion,

(4) Executing Agencies

The main Government agency would be the local irrigation service, through the Kabupaten Coordinated WUA Support Forum.

(5) Program Background

In the past farmers have generally accepted the responsibility for the O&M of tertiary areas, although in many cases their activities have been sub-optimal. Poor operation has resulted in the inefficient use of water and inequitable distribution and poor maintenance has resulted in water shortages and, in many cases, in Government having to rehabilitate canals and structures unnecessarily often.

Government has accepted that the remaining infrastructure of the irrigation systems is their responsibility, but as with the tertiary areas, O&M has often been sub-optimal.

Attempts have been made in the past to charge farmers for some of the O&M work carried out on

the secondary and primary parts of the systems, through the imposition of an Irrigation Service Fee. Although the ISF program met with considerable success in terms of collection, particularly in areas where special efforts were made, the whole program has come to a virtual standstill. In many areas collection rates were reasonable and the desired impact of providing sufficient funds to allow full O&M was rarely achieved. Some of the reasons for this were that:

- the rates were often set too low, so that even when the ISF funds were combined with the Government subsidy, there were insufficient funds available to cover the full O&M cost,
- the fees were collected centrally, and not all of the funds were used for O&M,
- if the funds were used on O&M, they did not necessarily benefit the area from which they had been collected,
- Government continued to limit its contribution to O&M,
- farmers had little say with regard to the rates set, the method of collection or the utilization of the funds.

The new policy is that any water charge levied would be administered totally by the concerned WUAF, who would set the rate, collect the fee and utilize the funds. This policy should eliminate several of the past problems associated with the ISF. There is still, however, considerable resentment by farmers regarding the ISF program, and in whatever guise a new water charging initiative appears, it will take some time to break down farmers' distrust and reluctance. This is current policy and in some areas farmers are making payments for O&M.

(6) Program Targets and Monitoring

The specific targets of this activity are to maximize the number of WUAFs which have set adequate O&M cost levels and which have managed to collect sufficient funds from their members to allow them, with an agreed subsidy from Government, to provide a full O&M service. Evidence that this has been achieved would be that the system is seen to be in good working order, water distribution has been efficient and fair and the WUAF accounts are seen to be in order.

(7) Program Activities

Concurrent with the provision of other technical assistance, the first activity will be to identify which WUAFs are requesting assistance regarding ISF issues. It is anticipated that the next step would be to conduct walkthroughs, involving both WUAF representatives and Government staff, from the main off-take through to the tertiary outlets from the secondary canals. Whilst the secondary system will, at this stage, be of main interest to the WUAFs, as it is for this section of the system which will be jointly managed, there will also be a need for all parties to appreciate the O&M cost of the primary network, which at this stage would remain Government's responsibility. It is anticipated that during this walkthrough items that require rehabilitation will also be identified; these would probably not be costed at this juncture. After walkthrough the O&M related activities would be costed and agreement reached between the two parties regarding the allocation of responsibility. Assistance would then be provided to the WUAF to help establish the methodology for sharing cost between WUAs and, within WUAs between farmers, on a unit area basis. Rules and guidelines would be established regarding ISF collection procedures, with the objective of maximizing recovery rates.

(8) Program Inputs

By far the main input, particularly in the early years of development on a particular irrigation system, would be the provision of O&M subsidies. Whilst one of the main objectives is to reduce

the extent of this subsidy, in the short term it is likely that Government will be expected to provide considerably more funds at the scheme level than has ever been the case in the past. It appears that, in the past, most irrigation schemes have received only a minor proportion of the total real field level requirement for O&M funding, with neither Government nor the farmers providing enough support. If farmers are expected to form joint management agreements with Government and to make substantially greater contributions towards a realistic O&M cost than they have in the past, it is clear that Government will also be expected to make substantial contributions, in the initial stages. Unless both parties comply with the agreement, there are few prospects that the joint management agreement will hold.

Unless considerably more funding is provided by Government to cover O&M subsidies, it is difficult to see how a stable situation can be maintained. If similar budgets to those in the past are provided and certain schemes are given realistic field level O&M subsidies for the coming few years, problems will arise. The additional amount of money channeled to the field, in comparison to what is currently the case, will either have to be taken from the subsidies given to schemes which have not yet been included in the Action Plan or taken from that amount that has been traditionally diverted to other activities, including minor rehabilitation and corruption. Whilst a reduction in malpractice, if this is possible, would go some way towards solving the problem, it is still very likely that O&M funding needs to be substantially increased if Government will be able to honor its responsibilities as it enters into an increasing number of joint management agreements. The intention is, of course, that the subsidy element will reduce as the farmers' contributions increase; it is, however, unlikely that this process will take place over a short period. If the farmers are pushed too hard the agreements will break down and the effort and investment used to nurture the WUA/WUAF will be wasted.

Other inputs would be technical assistance to be provided primarily by Government, where staff would teach WUAF members how to conduct walkthroughs, prepare O&M budgets, keep books, etc.

(9) Program Benefits and Impacts

As same as "Improved O&M and Joint Management" in sub-chapter 6.5.6, this activity is one of several whose main long term benefit would be reduced or eliminated O&M subsidies, hopefully reduced expenditure on rehabilitation and improved crop returns.

(10) Related Programs and Programs

Within the IDTO Program, there is an element concerned with O&M charges.

(11) Pre-requirements

This activity concerns one, but, nevertheless, an important issue upon which the whole success of the empowerment relies. Whilst a sequence of steps have been recommended, there is in fact considerable flexibility within the overall program, and in reality farmers may choose to solve their own problems in ways which best suit themselves. They do not, for example, have to form WUAs in order to organize O&M effectively. With regard to O&M costs, however, there is really little flexibility – there is little option but to make reasonably accurate estimates of the costs and devise a method whereby each user contributes, in a reasonably equitable manner, towards the cost. The only real pre-requisite for this activity is that there is somebody who is capable of estimating costs and devising a system of water charges, and that a means of collection has been organized.

In theory, another pre-requisite would be that farmers' willingness has been assured. In reality, it is unlikely that full co-operation can be assured at the beginning, and one of the on-going challenges that WUAFs will have to face during the transitional period will be to work towards full cost recovery.

(12) Risks and Sensitivities

Most farmers are used to making some contribution towards the costs of O&M at the tertiary level; the objective of this activity is to build on this traditional system towards the recovery of O&M costs for the whole scheme, at a level which ensures that the system can be operated and maintained in a first rate manner. The differences between actual amounts spent in the past and the amounts that should be spent in the future if the work is to be done are very great. It is very likely that on many schemes the optimal situation will not be achieved, and the amounts spent will lie somewhere between the two extremes mentioned. The consequence of such a situation would be that a scheme does not work at its full potential and the time between rehabilitations is shortened. Neither of these events need be disastrous, but the combined impact of many schemes falling into this condition would be that Government will find itself back where it currently lies – with the somewhat frightening prospect that they will have to continue to spend vast amounts of scarce funds on the irrigation sector.

6.5.8 Rehabilitation of Irrigation System

(1) Expected Implementation Period

There is a considerable backlog of rehabilitation awaiting attention, and this program is at least one Program that should start in the near future. Given the lull in construction activity over the past few years and the continued lack of attention to providing for full O&M, the backlog can only get bigger.

There are many schemes where work could start immediately; it is suggested, however, that in the context of this Program, there should be no immediate rehabilitation, to allow the WUAF in the affected areas to develop, and to achieve the status that, in theory, they should achieve before Government provides assistance for rehabilitation. It is recommended, therefore, that funding for this activity should lag behind that allocated for the other activities, by around three years.

(2) Target Area

It is recommended that in the context of this Program, rehabilitation is only undertaken in those areas which have already been provided with Program assistance.

(3) Program Description

This activity comprises two main components, the preparation of proposals for rehabilitation and the financing and implementation of the works.

It is now recommended policy that farmers, through their WUAF, should participate heavily in the preparation of proposals for the rehabilitation of their schemes. The Program would, on request, provide assistance to the farmers in:

- assessing what rehabilitation and modification works are required to bring the scheme into optimal working order,
- designing parts of the required infrastructure where this is necessary,

- costing out the construction works, and determining how these are shared between the farmers and Government,
- assessing potential incremental benefits,
- presenting a completed proposal.

It is recommended, prior to any major proposal preparation work being undertaken, that if, for example there are any doubts about the availability of water, a preliminary technical assessment is sought. Not all schemes were well designed, some were not constructed according to design and some have been modified. In some cases, hydrological conditions have changed over the years, particularly where the catchment has been seriously damaged and where new competitors for water have appeared, since the scheme was originally constructed. Preparing a rehabilitation plan is not simply returning a scheme back to its original condition; it is more concerned with utilizing the existing infrastructure and water resources in a way that maximizes benefits to the farmers, whilst taking account of the cost.

Having prepared the proposal, this would then be submitted to the KIIF for vetting; if approved, the next step would be to prepare a financing plan. Funds for rehabilitation are very likely to be scarce, and there would probably be stiff competition for them. Whilst, in theory, a logical approach might be to request schemes to prepare proposals and then to choose the best of these for funding, this would not, in reality, necessarily be so practical. Proposal preparation is a costly process, and if a WUAF spends considerable effort in preparing a proposal, only to be rejected, this is not only a waste of money but could also be very disheartening to the WUAF concerned. It is suggested that before a WUAF embarks on proposal preparation, a preliminary assessment is made, to provide some idea of the chance that the final proposal will be accepted.

There is always the possibility that rehabilitation plans can be tailored to suit the conditions. If, for example, the costs are too high, cheaper ways of solving a particular problem may be found, or certain components can be postponed or shelved.

If a scheme has been approved, the next task would be to assist the WUAF in finding the most appropriate way of financing and implementing the construction work. Where appropriate, farmer participation should be maximized, and any existing or potential skills, which they possess, should be exploited. The Program would assist in supervising activities and ensuring that sufficient attention is being paid to quality control.

(4) Executing Agencies

Executing agencies of the program is expected to be the Kabupaten irrigation service, through the Kabupaten Coordinated WUA Support Forum.

(5) Program Background

Irrigation scheme rehabilitation has been a standard activity for many years. It is regrettable that frequent rehabilitation is now considered to be quite normal, with many accepting the situation where minimal effort is applied to routine maintenance and when, once the scheme condition has been allowed to deteriorate to a point that it can no longer be handled on a routine basis, a major rehabilitation Program is initiated. The whole scenario has been a bad one. It encourages all parties to be careless with Government property, it perpetuates reliance on Government and it results in unnecessary Programs.

It is perhaps a blessing in disguise that Government now finds itself in a position where it simply cannot afford to perpetuate the old practices. If the huge past investment in irrigation is to be safeguarded, and rice production secured, the only real option open to Government is to gradually reduce its support for irrigation, and pass much of the responsibility to the farmers.

The new approach is to provide support to the farmers to enable them to take much more care of their systems than has been the case in the past, so that they operate more efficiently and they do not deteriorate at the rate they did in the past. However carefully a scheme has been looked after, there will, nevertheless, come a time when parts of it will require rehabilitation. The new policy is that when this situation arises, farmers will be encouraged to prepare a proposal, work out a way whereby they will contribute substantially towards the cost and be involved in all aspects of the activity, from planning through to implementation. The simple logic is that with farmers' involvement, better use will be made of the funds provided, the quality of construction will improve and, once rehabilitated, farmers will be keen to maintain the fabric in good condition for as long as possible, thus reducing costs and maximizing water availability.

(6) Program Targets and Monitoring

The target of this activity will be to maximize the net benefits accruing to the rehabilitation funds allocated to this Program. This will be achieved by selecting those schemes that have the best potential and where farmers' contributions are maximized.

Care must be taken, however, not to adopt a blinkered Program approach to this activity. Whilst it would be relatively straightforward to allocate funds simply by selecting the best proposals submitted by WUAFs, it is recommended that a wider view be taken. Whilst this Program is heavily concerned with empowering WUAF, it is also concerned with empowering decision makers. In the context of this activity, the Program should also be concerned with empowering Kabupaten level staff to make them capable of looking at the overall situation within their area of jurisdiction and more skilful in making logical decisions. Whilst it is appreciated that there should be a fundamental shift in the decision making process, with farmers being the prime movers, there is still a place for Government staff involvement in influencing the decision making process. Farmers may be able to make a strong case for assistance and being given high priority. From an overall Kabupaten viewpoint, however, there might be other much more important issues which require attention. The skill will be to make investment decisions that balance the requirements of all interests.

(7) Program Activities

Prior to activity being initiated, requests for assistance would need to have been submitted by the WUAF controlling the irrigation system. The next step would be to make, in conjunction with the WUAF, a preliminary survey of the proposed works and an assessment of the potential improvements that could be expected. In some cases this could well involve a reassessment of the hydrological conditions, in the light of current catchment conditions, current competition for the water source and the existing command area. Before any detailed work is undertaken, a preliminary assessment should be made to ascertain whether it is worth proceeding with more detailed work. It is anticipated that the assistance would be provided by Kabupaten level irrigation staff or by a local consulting company or by a combination of the two.

Where it is agreed that it is worth proceeding, reference would be made to data collected during

any recent walkthroughs and a more thorough inventory of required works would be prepared. The need for any modifications to the existing network and for additional structures, flow measuring devices would be discussed and assessed. Of particular relevance could be the sections of the network that have a direct bearing on those farmers currently facing the most serious problems with regard to water availability. Also of concern would be the interests of other existing/potential water users who, perhaps, did not exist when the scheme was originally constructed. Required works would be surveyed, designed and costed and a phased construction schedule would be prepared. As farmers would be expected to contribute towards the cost of the rehabilitation work, the phased costs would need to be split according to whether they are to be covered by the WUAF or by Government.

Whilst it is not expected that rehabilitation proposals would be subjected to sophisticated financial or economic analysis, it is recommended that some simple benefit cost assessment be undertaken. This would involve the estimation of the additional cropped areas and improved yields that could be expected in the post-rehabilitation situation. Care needs to be taken to ensure that the incremental benefits are attributable to the improved condition of the infrastructure, and not simply to any proposed improvements in distribution techniques.

The proposal would need to be supplemented by evidence that the WUAF was closely involved in all aspects of the work. It would then be submitted for consideration to the body that controls disbursement of the rehabilitation fund. This proposal would then be reviewed and assessed in the light of its own merits and compared with other similar proposals being submitted by other WUAF. At the same time it would be necessary for the decision makers to be aware of the total funds available and of any other priority calls on these funds. Whilst it is likely that preference would be given to schemes that are clearly well supported by the WUAF, Government also has to be careful that it is preserving its investment in irrigation infrastructure in the best manner. It could well be the case that some irrigation infrastructure would be in need of urgent attention, even though the WUAF concerned have not expressed any interest nor prepared any rehabilitation proposals. Within a Kabupaten, there may well be a wide mix of scheme types and, initially, a wide range of WUA development. Planners need to view the whole asset and ensure that its limited resources are used in a rational manner; this could mean that certain rehabilitation activities are initiated, regardless of the level of WUA development in that particular scheme.

Once a rehabilitation proposal has been accepted, as submitted or with modification, Government would then assist the WUAF to determine the best manner in which the work can be undertaken. It is anticipated that emphasis would be paid to minimizing the disturbance that the construction has on farmers' activities and the length of the construction period. In times past there has been a real tendency to prolong rehabilitation works far beyond that which was necessary. Further assistance would be provided at the outset and during the construction period to ensure that the work is carried out in accordance with the design and with accepted quality standards. Systems would be established and applied to ensure that funds are disbursed and utilized properly.

M&E activities would be implemented, both internally and in association with the proposed M&E unit.

(8) Program Inputs

The main input for this activity would be funds, presumably channeled through the KIIF, or an

equivalent channel, which would be used for supporting the technical assistance provided to WUAF for the preparation of rehabilitation proposals and for the construction of rehabilitation works.

The other main input would be the technical assistance itself, provided by either or both Government staff and outside agencies, such as local design engineering companies.

(9) Program Benefits and Impacts

The immediate benefit of this activity would be the physical improvement of specific sections of infrastructure within irrigation schemes whose condition has deteriorated to a point where it is no longer possible or rational to attempt to put it back in order, by applying routine maintenance.

The impact of this would be that irrigation schemes would operate optimally, farmers' returns would improve and O&M would become simpler and, probably, cheaper.

(10) Related Programs and Programs

The Northern Sumatra Irrigated Agriculture Sector Program is scheduled to begin shortly in four or five of the most northerly provinces in Sumatra. One of these is West Sumatra, where the current Study has been operating. Whilst the preliminary processes do not follow precisely those recommended under this Study, the principles are basically similar and, should rehabilitation be funded under this Program in this province, there should be little conflict with the other proposed activity.

(11) Pre-requirements

Whilst in the past, rehabilitation was generally carried out before turnover the situation has now virtually been reversed with rehabilitation being one of the last activities in the empowerment sequence.

It is, therefore, a pre-requisite of this activity that the WUAF concerned has been through the recommended steps and the relevant scheme has already been turned over or has reached a position where it has been finally agreed what are Government's and the WUAF's responsibilities.

(12) Risks and Sensitivities

The process of rehabilitation is generally relatively straightforward and often, considerable incremental benefits accrue to quite minor investments. It is often preferable, from an economic viewpoint, to rehabilitate rather than construct new infrastructure.

Possible risks under this activity are that:

- WUAFs spend considerable effort preparing rehabilitation proposals, only to have them rejected,
- during the selection process, if too much account is taken of the WUAFs eagerness and willingness to contribute, and insufficient account is taken of the real viability of the scheme, sub-optimal allocation of funds could occur,
- farmers comply with all the prescribed steps, in order to obtain rehabilitation assistance, and then revert to the ways of the past.

6.5.9 Monitoring and Evaluation

(1) Introduction

The proposed Action Plan comprises a suite of inter-related activities, the eventual aim of the overall package being the successful turnover of irrigation systems. Whilst there is a logical sequence of activities, the links between them are not, however, rigid and there are instances where there are links between activities, even though they do not lie adjacent to each other in the sequence.

To ascertain how each link in the chain is functioning, it will be necessary to monitor and evaluate each step. In some cases this will be a simple matter of keeping records of actions taken, in some cases more rigorous attention will be required, particularly where impact is being assessed.

Activities within the Action Plan involve Government agencies at various levels, non-government agencies, including consultancy companies, and farmers, mostly as WUA groups. Government, being the source of most of the funds supporting the Action Plan, is required to monitor how its funds are utilized. The extent, on the other hand, to which WUAs should be free to do what they want, is less clear.

From a Government viewpoint, it would be useful if WUAs kept and presented detailed records of all their activities; in particular Government would be interested in the condition of the irrigation infrastructure, water usage, and crop production. The WUA may or may not wish to keep such records, and to make them available; this is their prerogative. If however, the WUA is, to some extent, dependent on Government for O&M subsidy, or if the WUA requests Government funds for rehabilitation, or that it is in a condition of joint management, then Government has the right to request some information from the WUA. There is also the question regarding the availability of information regarding WUA financial affairs: the general consensus appears to be that as long as a WUA is in a joint management situation it is obliged to make all its financial affairs transparent. In fact, any WUA having achieved legal status might also be required to make its accounts available for inspection, under the conditions laid down by law for such organizations.

In general, M&E is a time consuming activity and in many instances little information, even if it is actually presented, is used. Care should be taken to keep the M&E process as simple as possible, to present the information in as simple and as useful manner as is possible, and to encourage decision makers to consult the information before moving on to the next step. Where appropriate, payments for services rendered should be made contingent on the presentation of verifiable records of activities successfully achieved. It is also important that agencies, other than the one concerned with carrying out a particular activity, are involved in making assessments and spot checks.

For virtually all the activities in Action Plan it is recommended that those concerned with carrying out the activity should keep and present detailed records of their activities and achievements. It is further recommended that one activity within the Action Plan should be responsible for the M&E of the overall plan, verifying the information provided under each of the other activities, and where appropriate, carrying out its own investigations and spot checks. In the subsequent discussion this is identified as the Program M&E Unit.

To summarize for each of the 12 activities it is suggested that the following recording and M&E is undertaken. Details are given regarding the type of records that those responsible for each activity would be expected to keep, and of the particular issues which the Program M&E Unit would be

expected to cover.

(2) Public Awareness of Government Policy amongst Government Officers

1) Reporting

Records of the names and positions of Government staff contacted and provided with publicity material would be recorded by PTGA. Records of the materials used would also be kept. It is hoped that records of feedback would also be kept, with the intention that the public awareness program would be constantly improved. The names, qualifications and positions of the trainers would also be recorded.

The recommended Kabupaten Coordinated WUA Support Forum would need to keep records of its activities, detailing the names and positions of its members, meetings held, decisions made and actions taken. It is advisable that one member of the forum should be specifically responsible for collating and compiling the records.

2) Independent assessment

The Program M&E unit would conduct checks, interviewing officers who had received training to assess that they had received and understood the information. Particular attention would be paid to the officers' comments and reactions to the information.

(3) Inventory of Irrigation Systems

1) Reporting

With regard to the inventory of irrigation schemes, it is assumed that the company preparing the inventory would be required to utilize supervisory services that would vet the accuracy of the work.

With regard to the inventory of the WUAs, it would be necessary that all the WUA involved would participate, to confirm the areas that they consider to be located within their jurisdiction. The company preparing the WUA inventory would keep records of the meetings with the WUA, listing attendees and recording minutes of the meetings. For many schemes where in part of the area there are no WUAs, or where they are ineffective or where the boundaries are ill defined, it will not be possible to present a DI map, indicating exactly how the total area is divided up by WUA. Data should be presented indicating which areas remain unallocated to specific WUA.

It is recommended that most of the data related to the WUA inventory would be stored in the Program's database.

2) Independent assessment:

Regarding the irrigation system inventory it is assumed that the supervisory agency mentioned above would be professionally accredited and that its verification of the accuracy of the work undertaken would be adequate for monitoring purposes. Little follow-up activity by the Program M&E unit is envisaged.

Concerning WUA (and WUAF and IWUA) inventory, the Program M&E unit would conduct cross checks, to verify that WUA were indeed contacted and that the information presented reflected the views of the concerned WUA.

(4) Public Awareness and Capacity Building at WUA Level

1) Reporting

The agency responsible for this activity would prepare reports indicating what actions had been taken, in a similar manner as that described above regarding public awareness for Government officers. In this case, however, the requirements of WUAs and farmers in the pre-WUA situation are much more diverse than those of Government officials. Records will need to be kept of the requirements requested by farmers and WUAs, and the extent to which the activity was able to respond to these requests.

2) Independent assessment:

The Program M&E unit would need to carry out cross checks on the reported activities, to assess whether the activities were indeed undertaken and to assess how successful the campaign had been. From this assessment it would, where appropriate, modify the methodology applied and the material used.

(5) Training of WUA Leaders

1) Reporting

The agency responsible for providing the training would keep accurate records of the names, qualifications and positions of the trainers, of the persons being trained and the courses provided.

2) Independent assessment

The Program M&E unit would carry out cross checks to verify that the above mentioned reports were accurate and to assess whether the training had been of the required quality and that it had been useful to the participants. Checks would also be made to ensure that the recipients were indeed receiving the training that they required, and that the channels of communication whereby the farmers' requests were fed to those who provided the training were operative.

(6) Start-up Financial Assistance

1) Reporting

Simple records of the names of WUAs that had received this assistance would be maintained, specifying what assistance had been provided and the phasing of the assistance.

2) Independent assessment

The Program M&E unit would conduct some cross checks to verify that the information provided above was accurate, to verify the assistance had been used for the purposes it had been intended and to assess whether all the package components were appropriate and if the package should be modified.

(7) Formation and Reformation of WUAs, WUAFs and IWUAs

1) Reporting:

Simple records of the names of WUAs (etc) that had been registered would be kept, along with all the information that is legally required.

2) Independent assessment:

The Program M&E unit would carry out cross checks to ensure that the WUA formation process had followed an approved path, that the farmers had been fully involved, that the election process

had been democratic and that the WUA was aware and capable of moving ahead.

(8) Improved O&M and Joint Management

1) Reporting:

This activity is the one where the real impact of most of the other activities should come to fruition; the only significant remaining steps are the complete turnover of the system and possibly, rehabilitation.

This is a multifaceted activity, where there is interest in how the WUA is developing the performance of its responsibilities, in how Government is executing its responsibilities and in the physical impact which the combined performance of the WUA and Government is having on the irrigation infrastructure and on productivity. It is also concerned with the progress of the joint management arrangement between the WUAs and Government, the extent to which each party has honored its obligations and the progress that has been made towards the final target. In some cases this target will be the complete turnover of a scheme to the WUA, in others it will be somewhere short of this.

Regarding WUA performance, much of this information would be provided by the WUA itself, some of which would be fed into the WUA ranking system, discussed in detail elsewhere. Government would be responsible for recording what finances it had made available for O&M, by scheme, and what physical activities had been undertaken with these funds.

The two parties would need to prepare a joint annual report on the performance of the joint management system.

2) Independent assessment:

Although both the WUA and Government would be responsible for providing information with regard to their funding and implementation of O&M, it is unlikely that this information will be sufficient to provide a full picture of what has really happened on the ground, what impact there has been on the condition of the irrigation infrastructure over one year and what impact these activities have had on overall crop production and farm incomes.

Whilst some of the required information will be provided through routine reporting, it is anticipated that the Program M&E unit would have to be heavily involved in verifying that both parties had indeed carried out their responsibilities as reported, in checking the condition of the irrigation infrastructure and of assessing crop production.

Where water is plentiful, under improved O&M conditions there might be little obvious difference in crop productivity from one year to the next and the main impact would be concerned with preserving the condition of the infrastructure, and the avoidance of frequent rehabilitation. Elsewhere, with improved O&M, there could be a number of impacts, including the preservation of infrastructural condition, but also including increased productivity. Assessing the impact that improving O&M has on overall cropping intensities and crop yields can be a formidable task. Weather and other conditions can change markedly from year to year and it is not always simple to determine what are the reasons for productivity changes, between years.

The M&E system used needs to address such issues and to devise the means whereby WUA and

Government performances can be assessed.

(9) Collection of ISF and Government Support

Most of the information required here would be collected under the above, mentioned activity.

(10) Rehabilitation of Irrigation Schemes

A number of activities are included under the general term of rehabilitation, and these need to be considered separately for M&E.

It is unfortunate that, at present, there are many schemes requiring varying degrees of rehabilitation and because few schemes are currently enjoying full O&M treatment or are being rehabilitated, the backlog of rehabilitation work can only get greater in the future.

It is anticipated that in a short period WUAs will start to learn to prepare and present proposals for rehabilitation, and this preparatory process will require monitoring. Clearly Government funds for rehabilitation works are likely to remain very scarce for years to come and it will be imperative that those that are available are used efficiently. This means that priority must be given to those schemes that are likely to generate the biggest impact and that expenditure is kept to a minimum. Whilst a major factor would be the enthusiasm and capability of the concerned WUA, and the extent to which it would be willing to contribute towards the capital cost, this by no means is the only consideration. It is also important to understand the potential capacity of a particular scheme, the expenditure which would be required to bring the scheme back into working order and the incremental benefits which are likely to accrue. If a scheme has poor potential, or requires excessive funding, even though WUA support might be strong, such a scheme might well not be suitable for priority funding.

The M&E process will assess the quality of the rehabilitation proposals. If the rehabilitation proposal is accepted and Government agrees to fund it, M&E of the implementation process, from design through to completion, would be required, utilizing similar, though more rigorous, techniques than have been applied in the past. In particular an important issue such as quality assurance is an issue where improvement needs to be promoted. Poor construction quality has been a serious problem for some time Under the application of the new policy, with farmers being involved in the planning, the financing and perhaps in the implementation of construction works, it is all the more important that past malpractice does not perpetuate. Although there is every likelihood that with greater farmer involvement there will be fewer opportunities for malpractice, it is not certain that quality will improve substantially. Where the WUA is involved itself in construction or where it is responsible for supervising contractors, there are always dangers that, even if their intentions are honest, they will lack technical skills.

(11) Summary

Whilst the various M&E activities discussed above appear to be rather formidable, whilst there is certainly much that has to be done, the process is not as complicated as might first appear. Much of the activity related to Government M&E is already standard practice and the main difference between past routine activity and what is being recommended is that the process needs to be made more transparent. If, as is hoped, the whole approach by Government is one of more transparency and integrity, the change will not be difficult. If, on the other hand, the old culture is allowed to remain, there is little reason to believe that the move towards autonomy will, itself, have any

positive impact on old practice. In some ways, the opportunities for malpractice become even greater. This Program can only specify what it recommends should happen, and hope that the approach is one that fits in with a cleaner form of Government involvement.

WUAs will, as part of their development process, be obliged to keep records of their activities; whilst such an activity will not come naturally to many at the field level, it is inevitable that these will be required if the organization is to function properly and members are to be able to understand what is happening and what is being done with the money that they contribute.

Any consultant or NGO company contracted to provide services under the Program would, naturally, be expected to prepare records of its activities. It is recommended that the TOR for any contracts with such organizations indicate clearly what records and M&E activities are required, and that care is taken when these issues are being considered.

As far as the Program M&E Unit's activities are concerned, apart from the Public Awareness of Government Officials Activity, virtually all the remaining work is at the field level. Staff will need to follow the process through virtually from start to finish, assessing, in the main, the following Activities:

- Public Awareness and Capacity Building of the WUA,
- WUA formation and registration process,
- WUA element of the Inventory of Irrigation Systems and WUAs,
- Training of WUA leaders,
- Start-up Financial Assistance,
- Improved O&M Management and Joint Management,
- Rehabilitation of Irrigation Systems.

6.6 Action Plan on Irrigated Agriculture

As stated section 5.7.4, the Study Team has not formulated the action plan on irrigated agriculture in accordance with the above consideration of WUA and irrigated agriculture in Indonesia. The Study Team has instead offered an enhancement plan on agriculture intended not only for WUA members but also for all farmers. Details of the plan are shown below.

6.6.1 Enhancement Plan of Agriculture

(1) Strategy of the enhancement plan

This enhancement plan aims at raising income of all farmers mainly in irrigated area through focusing on the following two objectives. Then, agricultural extension is considered as a main tool of realizing the objectives.

- a. Capacity building of individual farmers
- b. Promotion of group activity among farmers

As the objectives are going to be realized, farmers in Indonesia need to be able to think individually and to take action through their own intention in order to improve their welfare. The study result revealed that farmers' confidence and their own initiative could be the most important requirement for the success of any farmer activities on a sustainable basis.

While the objectives correspond with a principle in Government's economic development plans that respects the bottom-up and/or participation approaches, the above strategy also comes from a

consideration that farmers in Indonesia are compelled to rely, for the time being, mainly on their own constant effort. Because under the present circumstances, although regrettable, farmers cannot expect much input from the Government's policy. The two objectives are the only practical approaches remaining to raise farmers' income at present, even though it takes some time before desired results are realized.

(2) Basic Concept of Agricultural Extension

The study team has recognized that all problems shared by Indonesian farmers converge on a decreased return from rice farming, though they are highly dependent on this return. Moreover, the study team has understood that most of the problems are beyond the control of individual farmers since the major causes, which are a decreased rice price and increased production costs, are basically a matter of Government's economic policy. It is concluded that what farmers can do, is to direct their effort towards increasing their income through diversifying their crops and taking part in marketing and processing. However, insufficient information and capital hamper farmers from taking positive steps towards the implementation of the stated countermeasures.

The enhancement plan addresses how to improve farmers' ability to identify and access the resources needed, as the farmers' needs are multiple, complex and local area specific. Farmers and their groups should be empowered to express their interests and to play active roles in designing farming and/or agribusiness plans, the implementation and the evaluation. An agricultural extension approach in the enhancement plan should therefore be on human resources development instead of on technology transfer. *PPLs* are expected to act as facilitators and information brokers only

Agricultural extension in the enhancement plan requires a new approach to deal with the need to develop more participation from farmers and to develop the dormant initiative of farmers.

(3) Outline of the enhancement plan

Fig.6.6.1 shows the outline of the enhancement plan and its implementation procedure. The procedure is divided into two major components.

One component comprises activities of local governments (*Kabupaten* and Province), which are a series of preparatory or supporting activities for entering the next procedure. In other words, this component is a series of activities to reinforce the agricultural extension system/approach.

The other comprises farmer activities, which are considered to be the major part of the implementation. This component is subdivided into the following three sub-components:

- c. Enhancement of individuals
- d. Promotion of group activities
- e. Organizing farmer group/s

6.6.2 Activities of the Enhancement Plan

(1) Reinforcement of agricultural extension system/approach

- 1) Implement awareness campaign for local government officials

Agricultural extension services in Indonesia are still widely implemented with an outdated management system for group formation and farmer training based on a top-down philosophy of information and technology transfer with few flexible mechanisms for managing feedback and

farmers needs. Such an attitude of the relevant government staff at provincial and *Kabupaten* level of the agricultural extension services needs to be changed, as local governments, mainly *Kabupaten* government, are now responsible for the services.

It is proposed that they be informed and familiarized with new strategies and concepts of agricultural extension systems. A consulting team formed in the central government, MOA, carries out the initial steps. The consulting team explains the goal and purpose of the new agricultural extension system and organizes participatory discussions in a series of meetings.

2) Develop new agricultural extension system/approach

A committee to develop a new agricultural extension system and approach is organized at *Kabupaten* government level with the relevant government staff of provincial and *Kabupaten* level and some farmers' representatives. Other institutions related to agricultural development are also involved in the committee in order to make a partnership network more easily organized. Then, a secretariat is also established under the committee as a unit to manage the committee. A representative of the consulting team joins the secretariat. The committee through regular discussions, village discussions and workshops would be managed with a participatory planning policy. Although the consulting team carries out initial steps, the initiatives are gradually transferred to the committee.

A new agricultural extension system and approach in the *Kabupaten* is examined based on the new strategies and concepts, agricultural development policy of *Kabupaten* government and available staffs/budgets. A new extension approach should be planned with a concept to develop participation with and partnership between farmers. "Farmer-to-farmer" extension is considered as a major means for the dissemination of advanced technology, information and agribusiness opportunities. Farmers will be encouraged to find out solutions themselves through sharing their problems and technical developments with other farmers and neighboring villages.

3) Develop learning materials on new extension approach

Learning materials to support the new extension approach are developed both for extension workers and for farmers by the secretariat in consultation with members of the committee. Some representatives of *PPLs* and farmers are also invited to participate in the development. Many Programs in Indonesia have documented different types of materials for the farmer-to-farmer extension process. Also, the extension management system and policy requirements supporting participatory and farmer led approach are already well developed by many existing Programs. The secretariat can use this experience.

The most important thing is to make everyone understand that there is no stereotyped approach in the new extension approach. The materials would focus on understanding this concept and supporting farmers to develop necessary materials by themselves through visiting other farmers, other villages and/or other partners, i.e. *PPLs*, research institutions and private sector. Particular attention will be paid to the materials for farmers. As the education level of farmers is not so high, they need simple materials to help them understand new ideas and skills. Use of pictures and maps make the concepts easier to understand.

4) Recruit facilitators

A workload of the new extension approach is heavily concentrated in the beginning stage. Much of

the time and effort must be spent on an awareness campaign directed at farmers and on taking care of the farmers for several cropping seasons. It, however, seems that the existing extension system in Indonesia cannot manage such a heavy workload. This problem can be solved through the participation of a facilitator living and working amongst the community. The facilitator becomes a motivator in facilitating farmers' needs and helping farmers to solve their problems in coordination with PPLs and other partners. The facilitator is basically recruited from among a village elder or informal leader or respected member in the target community by *Kabupaten* government and contracted for several years, dependent on progress.

5) Train facilitator & PPLs in new agricultural extension approach

The recruited person for facilitator and PPLs receive basic training in the new agricultural extension approach with respect to the strategies and concepts by using the materials developed. Refresher training for PPLs will also be needed to empower them to fully provide the new services, as the traditional role of them providing technical guidance, direction and supervision should change to facilitating crop diversification, agribusiness networking and knowledge management. The training would be organized by the "Agricultural In-service Training Centers", which are located in each province and are managed by the respective provincial governments. Then, core instructors would be appointed from members of the committee.

6) Rearrange organizational setup of agricultural extension

The implementation of local autonomy policy has made Kabupaten government responsible for the administration and technical guidance to agricultural extension services. The Kabupaten government rearranges the existing organizational setup of its agricultural extension services based on the new system developed.

Though the Kabupaten government has not been obliged to follow the central government guidelines to setup BIPP and BPP since the delivery of autonomy, a concept of the guidelines should be respected and reinforced in the new organizational setup. An interactive information outlet to act as a link between farmers and every agricultural information source needed by them would be established as close as possible to a community.

7) Develop agricultural extension partnership network

Basically, farmers are encouraged to develop their own linkages directly with those resources needed for their farming and agribusiness activities assisted by PPLs. Kabupaten government organizes a network connecting the resources for facilitating and supporting such farmers' attitude. The resources to be organized in the network would be as follows.

- Research centers/universities
- Private traders (inputs supply/crop marketing) and markets
- Farm mechanization services
- Banks/financial institutions
- Government agencies to support farmers
- NGOs/farmer groups

The network would be linked with farmers at the above-mentioned interactive information outlet, and then members of the network would provide their information and/or services to farmers with a spirit of partnership.

(2) Enhancement of Individuals

The following activities in this component aim at empowering individual farmers in planning

farming and/or agribusiness, implementation and evaluation by themselves, so that they are aware of their own potential for further steps. The process of leaning by doing is the key catalyst for the empowerment. *KT* might be a core contact farmer unit, even though any farmer group, whether formal one or informal one, can be the unit.

Though the reinforcement of agricultural extension system/approach would be a precondition for ideal implementation of the activities, this component can be implemented without that if a capable *PPL* and/or respected community leader sincerely struggles with all difficulties in the activities.

1) Aware and understand new agricultural extension approach

Farmers are first familiarized with new strategies and concepts of agricultural extension approach through an awareness campaign implemented by *PPL* and facilitator. They also receive a basic training in the new agricultural extension approach by using the materials developed. The most important thing is that farmers have to change their attitude, mind set and mentality of waiting for government support and this must be explained in detail through the awareness campaign.

2) Identify potential of individual farmers

Farmers make an analysis of their potential, problems and needs in consultation with facilitator. They are expected to foster ideas mainly through formal and informal meetings with neighbor farmers. They would prepare pictures and maps to make them easier to identify their potential during the meetings. The following are the contents of expected potential, problems and needs.

- Internal factors (family member, land, capital, machinery, etc.)
- Social factors (neighbors, government officers, inputs suppliers, water management, local market, macro policies, etc.)
- Natural factors (climate, natural disaster, etc.)

<Related countermeasures for farmer activities in Chapter 5>

AF-1.3 Organize periodical meetings to exchange and/or share advanced technology on farming for increasing production and reducing production cost

3) Make an annual farming plan of individual farmers

Farmers develop a farming plan, which is based on the local resources available, possible technology, socio-economic conditions and market demand, in cropping calendar after careful analysis of their potential. All family members of farmers including their wives would be involved in the planning. They are encouraged to find out solutions for their problems and their needs so as to determine the potential by themselves through sharing their ideas with other farmers and neighboring villages. *PPL* and facilitator act as facilitators in the preparation of the plan.

<Related countermeasure for farmer activities in Chapter 5>

AF-1.1 Adopt cropping plan based on the availability of water and to look for income generation

AF-1.2 Introduce high quality rice varieties

AF-1.3 Organize periodical meetings to exchange and/or share advanced technology on farming for increasing production and reducing production cost

AF-2.3 Organize training how to grow and market new products including post-harvest technology in combine with the activity AF-1.3

4) Identify resources (inputs) needed and contact to partners who provide them

Farmers prepare needs for input, services, funding, labor, information and technology based on the farming plan. Then, farmers would participate directly with the partners, i.e. *PPL*, research stations,

other government services, universities, financial institutions, inputs suppliers, traders, etc. in order to fulfill the needs prepared. Farmers, assisted by *PPL* and facilitator, have to make good use of the agricultural extension partnership network in finding out proper partners who provide resources needed. *PPL* and facilitator would encourage them to visit at the interactive information outlet when they need partners.

<Related countermeasure for farmer activities in Chapter 5>

AF-1.3 Organize periodical meetings to exchange and/or share advanced technology on farming for increasing production and reducing production cost

AF-2.3 Organize training how to grow and market new products including post-harvest technology in combine with the activity 1.3

5) Implement farming

Farmers implement farming in accordance with their plan. Farmers would make efforts to improve the management of their farm and the technology applied in consultation with *PPL*, facilitator and partners of the agricultural extension partnership network.

6) Monitor/evaluate implementation against target planned

During the implementation, farmers conduct field observations on technology application and detail the problems seen or assessed. It is recommended that each farmer keeps a record of the field observation, inputs applied, partners contacted, etc. assisted by *PPL* and facilitator. Finally, farmers calculate costs and production from their farming plan, so that they can identify the profitable crops and farming technology. They also exchange their ideas and experience through formal and informal meetings with neighbor farmers.

Farmers should feed the record and calculation back into the planning for next season.

<Related countermeasure for farmer activities in Chapter 5>

AF-1.3 Organize periodical meetings to exchange and/or share advanced technology on farming for increasing production and reducing production cost

(3) Promoting of Group Activity

Group activity must be an indispensable condition to raise farmer income in Indonesia. Farmers can only overcome the present problems of low income, which are small-scaled farming and unfavorable market structure to farmers, through the united efforts of the farmers, themselves. However, the farmer group movement is very inactive in Indonesia because of the following major reasons.

- All existing farmer groups started under Government auspices, and were strongly influenced by government's interests.
- Farmers did not have the experience and ability to manage farmer group as an agri-business organization. A traditional mutual aid system just for the occasion, "*Gotong-royong*" did not contribute much to management of agribusiness organization, even though many people expect *Gotong-royong* to be a management philosophy of farmer group.

The following activities in this component aim to promote farmers in organizing group activities in agribusiness, so that they can be aware of the benefits from group activities. It is important that the following basic points should be taken into consideration in this component.

- Start by farmers' interests and initiative
- Start based on a conclusions through a series of serious discussions among members
- Start from easy agribusiness
- Start from a voluntary group to handle just one agribusiness on a temporary basis

like "Gotong-royong"

Basic agricultural extension approaches and concepts in this component are the same as in the component of "Enhancement of individuals"

1) Aware and understand necessity of group activity

Farmers receive a basic training in the group activity by *PPL* and facilitator. They are going to be familiar with the principle of cooperative movement, incentives, government support programs, etc. The most important thing is that *PPL* and facilitator just train farmers instead of demanding them to organize a farmer group.

<Related countermeasure for farmer activities in Chapter 5>

AF-3.1 Discuss the advantage/necessity of joint activities among farmers

2) Identify potential of community

During the meetings to identify potential of individual farmers, *PPL* and facilitator should ask farmers to discuss the potential of the community. They would be aware of community potential and that it is a part of their own potential.

<Related countermeasure for farmer activities in Chapter 5>

AF-1.3 Organize periodical meetings to exchange and/or share advanced technology on farming for increasing production and reducing production cost

AF-3.1 Discuss the advantage/necessity of joint activities among farmers

3) Make agribusiness plan by group activity

Farmers by their own initiative would develop an agribusiness plan, which is based on the identification of their potential and community potential. While farmers do not want to get into group activity in agribusiness, *PPL* and facilitator must not enforce the concept of agribusiness. They are not even required to organize every farmer of the community into a group, if farmers decide to start group activity. They can start a group activity in agribusiness by working through several voluntary farmers. They are also not asked to formulate a standardized hierarchical organization structure, even though they might decide how to share the work responsibility among members.

It is expected that there should be many agribusiness activities considered by farmers. Farmers are requested to work out their plan carefully assisted by *PPL* and facilitator, so that they could start easy agribusiness in the beginning, to avoid getting confusion beyond their control. The agribusiness plans to be considered by farmers are shown in the countermeasures as follows.

<Related countermeasure for farmer activities in Chapter 5>

AF-1.4 Organize joint procurement of agricultural inputs for reducing procurement cost

AF-1.5 Organize rice harvesting team among farmers

AF-1.6 Organize joint marketing of paddy and/or rice milling business for increasing bargaining power

AF-2.1 Promote a contract farming with private companies and/or a joint marketing

AF-2.2 Promote "one village one product policy"

AF-4.1 Formulate credit groups among members, if possible, inject formal credit fund into the credit groups

AG-2.2 Promote hand-tractor hiring business (in countermeasures for Government)

4) Identify resources (inputs) needed and contact to partners who provide them

Farmers should have a series of serious discussions on the costs and benefits before starting group activity in agribusiness. At first they must identify resources needed, assisted by *PPL* and facilitator. In many cases, they would also have consultations with partners in the agricultural extension partnership network.

<Related countermeasure for farmer activities in Chapter 5>

AF-2.1 Promote a contract farming with private companies and/or a joint marketing

AF-2.3 Organize training how to grow and market new products including post-harvest technology in combine with the activity AF-1.3

5) Implement agribusiness

Farmer group implements agribusiness in accordance with their plan. Farmers would make efforts to improve the management of their agribusiness and the technology applied in consultation with, the *PPL*, facilitator and the partners of the agricultural extension partnership network.

6) Monitoring and evaluate implementation against target planned

It is recommended that farmer groups keep a record of the inputs applied, problem occurred, partners contacted, etc. assisted by *PPL* and facilitator. Finally, farmers calculate costs and production from their agribusiness plan, so that they can identify the profitability of the agribusiness. They also exchange their ideas and experience through formal and informal meetings between members and with partners of the agricultural extension partnership network. Farmers should feed the record and calculation back into the planning for next steps.

<Related countermeasure for farmer activities in Chapter 5>

AF-1.3 Organize periodical meetings to exchange and/or share advanced technology on farming for increasing production and reducing production cost

(4) Formulate permanent farmer group(s)

This component is the ultimate stage of the enhancement plan. It is expected that the time would be ripe for farmers to organize a permanent farmers' group after becoming aware of the benefits of group activities and obtaining confidence in their ability through the activities in the component "Promotion of group activity". Farmers again by their own initiative would organize a permanent farmer group based on the experience in the past group activities and the identification of their potential. *PPL* and facilitator would not force them to form groups, as is the same as the case in the previous component. They just provide necessary information about establishment of permanent farmer group including information about Government's support program and incentives as facilitators.

Based on the information provided, farmers would decide everything about the farmer group by themselves. They can organize any type of farmer group whatever they want, and can select whichever the group be formal one or informal one. However, farmers needs to state articles of the farmer group and built up its management structure in contrast to the temporary farmer group in the previous component.

Instead, one of the existing farmer groups, i.e. *KT*, *KUD*, rural cooperatives, *WUA*, could take the group activity, if the members make such decision, and laws and regulations allow it to do.

<Related countermeasure for farmer activities in Chapter 5>

AF-3.1 Discuss the advantage/necessity of joint activities among farmers

- AF-3.2 Select capable leaders of farmer group by a democratic way
- AF-3.3 Build up transparent management framework of farmer group

6.7 Action Plan for Public Relation of Irrigation and Irrigated Agriculture

6.7.1 Present Situation of Indonesia

At present, Indonesia has been establishing and developing its own new democratic mechanisms which can be reflected in the peoples' opinions of the political and administration aspect of Government and can also deliver the national wealth fairly, based on lessons learned after Independence. These mechanisms are: "the realization of decision making method through peoples' participation", "decentralization" and "the creation and the maintenance of the fairness in society".

The present status in the country is in a situation that is far away from the desired goal as described in the previous sections, and these were recognized during the conduct of this Study. With respect to the transference of authority and responsibility for irrigation O&M, the following facts were recognized:

- 1) The farmers and the people do not trust the administration.
- 2) The administration also does not trust the farmers or the people.
- 3) Skepticism of Government programs are exist amongst the community and the farmers,.
- 4) There is an air of suspicion amongst the administrative hierarchies.
- 5) Everyone wants a democratic and fair society, but it is difficult to breakdown the existing shell of survival, due to at sense of distrust.
- 6) The sense of "Not-see, not-hear, not-talk" behavior was the best action for the people, if they would like to survive during the past 400-years of state power colonization.
- 7) Wealth disparity has been accepted by the majority as the norm with mainly tenant farmers accepting the norm as doom and this has been a result of the last 400-years of state power colonization.
- 8) The ethos of "secure his firm foothold" at expense of others is the priority so as to ensure the existence at subsistence.
- 9) The national economy had been managed in "the debt constitution", depending on foreign funds, and the most precious "the enlarged reproduction" of the business activities has never been sustained.
- 10) Also "enlarged reproduction of the human-resources", which has to be the foundation of the national development and management, has never been maintained up to today, due to collapses of the climate of not sharing knowledge and experiences under the state power governments.

There is rarity of mutual trust in the society and the duty of "the social existence" has never been fulfilled because the people are concentrating on survival of "the individual existence".

Hence it becomes difficulty to implement the proper function of the social approaches because society will not get out of "the shell of the individual existence" even though there is an issuing of social changes and preparations.

If the government would like the people to follow social change and preparations, even though leaving the distrusts or leaving them in the shell of the individual existence, the most effective way and suitable way may have been through a slow stepped process under the "state power" oriented compulsion and distrust based mutual watching but with a slow dismantling of the "state powers". But the will of the people is that they would like to divorce from such ways, is one of findings through this Study.

Then the only way to approach the fulfillment of a democratic society is to sustain the manner to tackle the issues one by one while adopting the common target of the future as their slogan. This is like a man should grow, even though intensifying the time and taking small steps of great effort, from now on.

It can similarly be said of the main issue of this Study, i.e. “Transfer of irrigation O&M (authority)” policy. The intension of the policy, which sets as social preparation consisted of laws and regulations, and they will be effective or functional after reaching a situation where the people can accept mutual trust and understand the difference between individual rights and social duties.

6.7.2 Considerable Aspects and Direction of Action Plan Provision

The JICA Study Team set a direction to provide the Action Plan/s to meet the targets as follows, based on the abovementioned Indonesian situation.

- 1) To give higher priority to the issues, that the relative people have been anxious of in their daily lives, which can be found through the conduct of participatory field surveys, to enable the acceptance of the proposed contents without objections.
- 2) To apply the contents available to meet with higher rank plans as accepted by the majority of the relative people, under the confused society and economic situation, to maximize its applicability and adaptability.
- 3) To define the external factors for any of the relative higher rank policies, which have never been given a definite consideration yet, for example the national agriculture policy.
- 4) To set the contents in line of the latest national management policies and existing administration and law / regulation systems.
- 5) To set the contents to meet with the democratic and fair national conditions, which the majority has been expecting.
- 6) To set the contents so as to assist to generate “mutual trust”, which Indonesia needs most, even though the sector that corresponds for the provision of this Action plan.
- 7) To set the contents which can be easily realized within farmers’ administrative abilities, with the available resources to be mobilized by them, and in the context relevant to the local community organization that farmers are most accustomed with.
- 8) To introduce the contents, which can make the people, realize the necessity of “recognition of social responsibilities”, as one of measures to motivate the situation that can allow independence in the frame of "the free economy activity".
- 9) To set the contents from the viewpoints that the existing irrigation facilities are a precious National resource and their proper maintenance is the primary method to ensure the food security and to take an important roll so as to sustain national economy.

6.7.3 Necessity of Provision of Action Plans to Meet with Targets

The objectives of this study make reference to improvement of irrigation management and the empowerment of water users associations (WUAs) for the enhancement of turnover. The Program has been careful to maintain the investigation and development at the grassroots, where our use of the term WUA refers to unit (either village or tertiary unit) based groups. It is from this basic approach that all Program initiatives including the generation of the Action plan has been developed. In generating the plan a process of staged development has been undertaken, review, problem and constraints identification, analysis, hypothesis, and confirmation, developing the grassroots condition in terms of physical, institutional, organisational and financial, aspects. It should be noted that all processes used on the Program and proposed by it, are generated from needs based assessment (AKNOP) and participatory methods. This process has been successively

introduced and developed at each level of administration from the field to National level. Within this process the term WUA has been used in its generic sense, allowing it to encompass all structures currently envisaged as water user development.

The JICA Study Team could understand that the creation of a climate of “social trust”, that is needed for the acceptance of any new rules and regulations which can legalize the plan for producing and sustaining the country as one united society for the future. Social trusts consist of a mutual trust of farmers who should own irrigation O&M, trust for the agricultural policy that directly relates to irrigation and the trust for an economic policy that guides the agriculture sector.

Whilst there are no limitation on expected expansions and strengths on mutual relationships between related sectors, it is not capable to discuss all of the relative associations when considering the magnitude of the expansions and strengths in this Study. Also it is not capable to describe individual wills and directions of each of the major three domains consisting within the country.

In this Study a clarification is adapted that all of action plans oriented directly to irrigation as “Direct Action Plan”, while giving the title of “ Indirect Action Plans” for the issues of others like generation of trust among people, between administration and farmers. Indirect action plans are to highlight issues to generate trusts or characters that have seldom to be discussed on plan provisions. And not include setting directions or contents themselves of other domains.

6.7.4 Action Plan for Public Relation of Irrigation and Irrigated Agriculture

"The indirect action plan" which is shown below is the contents that the dimension is different completely from "the direct core action plan" which was described to enhance the transfer of the irrigation O&M. On the occasion of the proposition of "the indirect action plan", some intentions are considered as important and needed: 1) Not pour funds so much, 2) Available to utilize existing social infrastructures, 3) To meet with "enjoying a life" character of the people in the village and communities, 4) To call back "the social pride" which was cultivated from the ancient times in the psychology of the people, 5) To decrease the intervention of "the administration" which lost trust of the people, 6) To provide occasions to accomplish things with the people's cooperation, 7) To imprint viewpoints that the role of task sharing and efforts by the individual to ensure their own subsistence is necessary. Several ideas are shown in Annex H for reference.

6.8 Adjustment Required with WATSAL Conclusion

Within the period of the JICA Study from Phase I (April to October 2000) and Phase II (January 2001 to final presentation October 2001) many changes have occurred. WATSAL and IDTO have run in parallel to the JICA Study, but continuously and with WATSAL irrigation reforms being formulated and presented in draft form only. As such terms have altered, new legislation has been enacted, institutional structures created and dissolved, and ideas conceptualised tried and tested. While every effort has been made to accommodate these changes within the study the Study has not operated continuously since it's inception, with the progress report, phase II and the draft final report completed at the end of June 2001.

Owing to these restrictions, several pertinent and important issues have not had the full benefit of the consultants' attention and should really have been investigated as part of parallel studies. Agricultural and agrarian policy reform, are examples of such issues that impinge strongly on

tenant farmers incomes and their ability to contribute both in financial and membership terms to organisational development.

Within the scope of the action plan (Action 7) the concept of Kabupaten Irrigation Improvement Funds (KIIF) and good governance are aspects that have not had thorough investigation and development from the Study. While the concept of KIIF is undoubtedly worthy of trial there are pitfalls to be avoided, capacities to be tested, and financial control transparency and audit to be put to use. For example, should these funds operate as rollover funds, should they be circular funds, contributory funds, or how should they operate. While this Study is supportive of the concept of KIIF for the purpose of pilot development, it is felt that if the initial indicators are encouraging then expansion to other areas should capitalize on these results as soon as possible. Contributory funding is an important part of the successful operation of this fund, but the exact details of these mechanisms are yet to be determined.

These and other aspects of the plan are presently dynamic, the final form and incorporation into the 'Action Plan' must be left as flexible as possible to allow for change and alteration in the light of practical experience once pilot development has started. At this stage it is emphasised that many measures, constraints, and concepts have been investigated and the plan presented here, is under the current circumstances, the consultants 'best fit' to the prevailing conditions, both at the field level and within the structural framework of the plan.

To add clarity and emphasis in various sections of the report, the more specific terms of WAUF (Federated WUA referring to grouped WUA units) and IWUA (Induk WUA referring to grouped Federations based on secondary systems) have been used. To avoid confusion the term WUA has been used through out the report in its generic sense referring to all structural levels.

6.9 Implementation of Action Plan

6.9.1 Action Plan Implementation Method

As described above, 11 and one activities for irrigation and WUA management and enhancement of agriculture are proposed for the acceleration of turnover program. They are categorized actions to be started immediately and to be started after the WATSAL results are confirmed. The former includes the formulation or up-dating inventories concerning irrigation and the renewal of agricultural extension system for agriculture enhancement program (refer Table 6.8.1).

Proposed actions are mostly based on the new concepts under the new irrigation management policy. They are involved in IDTO program that has worked together with WATSAL study. As IDTO applied the package program approach at the pilot areas, these actions shall be firstly implemented at the pilot kabupaten as a packaged program to verify and determine the detailed guideline for extending the program throughout the whole of Indonesia.

Through the Study, the Study Team proposed the following pilot Kabupaten in the Study Area, after due consideration of the ability of Kabupaten Government staff, involvement of IDTO program and regional characteristics.

Province	Kabupaten	Remarks
West Sumatera	Limapuluh Kota	
West Java	Garut	Coordinate IDTO
DI. Yogyakarta	Sulaiman	Coordinate IDTO
East Java	Lumajang	Coordinate IDTO
West Nusatenggara	West Lombok	

Several programs under the assistant of donor countries/agencies related with irrigation management will be operated under the National Water Management Program (NWMP), therefore it is recommended to formulate the program coordinating body which will be composed with KIMPRASWIL, BAPPEDA, MOHA and MOA, etc. as same as steering committee of the Study.

6.9.2 Action Plan Implementation Schedule

The schedule of the implementation of all actions are shown individually in Table 6.4.1 to 6.5.11, their schedule are summarized in Table 6.8.1 applying the Plan of Operation of PCM. The table includes not only schedule but also expected output, target people or organization, executing agencies/groups and implementer.

Table 6.4.1 Public Awareness of Government Policy amongst Government Officials

(1) Activity No. :	Program Name	Irrigation-related GOI Attitude Change	Category of the Program
(2) Sector :	Irrigation	(3) Expected Implementation Period :	6 months
(4) Target Area / Category	1) Estimated Total Number :		2) Estimated Total Area :
3) Others: Indonesia, Province of West Sumatera and 7 Kabupaten and Municipal included in the Study			
(5) Program Description			
Carry out participatory need assessment, program designing and implementation to assist the Provincial and Kabupaten/Municipal GOI and irrigation-related GOI Agencies ready to conduct Social Preparation program and to facilitate program implementation of irrigation policy reform, particularly improvement of irrigation management, WUA empowerment and turnover programs. The activities need to address comprehensively GOI Administration system and GOI Officers' attitude change, hence may include both GOI institutional and capacity building in the Province and at Kabupaten/Municipal level in particular.			
(6) Executing agencies/institutions, their roles, present conditions & required strengthening			
<p>1) <u>Field level</u> : Pengantar/Pengantar Pengantar GOI, Kecamatan GOI, and Village GOI (Initiative, Beneficiaries, Participation).</p> <p>2) <u>Kabupaten government</u>, Kabupaten GOI, Bappeda, Dinas Pengairan, <u>Current Problems to be addressed by the Program</u> Dinas Pertanian (Initiative, Decision, Action, Funding, Beneficiary) Regard with inadequate Government role and management capacity</p> <p>3) <u>Provincial government</u> : a. Provincial GOI, Bappeda, Dinas Pengairan, Dinas Pertanian (Funding, Control, MSE) b. PTGA (Action, Participation, Beneficiary) c. Consulting Company, University, NGO (Technical Assistance)</p> <p>4) <u>Central government</u>.</p>			
(7) Program Background			
<p>1) <u>Current Problems to be addressed by the Program</u> : a). Inadequate GOI Administration sectoral and intersectoral system, b). Inadequate GOI Office and Field management capacities, c). Inappropriate GOI Officers' approach and orientation (top-down, ego-sectoral, target-oriented, project-oriented)</p> <p>2) <u>Countermeasures already taken</u> : a). Issuance of <i>Kab/Mun Perda</i> corresponding to regional autonomy laws and regulations, b). Reorganization of Kab/Mun GOI organizational structure and work mechanism accordingly, c). Limited socialization of Irrigation Policy Reform, and d) Inclusion of Province and the 7 Kabupaten and Municipal in JICA Study 2000/2001.</p> <p>3) <u>Significance and necessary of the Program</u> : GOI is the side where the irrigation policy reform come from. Thus, due to regional autonomy and democratization, GOI preparedness is firstly required for Kabupaten and Municipal prior to Dissemination and Program implementation of irrigation policy reform</p> <p>4) <u>Relation between the Program and national development plan/policies/instructions</u> : This program must be supplementary to the on-going comprehensive GOI project schemes (P3DT, KDP etc) and supporting for irrigation-related program schemes (PTGA, WUAT scheme, Batang Hari scheme, Batang Asai scheme, etc) under Inpres no. 3/1999 and Laws and Regulations of decentralization and deconcentration.</p>			
(8) Program Targets and Monitoring			
<p>1) <u>Overall Goal</u> : Preparedness of Kab/Mun GOIs and irrigation-related GOI Agencies to disseminate and facilitate adequately implementation of irrigation policy reform as required.</p> <p>2) <u>Proposed performance indicators to assess results at the target level</u> : Readiness of Kab/Mun GOI and related Sector GOI Officers to initiate dissemination as scheduled and facilitate PPI implementation in the included Dis, Kecamatan and Villages on request basis.</p> <p>3) <u>Output</u> : a) Adequate Operation Plans of dissemination and facilitation of PPI implementation b) Formation of KICF at Kab/Mun level c) Applicable materials and tool-kits for dissemination and facilitation purposes of PPI implementation d) Sufficient financial resources and arrangement for dissemination and facilitation purposes of PPI implementation e) Adequate number and quality of COs for PPI implementation f) Awareness and ability of GOI officer to be highly motivated civil servants.</p> <p>4) <u>Proposed performance indicators to assess achievements at the outputs level</u> : a) Prepared adequate dissemination and facilitation operation-plans of PPI implementation of 7 Kab/Mun at the end of this program b) Prepared applicable dissemination and implementation facilitation set of materials and tool-kits of 7 Kab/Mun at the end of this program c) Sufficient financial resources and arrangements for dissemination and facilitation of PPI implementation of 7 Kab/Mun at the end of this program d) Formation of Kabupaten Irrigation Coordination Forum (KICF) of respective Kab/Mun at the end of this program e) Adequate TOT for PTGA and proper PTGA capabilities to train Coe accordingly f) Hired and trained adequate COs managed by Univ/NGO Consulting Team responsible to KICF of 7 Kab/Mun in the end of this program g) Field tested Kab/Mun GOI Officers' ability to be civil servants of 7 Kab/Mun at the end this program</p> <p>5) <u>Activities</u> : See Supporting information</p> <p>6) <u>Assumptions</u> : a) Fund is available b) Irrigation policy reform is benefiting to water users c) Task allocation of Central Provincial and Kab/Mun GOIs and Water Users were firstly defined and accepted</p>			
(9) Program Inputs			
<p>1) <u>Budget allocation plan throughout the Program period</u></p> <ul style="list-style-type: none"> - Need assessment, Provincial GOI and 7 Kab and Mun GOIs, 1 month, 24 man/month - Materials and tool-kits production for dissemination and facilitation of PPI implementation, 2 months, 40 man/month - TOT for PTGA and 7 Kab/Municipal PTGA Teams, 1 training, 1 week, 30 participant at maximum - Recruitment and training for COs, 7 Kab/Mun, 1 CO/DI, 3 DI priorities per Kab/Mun (21 COs), 1 week recruitment, 1 week training - Initiation of KICF, 7 Kab/Mun, meetings for organizational setting and ADIART formulation (1 week, 7x 21 man/days), 7x1-day Formation Meeting @ 40 attendances, startup budget for Secretariate and overhead. - In-built consultancies for individual Province and Kabupaten/Municipal GOI and GOI Agencies, KICF and COs for formulation of Dissemination and Facilitation of PPI implementation and activities specified above, 6 months, 40 man/month - Overhead, transportation, communication, accomodation <p>2) <u>Staff allocation plans and technical after achievement of overall goal</u>. The Consulting Team is demobilized at the end of this program, whereas the Provincial and Kab/Mun GOIs and related GOI Agencies, PTGA teams, CO and KICF take actions respectively in according to the formulated dissemination and facilitation Action Plan</p> <p>3) <u>Provisional equipment/ Materials</u> : a) Related laws and regulations (Central, Province, Kab/Mun, Kecamatan/Nagari levels) of irrigation policy reform and implementation b) Explanatory sets of irrigation and WUA problems and solutions c) Proposed Action Plan and task allocation under irrigation policy reform d) Financial budget arrangement (appraisal, proposal, approval, disbursement requirements and mechanisms) e) Manual, instruments, forms which regard to financial, technical, and GOI administration requirements f) Dissemination materials as required for local mass-media (TV, newspaper) and group-media (seminar, meetings, trainings), etc</p>			

To be Continued