

Appendix H
Institution, Organization and Management

**THE STUDY
ON
THE NATIONAL IRRIGATION MASTER PLAN
IN
THE UNITED REPUBLIC OF TANZANIA**

MASTER PLAN

APPENDIX H

INSTITUTION, ORGANIZATION AND MANAGEMENT

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APPENDIX H

INSTITUTION, ORGANIZATION AND MANAGEMENT

CHAPTER 1 INSTITUTION

1.1 Review on Institutional Framework since Independence

The overall institutional setting for irrigation development is unfortunately pointed out to have acted as one of major constraints for irrigation development in Tanzania. It is quite crucial to the success of the study on the National Irrigation Master Plan, to review and appraise carefully the historical background and present institutional framework.

The report, "Agriculture: Performance and Strategies for Sustainable Growth" by the Ministry of Agriculture and Cooperatives, and the World Bank (February, 2000) reviewed agricultural policy and institutional reforms since independence. It traced the evolution of markets and the regulatory framework to the present and, furthermore, identified the next reform agenda for immediate implementation, to reap the benefits of the reforms that were already in place. Some of their results may become and utilized as working hypotheses and/or guide for the National Irrigation Master Plan to propose an appropriate institutional setting for irrigation development.

The report reviewed the policy and institutional reforms by classifying the period from the independence to the present into the following four stages:

- (1) Independence to the Arusha Declaration (1961 – 1967)
- (2) Post Arusha Declaration Period (1967 – 1982)
- (3) Initial Liberalization Period (1983 – 1993)
- (4) Continued Liberalization Period (1994 – Present)

In the first stage, according to the report, "the agricultural policy setting evolved from the British colonial period and the emphasis was on providing better opportunities for peasant farming." The main features of government policy are summarized as follows:

- Improvement of productivity of peasant farming, involving provision of enhanced extension services, provision of agricultural credit and access to markets
- A "Government/Farmer Partnership" in which Government would provide capital works, productive services and skilled management, and small farmers

would be responsible for "tilling the soil".

- Development and implementation of a "Transformation Strategy" where larger more technically advanced and thus more productive farms would be established in selected sparsely populated areas.
- The transformation strategy involved new settlements for rain-fed and irrigated crop production and for cattle ranching.
- Continued emphasis on large-scale estate farming to provide export crops and thus foreign exchange.

"The next Arusha Declaration Period (1967 – 1982) marked the beginning of the period where all policies were oriented towards the broad national objectives of self-reliance and Ujamaa. The main policies, which were applicable to the agricultural sector in this period thus, emphasized the overarching role of the government, which assigned to itself the roles of manager, entrepreneur and investor." The main policies applied are as follows:

- Nationalization of most large estates producing for the export market
- Establishment of numerous new government owned farming enterprises, with a role of both import substitution and production for export
- Abolition of most direct taxes on small farmers, except the produce cess paid to marketing boards, and confiscatory levels of taxation on privately owned commercial farms
- Explicit collectivization of small-scale agriculture in harmony with the policy of villagization
- Heavy subsidization of inputs such as fertilizer, pesticides and improved seed
- Pan territorial pricing for agricultural produce through government marketing boards or government dominated cooperatives
- Establishment of artificially low prices for many commodities especially food crops
- Substantial continued investment in provision of government extension and research services specifically targeted at small-scale farmers"

"At this stage, although the poor performance of the sector had been noted, there was no clear understanding that it was the misguided activities and policies of the state which had been the primary cause of the malaise. Thus, the government still expected that improvements would stem from more and better-focused intervention from the state system."

During the initial liberalization period (1983 – 1993), "there were series of macro and sector policy modifications and adjustments. For the agricultural sector, measures complementary to the changes in macro-economic management were

formulated, and implemented through an agriculture sector adjustment program. The main policy components of the adjustment program were:

- To liberalize the marketing and pricing of food grains,
- To initiate liberalization of the marketing boards,
- To restructure several agriculture sector parastatals, and
- To close down or restructure non-viable projects in the agricultural public investment program.”

In the front phase of the Continued Liberalization Period (1994 – Present), that is, “from 1993 to 1997, agricultural sector policy continued its evolution towards market orientation with reduced intervention by the state. During this period, there was substantial activity in macro-economic reform and government investment in infrastructure, which had a direct bearing on agricultural productivity and incomes.”

“The most recent comprehensive official statement of agricultural policy is contained in “Agricultural and Livestock Policy”, 1997, published by the Ministry of Agriculture and Cooperatives. The salient features of currently announced agricultural and livestock policy can be summarized as follows:

- Liberalization of all agricultural markets and removal of state monopolies in export and import of agricultural goods and produce
- Withdrawal of Government from agricultural production projects
- Abandoning the objective of national food self sufficiency in favor of the national food security at the national and household levels
- Reliance on the private sector (comprising smallholders, commercial farmers and pastoralists) for all agricultural production
- Decentralization of agricultural extension and transfer of administrative and implementation responsibility to District Councils
- Integration of agricultural research with agricultural extension at the district level
- The adoption of a new land policy to improve security of tenure and allocation of land
- Government continued responsibility for industry regulation and assistance through commodity crop marketing boards.”

Liberalization of the agricultural sector did not take place all at once. It is a gradual process that is still under implementation and is not a fully completed reform agenda. Depending on the unique characteristic of the sub-sector and the commodities under consideration, reform measures were taken in stages and some were carried out earlier than others.”

1.2 Constraints identified in the NIDP

During the four decades since independence, the agricultural policy in Tanzania has experienced a drastic fluctuation because of dramatically different and diametrically opposed economic and political principles. The early stage was influenced by socialist ideology and experienced extensive governmental intervention. Later, in the mid 1980s, the policy reform and market liberalization began to be implemented.

Along these policy changes the role of government has been changing from being an active participant to being a facilitator playing a regulatory role as providing support services and technical backstopping. Instead of the governments' strong intervention the participatory approach of all stakeholders in the agricultural development has been put emphasis on. Consequently, farmers and other private sectors are now expected and encouraged to play a much greater part in all stages of agricultural development including irrigation development. However, as the transformation of institutional frame is still under the transition process, a further effort of strengthening the institutional frame should be made to attain efficient and sustainable agricultural development.

A number of constraints facing irrigation development in Tanzania were identified in the NIDP. They essentially stemmed from various factors and their complex interactions. However, the overall institutional setting for irrigation development has been unfortunately considered as one of major causes for the poor performance of irrigation in the past. Therefore, the institutional setting has to be carefully reviewed and effectively reformed to alleviate the constraints, although some of them have been improved to some extent since the mid 90s through the implementation of various externally supported projects.

The identified constraints are listed as follows:

- Absence of hydrological data for irrigation planning
- Failure of development planners to appreciate the need for human, equipment and financial resources for implementation of irrigation projects.
- Continued emphasis on sophisticated, expensive and uneconomically viable irrigation projects.
- Poor project planning and inadequate project preparation.
- Insufficient resource of irrigation services at national, zonal and regional levels.
- Failure to concentrate limited resources on a limited number of viable projects or programmes.

- Inadequate support to farmer organizations in operation and maintenance (O&M).
- Failure to develop extension packages for irrigated agriculture and the ineffectiveness of extension services to farmers
- Inadequate human resource development and lack of funding for training, leading to low staff motivations

In addition, the supply of water alone is not sufficient. The importance of adequate security of land tenure for irrigation farmers is also pointed out as a crucial factor for success. The government should provide an institutional guarantee of tenure, for instance, in the form of long leases, which are tradable in order to encourage farmers to invest in irrigation developments. In the same way, the development of smallholder irrigation must be accompanied by government support for savings and credit development so that farmers can purchase the initial inputs that will enable productivity increases to be achieved.

Furthermore, it is important that government holds strictly its policy of addressing environmental issues for any irrigation development. Similarly, the possibility of conflict over water use between competing stakeholders should be carefully handled. Conflicts can arise not only between villages along rivers, cultivators and pastoralists, but also between the agricultural sector and other sectors like hydropower generation. Government, especially at the district level, will need to establish an institutional mechanism to mediate such conflicts so that irrigation development is implemented smoothly without delay.

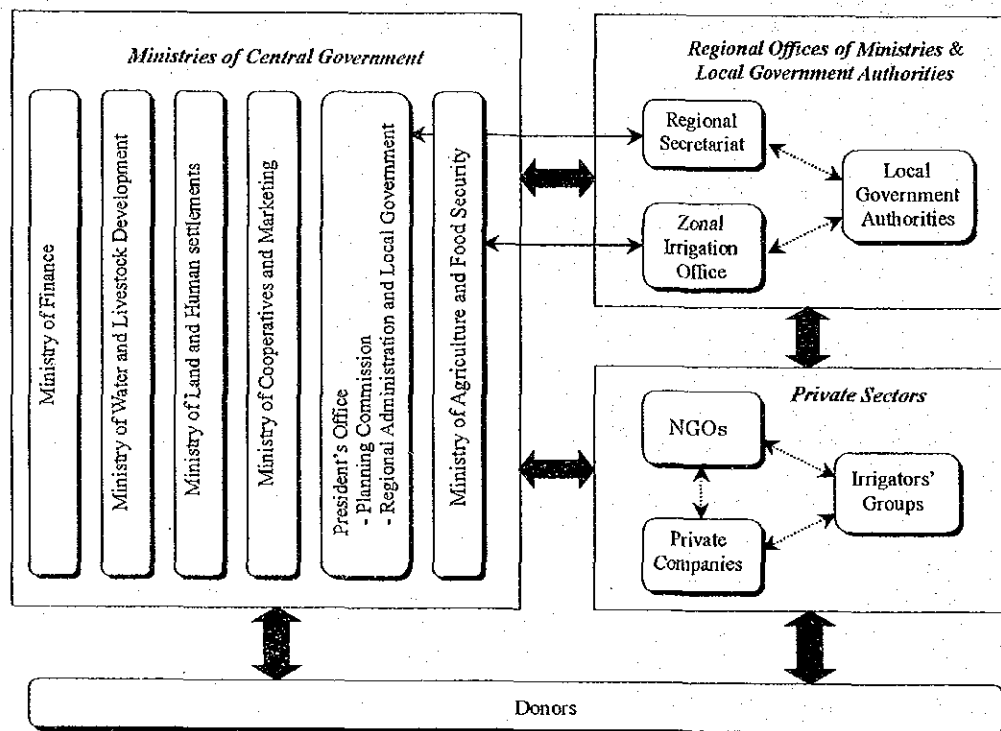
CHAPTER 2 ORGANIZATION

Presently various organizations are involved in the field of irrigation development in Tanzania. They generally include; (1) Ministries of the Central Government, (2) Regional Offices of the Ministries and the Local Government Authorities (LGAs) and (3) the Private sectors (Irrigators' groups, Non-governmental organizations (NGOs), and private companies). As there are at present no irrigation projects 100% financed by own local resources, the implementation procedure of project and involved organizations are not uniform, but differ one another depending on project targets, donors and other factors.

2.1 Central Government

In the central governmental body there is no organization holding all necessary mandates of irrigation in the block. Even though irrigation can be regarded as a sub-sector of agriculture, several organizations are inevitably involved to implement irrigation projects at the central level. Coordination mechanism of the relevant organizations is, needless to say, necessary. However, it is pointed out that no comprehensive mechanism among them has been established yet.

Organizations Pertaining to Irrigation Development in Tanzania



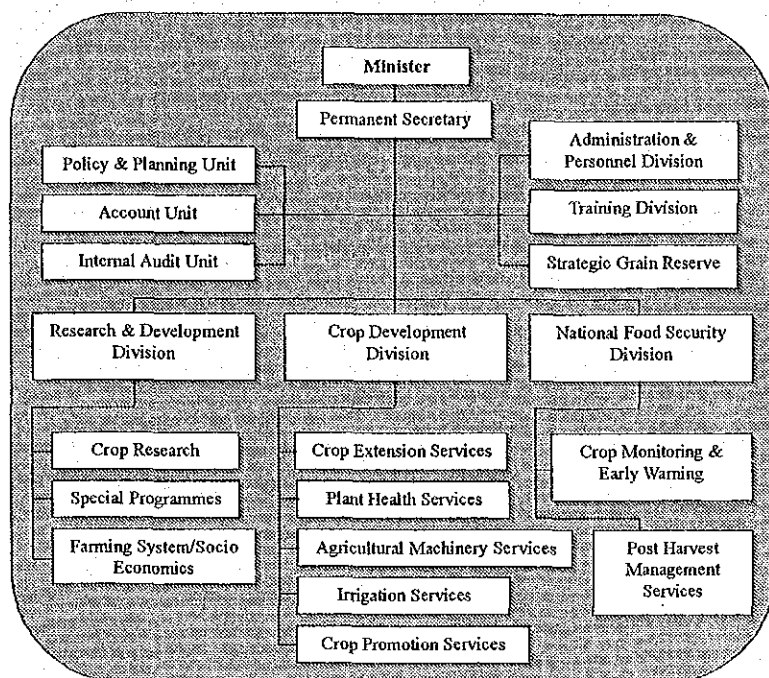
Remarks: (↔) Organizational Linkage,
(- - -) & (↔) Functional Linkage

Source: JICA Study Team

2.2 Present Organization of Irrigation Section

The Irrigation Services Section is at present one of five sections belonging to the crop development division in MAFS. In 1988 the section was degraded from the division. Allegedly the development budget was hardly allocated to the section during 1994 and 1999.

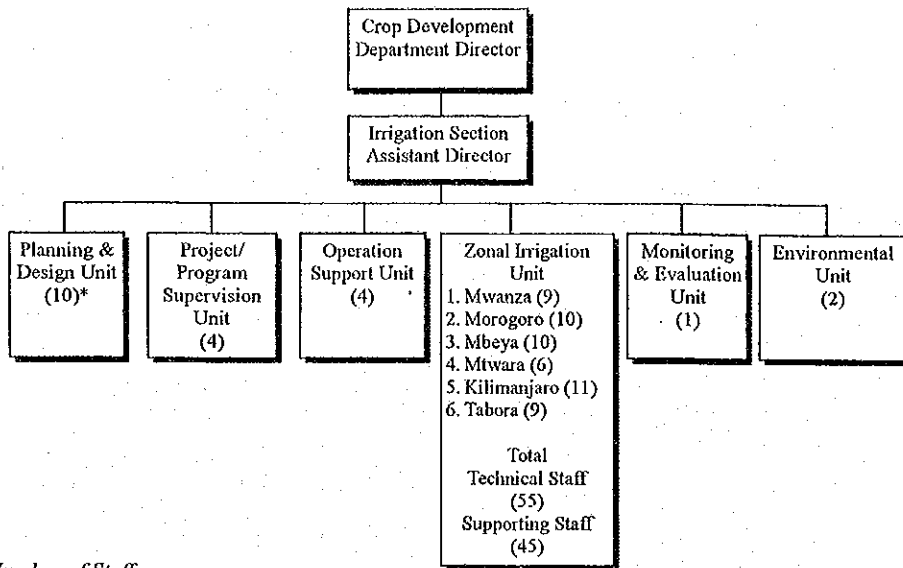
Present Institutional Position of Irrigation Services in MAFS



Source: MAFS

Taking an importance of irrigation development for poverty alleviation and economic development in the rural areas into account, the present institutional position of irrigation development unfortunately seems inappropriate to coordinate and harmonize the different organizations involved in irrigation development and, furthermore, to make prompt decisions. The section may also need strong mandates of the personnel administration and budget allocation.

Present Organization of Irrigation Section

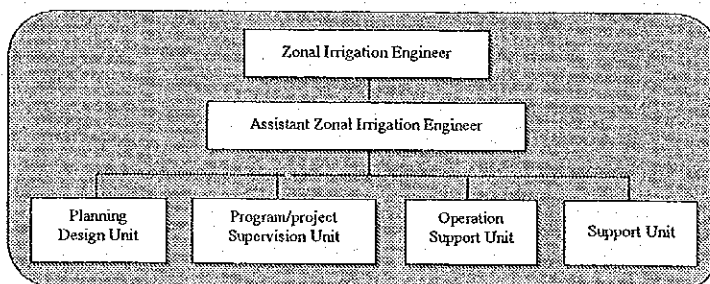


(No.) *: Number of Staff

Source: MAFS

The irrigation services section has six zonal irrigation offices in the country. Each office has jurisdiction over two or three regions. The following is a case of Morogoro zonal irrigation office whose jurisdiction covers Morogoro, Coast and Dar es Salaam Regions.

Organization of Morogoro Zonal Irrigation Office



Source: MAFS

Previously there were five units including the construction unit. Since the irrigation projects of the government's own resources were not implemented, the unit was abolished. Its technical staffs were relocated to the local governments. The number of the staffs decreased from over 100 to 23 until 2001.

The major function of the office is to provide technical services such as identification of potential irrigable land, feasibility study, design, and construction management. At present, however, technical support services for the projects by foreign donors and/or the existing irrigation facilities are their main task.

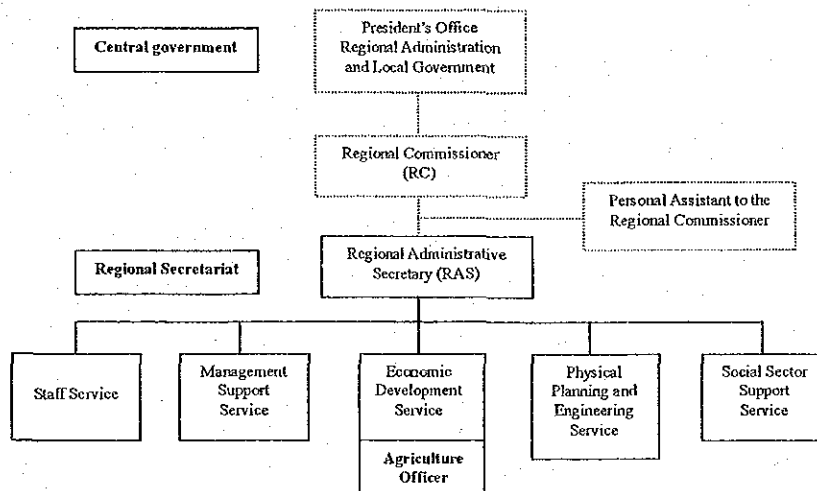
Although the technical staffs already received training of irrigation development, a lack of financial resources is a serious stumbling block for performing their function to a great extent. It is allegedly difficult for the office, for instance, to afford fuel for its only one 4WD vehicle. Consequently, the office hardly covers the jurisdiction sufficiently. Besides, there is no formal institutional relation between the zonal irrigation office and the local governments at present.

The present performance of the office unfortunately seems insufficient and unsatisfactory. The present situation of the zonal irrigation office also should be carefully appraised and its possible institutional reform will be considered further in the next stage of the study.

2.3 Regional Secretariat

The Regional Secretariat is a local agency of the Central Government whose functions are to encourage coordinate Local Governments to execute and to implement policies. The quota of the staff is at present 83 which has decreased

Organization of the Regional Secretariat



Source: MAFS

from more than 400 because of the decentralization policy, i.e. the LGRP. A certain portion of the staff has been transferred to the Local Governments. At the Regional Secretariat the agriculture officer is responsible for the irrigation development at present. Before the LGRP began, the RALDO (Regional Agriculture and Livestock Development Officer) was in charge of the irrigation development and subject matter specialists including irrigation engineer were supervised by the RALDO. However, the agriculture officer doesn't have any staff today. His function is today generally confined to supervise the DALDO (District

Agriculture and Livestock Development Officer) who has subject matter specialists.

2.4 Local Government Authorities

Under the Regional and Local Government Act of 1997, the LGRP started since 1998 and the first phase of the programme has been implemented by PO-RALG. The program will bring about the dramatic change of the roles and functions of the local governments through decentralization of those of the Central Government. It involves the followings:

- Transferring political, financial and development planning authority from the Central Ministries to LGAs.
- District Councils taking responsibility for the delivery of social and economic services.
- Empowering local people by promoting their participation in decision-making on and, hence, ownership of local development initiatives.
- Implementing sector-specific policies formulated by the Central Ministries.

These reforms will be particularly critical to the delivery of support services to smallholders, rural infrastructure development, and farmer's access to financial services. The roles of local governments pertaining to agricultural development including irrigation development are:

- Promoting social and economic development.
- Designing and implementing agricultural sector plans.
- Supervising the implementing of laws, acts and regulations relevant to the sector.
- Supervising and coordinating the delivery of extension services
- Mobilizing resources (financial, human and facilities/equipment) for local development programmes.
- Administration of villages for the purpose of stimulating sustained development.
- Land administration, land use planning and management for effective and sustainable land utilization.

For instance, the decision to decentralize all agricultural extension services to the District level has been already made. The District Councils are to be responsible for the provision of extension services to farmers, as well as other services (education, health, roads, and water). While the central technical ministries, including MAFS, will be responsible for determining national minimum standards (NMS) of service, safeguarding professionalism, and determining the

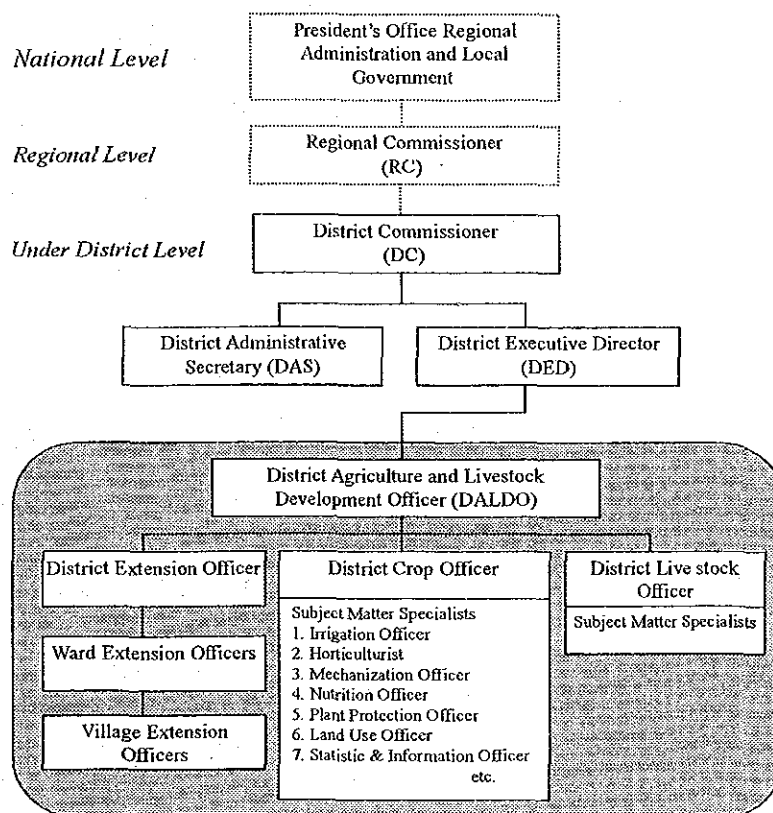
qualifications and numbers of staff required to meet the NMS.

In the District Council the District Agriculture and Livestock Development Officer (DALDO) is in charge of irrigation development, in particular an irrigation officer under the supervision of the district crop officer. However, all of DALDOs haven't always irrigation officers. As a matter of fact, some DALDOs are understaffed today.

Although their expected roles and functions have expanded more, the LGAs presently face a lot of constraints that limit their capacity including:

- Lack of a legal mandate, technical skills and facilities to enforce some roles.
- Lack of expertise for strategic and financial planning and management.
- Very limited resources for local level institutional building for community participation in the development process.
- A shortage of competent personnel and, in some cases, technical equipment to manage and control the development process. For example, all local governments lack the technical capacity for effective and timely land use planning.

Typical Organization of the DALDO



Source: DALDOs

Let's take a look at the case of Morogoro District as an example of local government. The DALDO under the district executive director had 170 staffs in 2001. However, they still couldn't cover sufficiently all wards and villages in their jurisdiction. In fact, 36 ward extension officers were assigned to 42 wards, and 104 village extension officers to 235 villages.

Their main tasks include technical advisory and educational services to farmers, demonstration and dissemination of agricultural and livestock technology, collection and reporting of data to the district, cooperation of other relevant organizations, and crop inspection. Their budget consists of the own resources (regional revenues) and grants from the central government. The share of the own resources has been allegedly below 30%. Previously they used to sell seeds and pesticides, but already stopped it. As most of expenditures account for salaries of the staffs, the office is also facing a serious financial shortage.

LGRP is still under way. Its efficient and smooth implementation may be very crucial to reform the institutional and organizational setting of irrigation development. The progress of LGRP should be carefully watched and its attained results will be conformably reflected to institutional and organizational strengthening of the irrigation development.

2.5 Present Performance of the Governmental Organizations

The demarcation of roles and functions of irrigation farming among the relating governmental organizations was clearly defined conforming to the LGRP in June 2001. The demarcated roles and functions, however, are presently not necessarily well performed by each organization. The table of the demarcated roles and functions shows their present performance and priority of strengthening.

Present Performance and Strengthening Priority of Roles and Functions Demarcated to the Governmental Organizations for Irrigation Development

Organization	Roles and Functions	Present Performance	Priority of Strengthening
MAFS	a To formulate and review policy, laws, procedures, regulations and guidelines on irrigation farming.	Poor	High
	b To investigate and identify areas suitable for irrigation farming.	Fair	Medium
	c To set criteria for sound/appropriate irrigation projects.	Fair	Medium
	d To evaluate projects recommended by Local governments and to give advice on their suitability.	Fair	Medium
	e To supervise in the preparation of irrigation farming projects before they are implemented.	Good	Medium
	f To coordinate and evaluate irrigation schemes.	Fair	Medium
	g To prepare guidelines for the formation of groups that intend to use water for irrigation farming.	Fair	Medium
PO-RALG	a To encourage Local Governments to execute/implement policies related to irrigation farming.	Poor	-
Regional Secretariats	a To receive, coordinate and prepare reports on irrigation farming and to give guidance needed.	Poor	High
	b To interpret and give advice on the policy of irrigation farming.	Poor	High
	c To coordinate identification of suitable land for irrigation farming.	Poor	High
	d To give advice on how to undertake evaluation of irrigation procedures.	Poor	High
	e To give advice on irrigation procedures.	Poor	High
	f To coordinate the use of resources in irrigation areas.	Poor	High
	g To coordinate projects that promote irrigation farming through cooperation with the Ministry of Agriculture and Food Security	Poor	High
Local Governments	a To implement policy of irrigation farming.	Poor	High
	b To investigate and specify areas suitable for irrigation farming.	Poor	Medium
	c To evaluate irrigation projects.	Poor	Medium
	d To ensure that irrigation techniques and practices are properly carried out.	Poor	Medium
	e To ascertain the proper use of resources in irrigation areas.	Poor	Medium
	f To involve non-governmental organizations and donors in planning and execution of irrigation projects.	Poor	High
	g To supervise the construction of irrigation farming.	Poor	Medium
	h To give advice to the people on irrigation farming.	Poor	High
	i To mobilize and advice farmers on formation and management of water users associations.	Fair	Medium
	j To prepare reports on the progress of irrigation farming.	Poor	Medium
	k To maintain resources that sustain irrigation schemes in general.	Poor	High
	l To mobilize farmers to contribute resources in the planning and implementation of irrigation projects.	Poor	High
	m To mobilize and give advice to farmers and livestock keepers on rain water harvesting.	Poor	Medium

Source: The Division of Responsibilities of the Roles and Functions of the Agricultural Sector among the Ministry of Agriculture and Food Security, Ministry of Co-Operatives and Marketing, Ministry of Water and Livestock Development, President's Office - Regional Administration and Local Governments, June 2001

Remarks: The present performance and priority are evaluated by the JICA Study Team based on the hearing from MAFS, the Local Governments and the PCM workshops. Grades used are "Good", "Fair", "Poor" and "High", "Medium", "Low" respectively.

The present performance is generally rated as insufficient, in particular, that of the Regional Secretariat and the Local Governments. In addition, the first priority of PO-RALG today may be given to the LGRP itself. Therefore, seemingly the individual component such as irrigation development has a lower priority today. MAFS shows rather the better performance than the others. However, it is far from the satisfactory level.

For MAFS, the high priority of institutional and/or organizational strengthening is to formulate and review policy, laws, procedures, regulations and guidelines on irrigation farming. It indicates that the formation of an effective institutional framework including securing the stronger institutional and organizational position of the Irrigation Section is urgent for efficient irrigation development.

The Local governments and Regional Secretariats are presently transforming under the decentralization policy, i.e. the LGRP. Therefore, it is actually too early to judge their present performance of the demarcated roles and functions, which are expected to be fulfilled after the completion of the LGRP. However, it is quite obvious that they need a strong backstopping from the Central Government for a certain period by the time of completion of the LGRP to secure their self-reliance. In addition to the roles and functions mentioned above, the competent authorities for registration of water user group are the Ministry of Cooperatives and Marketing or the Ministry of Home Affairs, application for water right is the Ministry of Water and Livestock, land registration including agricultural land is the Ministry of Land and Human Settlements respectively. Furthermore, in the case of projects assisted by the foreign donors the Planning Commission and the Ministry of Finance are involved in the process of implementation.

2.6 Private Sector Organizations

The role of public organizations is a facilitator or a promoter of irrigation development. On the other hand, the private sector is directly involved in productive activities at its own risk to increase agricultural productivity, incomes and livelihoods. In that sense, the private sector, in particular farmers themselves, is expected to become a main actor in irrigation development. However, at present farmers face a lot of constraints to perform their roles to a large extent. ASDS pointed out the followings:

- Institutional and governmental constraints, including an uncertain regulatory environment, inappropriate policies, inadequate extension, research, marketing and regulatory services.
- Financial constraints, including lack of access to capital assets and credit,

exacerbated by low prices of output, high cost of inputs, multiple taxes and limited incomes.

- Natural environment constraints, which include limited access to land and water, frequent outbreaks of pests and diseases and a deteriorating natural resource base.
- Human constraints that include limited knowledge and skills, poor health and low productivity.
- Infrastructure constraints, including poor roads, inadequate marketing infrastructure, lack of electricity, water and communication facilities.

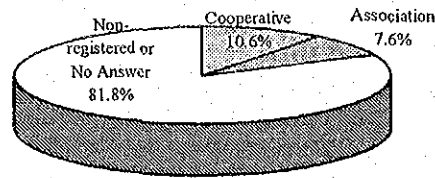
The constraints have tangled complexly and hampered farmer's efforts. It seems very difficult to overcome all of them in a short period. However, through careful observation of the present problem situation, some key factors for practical and efficient countermeasures should be identified and formulated gradual steps to overcome the persistent constraints one by one.

The water users group, i.e. the irrigators' group (IG), is a basic private organization and a basic actor for irrigation development. Needless to say, an well-organized IG is one of crucial factors for its success. Today the IGs are generally classified into three categories, (1) registered irrigators cooperative society (ICS), (2) registered irrigators association (IA), and (3) non-registered group. It depends on the wishes of beneficiary farmers and the objective of their organization.

Mobilizing and advising irrigators on formation and management of irrigators' group is one of important roles for the Governments, in particular, for the Local Governments. Under the program/projects supervised by MAFS a team of experts from the Irrigation Section, the Zonal Irrigation Office and the District is generally sent to a scheme to explain beneficiary farmers the necessity of forming an organization not only for a good and sustainable operation and maintenance, but also for marketing of their produce, securing agricultural inputs, and so forth.

Currently MAFS doesn't have data on the number of irrigators' groups and the percentages of the registered groups in the country. However, the inventory survey done by the JICA study team shows that there are 32 registered cooperatives (10.6%), 23 registered associations (7.6%) among 302 schemes, which have farmer's organizations. The rest (81.8 %) is non-registered or no answer.

Registration Status of the Water Users Groups



Source: *The Inventory Survey by the JICA Study Team, 2002*

The actual present status can't be automatically generalized from the Inventory Survey because of the sample size. However, it surely implies the legal status of the water users groups is still weak and may bring about certain constraints for operation and maintenance of the irrigation schemes.

Currently farmers tend to choose the association rather than the cooperative. One of reasons for the tendency may be the poor performance of cooperative societies in the past. On the other hand, the association is a rather new type of organization to farmers and they tend to try its possibility. For instance, in the case of five irrigation schemes supported by ASPS/IC, four of the five water users groups chose to be registered as association, and the only one group as irrigator's cooperative society.

The difference of the Cooperative Society and the Association is summarized in the table. It is not always well understood by the farmers, in some cases even by officers. Neither cooperative nor association is necessarily an appropriate organizational form for the irrigators' group. Sustainable operation and maintenance of the scheme is one of major tasks for the irrigators' group. However, the cooperative is primarily a business-oriented organization (buying, selling and marketing) on one hand. The association can be applicable to any type of social activities on the other hand. The rights and obligations of the irrigators' group members can't be always clearly and uniformly defined under the present legal framework. The new legal framework exclusively for the irrigators' group seems to be very important and necessary for self-reliable irrigation development.

Comparison of Cooperative and Association

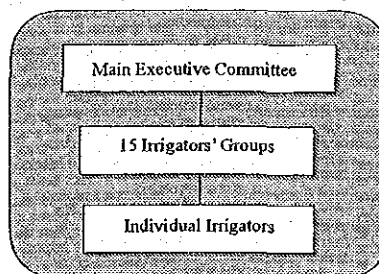
	Irrigators Cooperative Society	Irrigators Association
Legal Ground	Registered under the Cooperative Act of 1991, Article No.15, with Ministry of Cooperatives and Marketing -Organization should have a capital shared by the members -Monitored by the District cooperative officer after registration -It must have an executive committee of not less than 5 members and not more than 15 members, including a chairperson, vice chairperson, secretary, treasurer, and	Registered under the societies ordinance, 1954, with Ministry of Home Affairs - Organization structure depends on the wish of members
Major Necessary Conditions/Requirements for Registration	Members should not be less than 10.	Founder members should be less than 10.
	The bylaw should be prepared and four copies sent to the registrar.	The constitution should be prepared. Its two copies and the minutes of the meeting approving the constitution should be sent to the registrar.
	The District cooperative officer's recommendation to the Regional cooperative officer/assistant registrar	Supporting Document/letter from the respective authority, e.g. DC, RC or the Ministry
	Registration fee: Tsh. 1,800	Application fee: Tsh. 10,000 Registration fee: Tsh. 100,000, Annual payable fee: Tsh. 40,000, Total: Tsh. 150,000
	Economic viability report	

Source: The Irrigation Section, MAFS

Let's take a look at a case of JICA grant project, Mwega small-scale irrigation project. The construction started in 2000 and finished in 2002. A new irrigators' group (Mwega Irrigation primary cooperative society) is now being organized parallel with the construction. There are 1,240 agricultural plots in the project area (580 ha.). Its registration ratio of plots already reached 88.35% by the end of 2001. The figure is remarkably and exceptionally high in terms of comparison with other similar cases. Although the organization is still in its infant stage of activities, some clues to overcome the above-stated constraints can be pointed out from its experiences.

Its structure has three tiers shown in the chart. The main executive committee, the first tier, consists of 15 members who are elected chairpersons from different irrigators' groups. A chairperson, a vice-chairperson, a secretary, and a treasurer are designated among them. Besides, there are 4 subcommittees, the planning and finance, the irrigation, construction and environmental protection, the agricultural and marketing, and the human rights, gender and farmer development.

Organization of Mwega Irrigation Primary Cooperative Society



Source: JICA Study Team

The second tier consists of 15 irrigators' groups, which are organized through geographical location of agricultural plots. Each group has a chairperson, a secretary and a treasurer similar to the executive committee.

After completion of the construction, the irrigators' groups themselves undertake its operation and maintenance. The operation and maintenance manual was prepared with technical support of a JICA expert and a ward extension officer.

According to the chairperson of the executive committee, the high registration ratio has been attained by the supervision of a JICA expert and a ward extension officer assigned to the project. In addition, the construction management team of irrigation engineers made a great effort to initiate organizing farmers at the early stage of the construction. It should be also noted that the chairperson himself was capable and worked earnestly for his duty. A combination of the appropriate technical supervision, the voluntary work of the irrigation engineers and the capable local leader motivated the local people and attained the high registration ratio.

However, the chairperson added that he worried about how to get financial resources for the initial agricultural inputs and continued technical supervision for the operation and maintenance, in order to utilize the newly constructed irrigation system to a great extent. His anxiety can be applicable to similar irrigation projects and generalized as financial and institutional constraints, which have rather commonly afflicted farmers. The consideration of institutional strengthening for irrigation development should cover the constraints indicated by the chairperson.

In addition to the farmers, the governments encourage the private companies to invest in the irrigation development in the future. In fact, a consortium of private companies undertook a study on the potential for developing a commercially operated Build, Operate and Transfer (BOT) mechanized rice project in 1994. The plan is still active and under preparation. However, during the course of the study, a number of legal and institutional issues emerged that require further discussion with the relevant governmental agencies. They are the following:

- Arrangements for transfer of the land title and water rights to the private company.
- The proposed BOT private company organization structure including the public cooperation shareholding arrangement.
- The arrangements for eventual transfer of the project/company, etc.

The investment by the private companies in irrigated farming will be one of important alternatives in the future and play an important role for the irrigation

development. The relevant governmental agencies need to prepare favorable and attractive legal and institutional framework for the private investors.

2.7 Core Problems and Objectives Identified through the PCM Workshops

The five PCM (Project Cycle Management) workshops inviting different participant groups respectively were held by the JICA study team in June 2002. The invited groups were (i) the Irrigation Section, MAFS, (ii) Zonal Irrigation Offices, (iii) Local Governments (DALDO), and (iv) Irrigators' Groups.

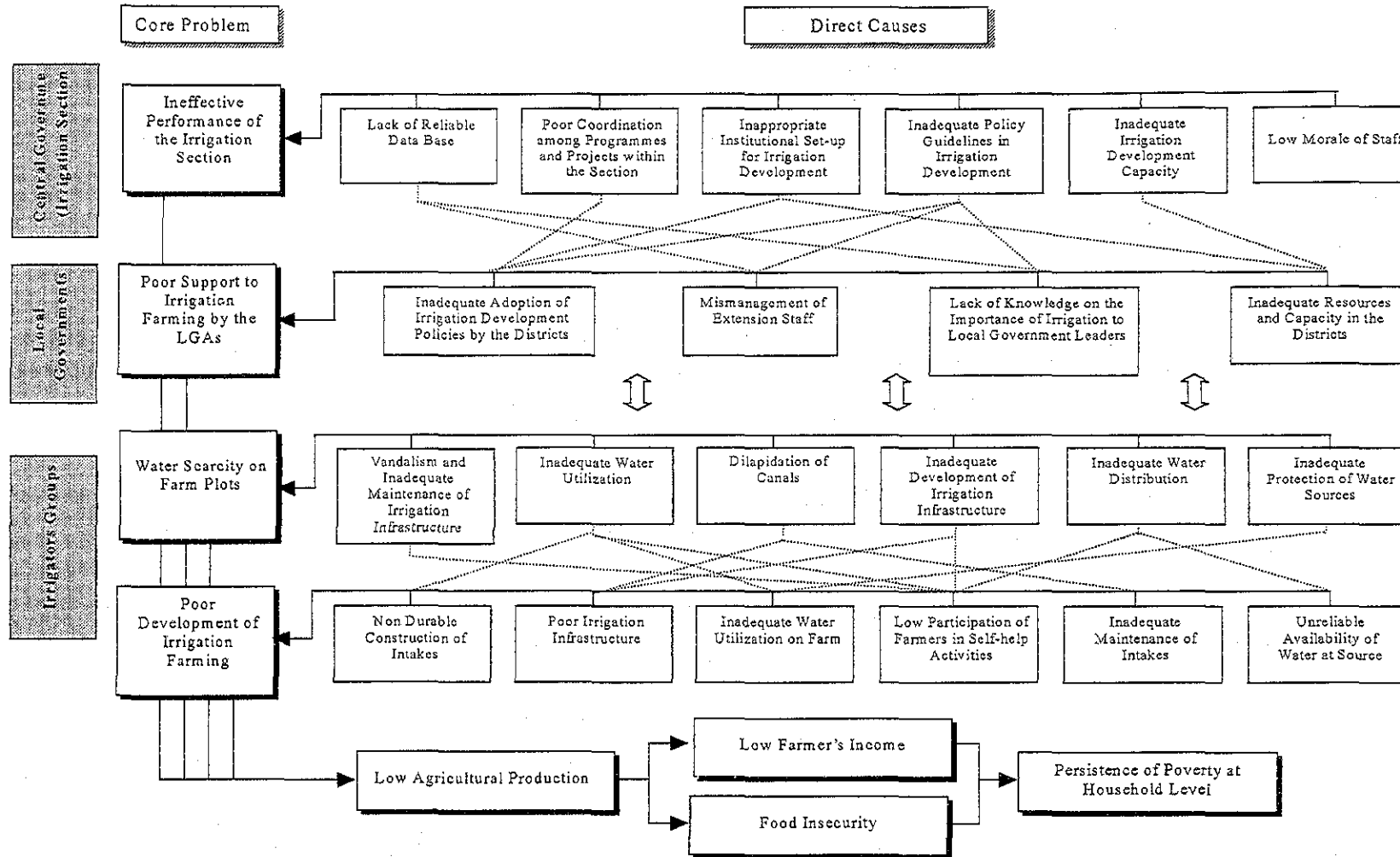
At each workshop the core problem for irrigation development, which each participant group was facing, and its direct causes were discussed and identified. Furthermore, the objective analysis and/or the participant analysis were carried out based on the problem analysis. The core problems identified are as follows:

- Ineffective Performance of the Irrigation Section
- Poor Support to Irrigation farming by the LGAs
- Water Scarcity on Farm Plots
- Poor Development of Irrigation Farming

At least two hidden core problems can be extracted from these separately identified problems. They may be *insufficient ownership* and *insufficient capability in institution, technology and finance*.

The core problems and direct causes may have a causal relationship among them. The results are summarized into the two charts, the integrated problem tree and the integrated objective tree. These charts are utilized to identify program and project approach of the National Irrigation Master Plan.

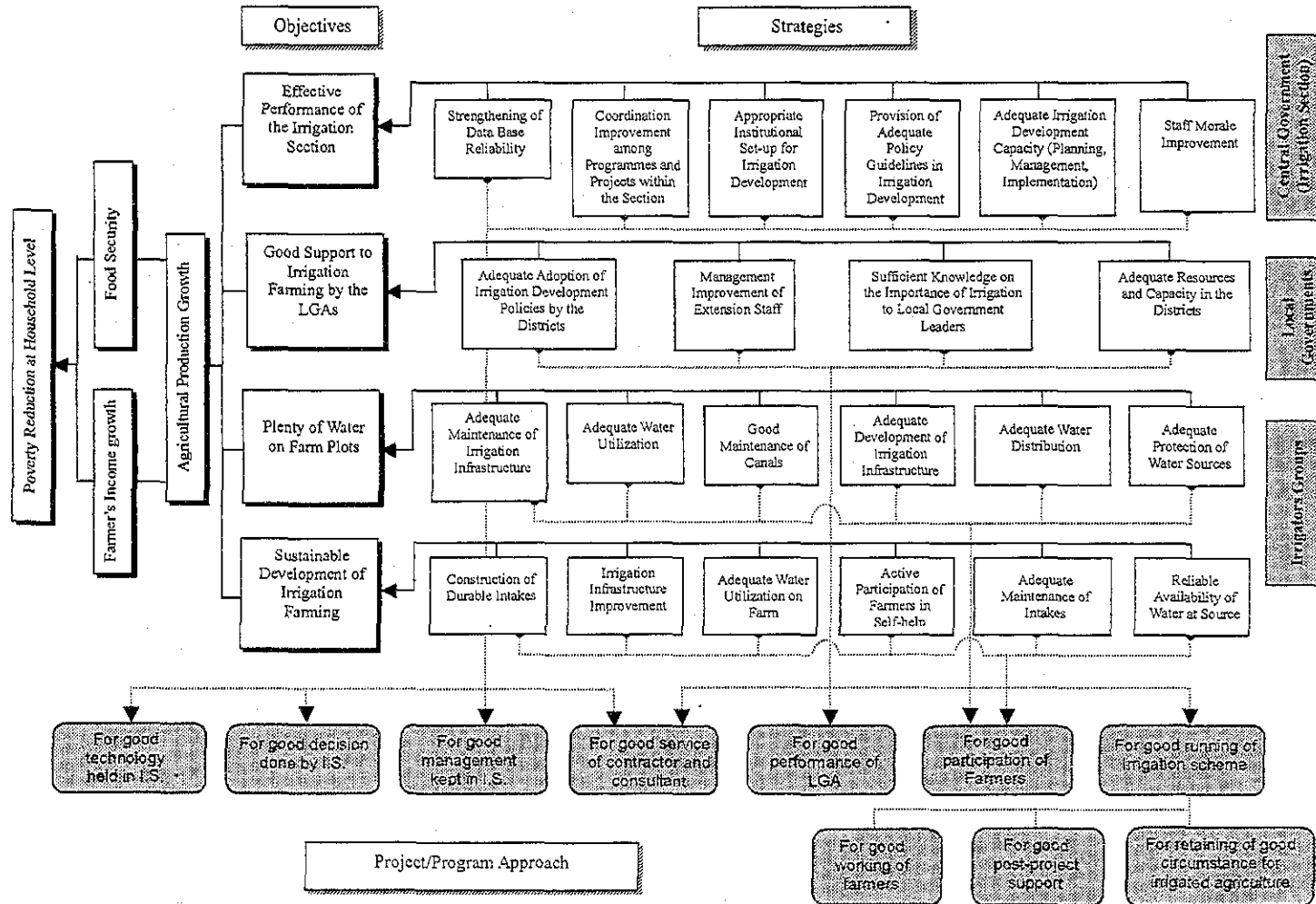
Integrated Problem Tree of Irrigation Development pertaining to the Central Government, the Local governments, and the Irrigators' groups



H - 20

Source: PCM Workshops held by the JICA Study Team

Integrated Objective Tree of Irrigation Development pertaining to the Central Government, the Local governments, and the Irrigators' groups



H - 21

Source: PCM Workshops held by the JICA Study Team

CHAPTER 3 BASIC PLAN FOR INSTITUTIONAL DEVELOPMENT

The basic concept of the institutional development for the NIMP is to realize a practical and reliable institutional setting for the sustainable and self-reliant irrigation development. The institutional setting is, in other words, a kind of engine to operate smoothly the irrigation development procedure and mechanism composed of the various participants, that is, the Central Government, the Local Government Authorities, the Irrigators' Organizations, Private Companies, NGOs, Donors and etc. Without the engine, i.e. the practical and reliable institutional setting, the irrigation development projects/programs will definitely lose their momentum and control. Consequently, they must encounter the persistent constraints discussed previously again just the same as before. Whether the institutional development is achieved smoothly and harmoniously among the various players or not will definitely become a crucial prerequisite for the sustainable and self-reliant irrigation development, i.e. the NIMP.

For the institutional development stage-wise programs are basically appropriate for the long time span of the planning period to the target year of 2017, conforming to changing socio-economic conditions around and planning objectives of the irrigation development. In particular, the conformity to the LGRP is essential. The programs basically have three steps for the short, medium and long terms based on the stage-wise development scenario. The basic objective of the institutional development for each term is as follows:

- Short term (2003-2007): To reform the existing institutional setting for better performance of participatory irrigation development responding to the decentralization policy.
- Medium Term (by 2012): To support actualizing farmers-oriented irrigation development through the Local Government Authorities' initiatives and assistance to the farmers.
- Long Term (by 2017): To support realizing self-reliant irrigation development through the PPP (Public Private Partnership).

3.1 Roles of the Central Government, the Local Government Authorities and Farmers' Organizations

The demarcation of roles and functions of irrigation farming among the relating governmental organizations were clearly defined conforming to the LGRP in June 2001. The harmonization of them is essential to achieve the sustainable self-reliant irrigation development. Although they were well defined, the demarcated roles

and functions are, however, presently not necessarily well performed yet by each organization, as reviewed in Chapter 4.3.7.

The main objective of institutional development in the NIMP is to provide the more effective and more fitting institutional framework for the various participants of irrigation development and to support them achieving good performances of their demarcated roles and functions.

The Central Government, including MAFS, will be basically responsible for determining the national minimum standards (NMS) of service, safeguarding professionalism, and determining the qualifications and numbers of staff required to meet the NMS. In that sense, among the demarcated roles, a top priority for the Irrigation Section is given to the role of formulating and reviewing policy, laws, procedures, regulations and guidelines on irrigation farming. This role is quite essential for the Irrigation Section to give the firm policy and technical guidance to the Local Government Authorities. The Zonal Irrigation Office and the Regional Secretariat have basically inter- and intra-regional coordination and supervision functions through different channels. The main task of the Zonal Office is a technical supervision, on one hand. The Regional Secretariat is to coordinate irrigation development with other development activities on the other hand.

The LGAs' role is quite critical under the decentralization policy. A lot of constraints discussed in Chapter 4.3.7 must be solved one by one to perform their roles satisfactorily. One of their main roles is based on the guidance from the Central Government to provide technically and financially appropriate and feasible models and/or methods of irrigation development to the irrigators' organizations (farmers) and, in addition, to assist and encourage the irrigators' organizations to operate and maintain the irrigation scheme by themselves.

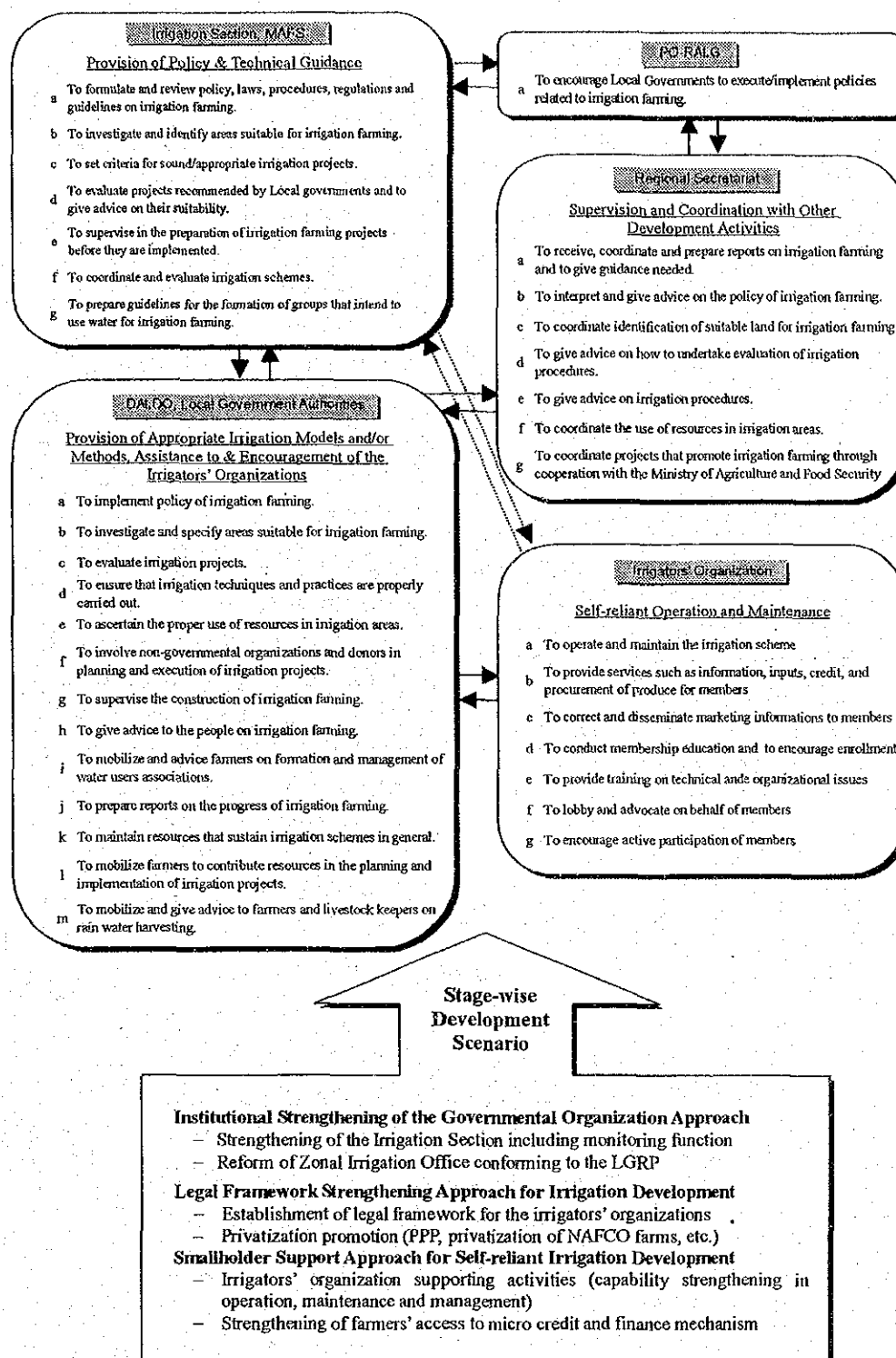
The role of irrigators' organizations will become crucially very important toward the farmers oriented irrigation development. They will play a main role in operating and maintaining the irrigation scheme and achieving self-reliance. However, they surely need backstopping from the LGAs and the Zonal Irrigation Offices for the short and medium terms.

3.2 Institutional Development Components

The following three groups of the institutional development components are identified for the NIMP and they will support the participants of irrigation development to achieve good performances of their demarcated roles and functions. The details will be discussed in Chapter 7.2.

- (1) Institutional Strengthening of the Irrigation Section
 - Promotion of the Irrigation Section to the Department
 - Strengthening of Monitoring Function
 - Reform of Zonal Irrigation Office conforming to the LGRP
- (2) Legal Framework Strengthening for Irrigation Development Program
 - Establishment of Legal Framework for the Irrigators' Organization
 - PPP (Public Private Partnership): Privatization Promotion
 - Privatization of NAFCO Farms
 - PFI (Private Finance Initiative) including BOT
- (3) Smallholder Supporting Program for Self-reliance
 - Strengthening of Operation, Maintenance Skill
 - Strengthening of Management Skill
 - Strengthening of Farmers' Access to Micro Credit and Finance Mechanism

Institutional Development Components and Demarcated Roles of the Central Government, Regional Secretariat, the Local Government Authorities, and Irrigators' Groups



Source: JICA Study Team

CHAPTER 4 INSTITUTIONAL SUPPORTING PROGRAMME

4.1 Direction indicated by the ASDS

The ASDS picks up “strengthening the institutional framework” as a priority issue among a lot of issues that constrain the performance of Tanzanian agriculture and lead to continuing rural poverty. It states, “The wide range of actors that will be involved in the ASDS will require a harmonized and coordinated framework for effective and efficient management of activities and resources. This will be achieved through the following mechanisms:

- An Inter-ministerial Coordination Committee (ICC) will be constituted. It will be composed of Permanent Secretaries of the lead and collaborating Ministries and representatives of the private sector. ICC will be responsible for coordinating the planning of the ASDS at national level and monitoring its implementation to ensure that the goals of the ASDS are being achieved.
- The three lead ministries, together with PO-RALG, will establish a Technical Inter-ministerial Committee (TIC) to act as the Secretariat for the ICC. Its terms of reference will include:
 - Preparing the technical guidelines for LGAs to prepare DADPs and integrate them in District Development Programmes (DDPs)
 - Formulating a rolling ASDP to implement the ASDS at national level, covering the mandate, roles and functions of the lead ministries.
 - Monitoring the implementation of ASDS by the LGAs.
 - Acting as a coordination mechanism between the lead ministries and the cooperating ministries or agencies.
 - Resolving any conflicts that may arise between lead ministries and LGAs regarding domains of authority and influence (such as the terms of appointment of high level personnel and the enforcement of technical standards) and their relative roles in undertaking specific functions.”

The proposed harmonized and coordinated framework hasn't been realized yet. After being established, however, the proposed framework will expectedly function as a fundamental backbone and a prerequisite for the institutional strengthening of the irrigation sector. Inter-ministerial issues concerning irrigation development can be conveyed to, discussed and settled in the framework in the future. Actions, which will be taken for establishing the framework, should be carefully paid attention to.

In addition, several serious constraints that the relevant Ministries need to overcome in order to play their new roles effectively are also clarified in the

ASDS. As they are directly applicable to irrigation development, they should be surveyed thoroughly further to find out their fundamental causes. They are the followings:

- Inadequate manpower and skills for policy formulation and analysis, monitoring and enforcing policies, standards and regulations.
- Lack of performance standards and a framework for assessing performance of service providers, especially at the level of LGAs, together with a lack of facilities for enforcing standards and regulations.
- Erosion of the institutional culture for good governance. This will be addressed by the ongoing PSRP.
- Lack of mechanisms for institutional coordination among the various ministries, and between central ministries and the LGAs.
- A shortage of counterpart funding for development programmes, which reduces funding from development partners. This will require the Government to place a higher priority on funding the agricultural sector.
- A general lack of financial, human and technical capacity to generate, manage and disseminate accurate agricultural information.

4.2 Strengthening of Irrigation Section

(1) Background

The institutional issue has been repeatedly discussed and a lot of institutional reforms have been proposed so far in various occasions. The fact indicates the issue has been quite persistent and ineradicable. The institutional responsibility for irrigation was discussed and the alternative plan of strengthening the irrigation section was also proposed in the NIDP. It stated as follows:

“Given the multi-sectoral nature of sustainable irrigation development, the institutional location of nation’s irrigation services is notoriously difficult to specify. It can be seen that under the new order the Irrigation Department, which used to fall under the Agriculture and Livestock Division, is expected to become a section of the Extension and Technical Services Division. Notwithstanding this, many experts in Tanzania feel that the Irrigation Section will be inadequately empowered and mandates buried so deeply within the Ministry structure. They have therefore suggested that a semi-autonomous role would be worth considering; the National Environmental Management Council has been cited as a possible example.”

The above statement of the NIDP may still be applicable to the present irrigation section to a great extent. The necessity of strengthening the irrigation section

hasn't decreased at all, to fulfill its role as facilitator, technical advisor and coordinator for irrigation development.

(2) General Approach and Basic Components

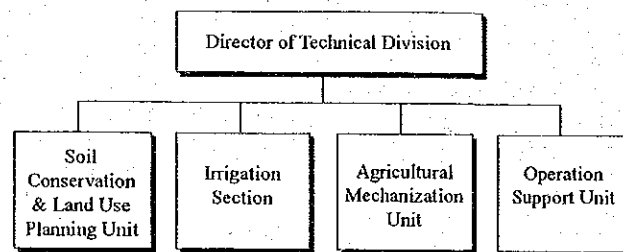
The demarcation of roles and functions of irrigation farming among the relating governmental organizations defined in June 2001 are prerequisites for the institutional strengthening. For the Irrigation Section the top priority should be given to the role of formulating and reviewing policy, laws, procedures, regulations and guidelines on irrigation farming. The present position of the Section in MAFS unfortunately seems insufficient to achieve the role, which surely needs to coordinate and harmonize the different organizations pertaining to irrigation development and, furthermore, to make prompt decisions. The Section also needs stronger mandates of the personnel administration and budget allocation. It consequently requires a stronger institutional and organizational position of the Irrigation Section in MAFS.

The Institutional Strengthening of the Irrigation Section has the following three sub-components:

- Promotion of the Irrigation Section to the Department
- Strengthening of Monitoring Function
- Reform of Zonal Irrigation Office conforming to the LGRP

Presently a possible reform plan is under consideration in MAFS. It is to promote the Irrigation Section to a new department, i.e. the Technical Division through combining the Irrigation Section, the Soil Conservation and Land Use Planning Unit and the Agricultural Mechanization Unit. Strengthening of the irrigation section including this plan should be given serious consideration.

Possible Institutional Strengthening Plan of the Irrigation Section



Source: Irrigation Section, MAFS

In addition, the Monitoring and Evaluation Unit and the Environmental Unit are presently really understaffed, even though their expected roles at the National level are quite crucial to provision of effective feedback data to perform their

demarcated roles and, moreover, to socio-economic effectiveness of irrigation development with environmental consideration. As a matter of fact, the Section doesn't have established a firm monitoring mechanism yet and hasn't even selected a list of necessary socio-economic, technical and environmental indicators to monitor and evaluate the irrigation development activities. Strengthening of those two units should be included in the strengthening of the Irrigation Section.

Presently Demarcated Roles and Functions in the Irrigation Section

Irrigation Section of MAFS		Planning & Design Unit (10)	Project/Program Supervision Unit (4)	Operation Support Unit (4)	Zonal Irrigation Unit (100)	Monitoring & Evaluation Unit (1)	Environmental Unit (2)	
Roles and Functions	a	To formulate and review policy, laws, procedures, regulations and guidelines on irrigation farming.	⊙	○	○	○	○	○
	b	To investigate and identify areas suitable for irrigation farming.	○			⊙		○
	c	To set criteria for sound/appropriate irrigation projects.	⊙	○	○	○	○	○
	d	To evaluate projects recommended by Local governments and to give advice on their	○	○	○	⊙	○	○
	e	To supervise in the preparation of irrigation farming projects before they are implemented.	○		○	⊙		
	f	To coordinate and evaluate irrigation schemes.	⊙		○	○		
	g	To prepare guidelines for the formation of groups that intend to use water for irrigation farming.	○		⊙	○		

(No.) *: Number of Staff

Remarks: "⊙" In charge mainly, "○" In charge

Source: JICA Study Team

The third sub-component, Reform of Zonal Irrigation Office should be synchronized with the progress of LGRP. Presently the Zonal Office has still very influential role in irrigation development, in particular, in new development schemes, because the LGAs are presently not yet capable enough to perform their demarcated roles and functions. The constraints limiting the LGAs' capacity are already discussed at Chapter 4.3.7.

At least in the first stage of the NIMP up to 2007 the Zonal Office should maintain the present roles and functions. Gradually, however, their roles should focus on the inter-regional coordination in cooperation with the Regional Secretariat and provision of policy and technical guidance to the LGAs (DALDO) toward the end of third stage up to the year of 2017. Gradual withdrawal from direct supervision of irrigation schemes and transferring it to the LGAs should be undertaken from

the first and second stages.

A task force of the experts should be organized to make a reform plan of the Irrigation Section. The plan should be a stage-wise program responding to the short term (2003-2007), the medium term (by 2012) and the long term (by 2017). The promotion of the Section to the Department should be actualized in the short term, because it must be the important first step toward sustainable and self-reliant irrigation development and a trigger of other institutional developments.

Needless to say, the institutional reform only for the irrigation section is not enough. If the others are not changed, the effects of reform will diminish easily. Particularly simultaneous institutional strengthening of the Regional Secretariats and the DALDO are definitely necessary. However, those components should be included in the LGRP. Therefore, the task force should continuously appeal to the LGRP to promote them for effective synergy effect.

Ideally the extensive institutional setting has to be reformed parallel with the irrigation section. On the contrary, however, the extensive reform at once seems unrealistic judging from the previous lessons. A gradual and practical procedure to the reform should be carefully designed and implemented one by one.

4.3 Legal Framework Strengthening for Irrigation Development

(1) Background

A reliable legal framework is a prerequisite for successful farmers-oriented irrigation development. It should provide a secure legal environment for farmers and other private stakeholders to participate and invest in irrigation development. Legal status of irrigators' group, land tenure and water right, as well as ownership of and responsibility for irrigation infrastructure should be clearly defined for irrigation development. Presently these items are defined disconnectedly by a number of separate laws, such as the Land Acts, the Water Act, the Cooperatives Act, the Societies Ordinance and etc.

It has become important to establish a sound legal framework to empower farmers and the other private sectors to enable them to secure their ownership, i.e. to take full responsibility for all decisions and matters involved in development, operation and management of the irrigation schemes.

(2) Establishment of Legal Framework for the Irrigators' Organization

The irrigators' group (IG) is a basic private organization and a principal actor for irrigation development. Needless to say, a well-organized IG is one of crucial factors for its success. Presently the IGs are generally classified into three

categories, (i) registered irrigators' cooperative society (ICS), (ii) registered irrigators' association (IA), and (iii) non-registered group.

Neither cooperative nor association is necessarily an optimum organizational form for the irrigators' group. The cooperative is primarily a business-oriented organization and the association can be applicable to any type of social activities. The rights and obligations of the irrigators' group members can't be always clearly and uniformly defined under the present legal framework. A new legal framework exclusively for the irrigators' groups seems to be very important and necessary for securing their ownership and self-reliable irrigation development.

A consultancy work for establishment of the legal framework, possibly a new Act, Ordinance or Regulations, should be undertaken through the initiative of the Irrigation Section in cooperation with the relevant governmental agencies, lawyers and technical specialists. The Ministry of Water and Livestock Development, however, will review the present Water Act for amendment based on the revised National Water Policy, which will provide the scope of activities and powers of water users' associations. The consultancy work should be compatible with the amendments of Water Act.

(3) PPP (Public Private Partnership): Privatization Promotion

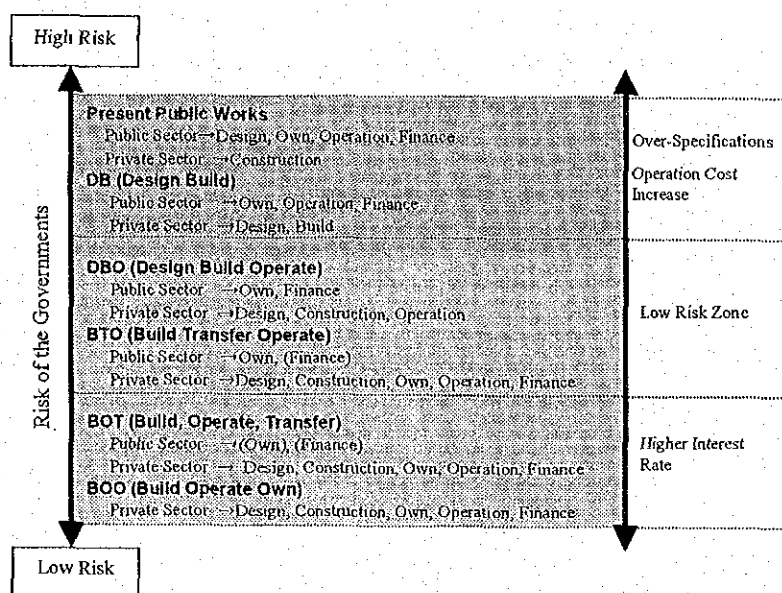
The institutional development target at the third stage of the NIMP is to support realizing self-reliant irrigation development through the PPP (Public Private Partnership). The investment by the private companies in irrigated farming will be one of important alternatives in the future and play an important role for irrigation development. MAFS in cooperation with relevant governmental agencies need to prepare favorable and attractive legal and institutional framework for the private investors.

The first step toward the PPP is to realize a smooth privatization of NAFCO. Although NAFCO is already in process of being privatized, the privatization process has encountered various obstacles, because in many cases their farms will require technical audits, large-scale rehabilitation with a large sum of debt. Investment in those farms has presently rather high risk and is not so attractive to possible private investors.

The Government already established the Ministerial Committee for agricultural sector privatization. Under the supervision of the committee, a further in-depth study on privatization methods, strategy and implementation plan by the expert committee should be undertaken. For the PPP, there are several possible schemes. The applicability and feasibility of each privatization scheme such as DBO, BTO

as well as BOT (see the next chart) should be carefully explored and compared based on the present situation of the parastatals. Furthermore, the investment guidelines for the private sector should be established for not only privatization of parastatals but also direct private investment for irrigation development.

Typical Development Schemes of PPP



Source: Original source written in Japanese is, Motoji Muraoka, "Outline of the PFI Business in Japan", Business Research Institute of NTT DATA.

4.4 Smallholder Supporting for Self-reliance

Extension services for irrigators' group through the DALDO should be continuously given a high priority for actualization of self-reliant irrigation development. The present situation of availability of training for irrigators' groups obtained through the inventory survey is shown in the next table. "Available and

Present Situation and Future Requirement of Training for Irrigators' Groups

Present Situation

Training Item	Available and Satisfactory	Available but Unsatisfactory	Not Available	No Answer
Operation & Maintenance	6.0%	34.4%	46.7%	12.9%
Accounting System	2.3%	18.2%	64.6%	14.9%
Water Management	4.6%	45.0%	38.7%	11.6%
Paddy Production	7.3%	35.8%	31.5%	25.5%
Upland Crops Production	10.6%	58.3%	19.2%	11.9%

Sample Size: 302

Future Requirement

Training Item	Necessary	Not Necessary	No Answer
Operation & Maintenance	95.0%	1.0%	4.0%
Accounting System	96.4%	1.3%	2.3%
Water Management	95.7%	1.7%	2.6%
Paddy Production	70.9%	14.9%	14.2%
Upland Crops Production	90.7%	3.3%	6.0%

Sample Size: 302

Source: Inventory Survey by the JICA Study Team, 2002

Satisfactory” accounts for almost less than 10% on one hand. “Not Available” reaches over 30% to around 65% on the other hand. The present situation is unfortunately far below the satisfactory level. As for the future requirement, the necessity seems very high among the irrigators’ groups, in particular, for operation & maintenance, and also for administrative, financial and technical management skills.

The following sub-components should be put emphasis on in the training programs for the irrigators’ groups.

- Strengthening of Operation, Maintenance Skill
- Strengthening of Administrative, Financial and Technical Management Skills

Strengthening of Farmers’ Access to Micro Credit and Finance Mechanism is also pointed out as an important sub-component of smallholder supporting activities. This sub-component, however, should be integrated into a comprehensive rural development strategy and plan for effective implementation. Therefore, the NIMP recommends the relevant agencies to explore this *in integrated manner*.

The institutional reform should begin from a feasible point, then several reformed points will make new lines, and consequently several reformed lines will create new institutional dimensions. Each step should be carefully monitored and evaluated by a neutral third-party organization. The results have to be promptly reflected to the reform program for better performance of the future steps.

4.5 Monitoring and Evaluation of NIMP at each Development Stage

The NIMP itself should be carefully monitored and evaluated by its performance at each development stage, just the same as an irrigation development scheme, which needs good operation and maintenance for satisfactory performance. In other words, necessary feedback through a reliable monitoring and evaluation mechanism should be promptly given to the NIMP for revision. For that purpose, the role of monitoring and evaluation of the NIMP should be assigned to the Irrigation Section.

Attachment

PRIVATIZATION OF NAFCO

1.1 History of NAFCO and the Situation of the Rice Farms

After the Arusha Declaration of 1967, the Government of Tanzania proposed to construct a number of large-scale mechanized irrigated rice projects, to be run by a parastatal, the National Agriculture and Food Corporation (NAFCO), in order to substitute growing imports of rice. The government at that time placed great emphasis on Tanzania's self-reliance and chose large-scale state farms and agricultural collectives to achieve the national and local food self-sufficiency. Presently NAFCO has 22 firms including 4 rice farms, Mbarali rice farm, Rubu rice farm, Dakawa rice farm, and Kapunga rice farm. However, the farms, in particular those rice farms, are today facing severe financial and managerial difficulties because of policy change conforming to market oriented economy since the mid 80s and poor management.

(1) Mbarali Rice Farm

The Mbarali rice farm in Mbeya Region began in 1956 and was reorganized into a state farm in 1968. Since 1969 the People's Republic of China provided technical and financial assistance and the farm was expanded between 1969 and 1977. The farm was intended to double crop rice on about 3,200 ha. However, double cropping has never been achieved from various reasons including the lack of a suitable cold season rice variety. In addition, the arable area of 3,200 ha has never been cultivated to full capacity mainly due to various reasons such as lack of capital, unsatisfactory state of machinery, and etc.

Before 1985, Mbarali was a project under NAFCO. Since then, it was incorporated as a limited liability company owned by NAFCO. The governing body of the company is the Board of Directors, which is an overseer of company activities. It is pointed out, however, that the current organization doesn't bring out the enthusiasm of each worker and a need for transforming the organization and management of the company in order to make each department a self-accounting profit centre. With regard to this, a consultancy is required for studying the appropriate management and organization structure of the farm to cope with current market environment.

The rice production trend of Mbarali was good since rehabilitation in the mid 70s until it reached a peak record in 1980/81 with an average yield of 8.1 tons/ha. Then, however, the yields started to decline to 2.85 ton/ha in 1993/4. The reasons for the decline are listed in the following:

- Infestation of notorious weed known as "wildrice", which is hardly controllable with the herbicides.
- Loss of field levels and aging irrigation system, which aggravated weed problems.
- Losses during harvesting due to old combine harvesters.
- Inadequate working capital for hire of casual laborers usually used for completion of weed control operations, and inadequate irrigation water during germinations time.
- Expensive and sometimes short supply of agricultural inputs such as fertilizers, herbicides, fuel, and etc.
- Inadequate cultural practices such as monoculture and etc.

(2) Ruvu Rice Farm

The Ruvu rice farm in Coast Region was established in 1965 with financial assistance from the People's Republic of China. Farm development was completed in 1974 and handed over to the NAFCO in the same year. The farm was incorporated as a subsidiary company in 1977.

Although it began production in 1966, it did not become fully operational until 1974, when about 725 ha were brought under irrigation. Problems with the irrigation system were then encountered and the Chinese were brought back to resolve these. The reconstruction work was completed in 1981/82 when the farm became fully operational again. However, the planted area on the scheme has been reduced to about 210 ha for various reasons since then. The remaining area of 515 ha has been abandoned for years and is overgrown with trees and bushes. The irrigation works on the 515 ha are silted and most of the irrigation canal sides have collapsed.

(3) Dakawa Rice Farm

The Dakawa rice farm was conceived in 1975 with the overall objectives of reducing Tanzania's rice imports and increasing regional employment opportunities. The survey and design works were undertaken with the assistance from the People's Republic of Korea. The project was intended for paddy cultivation on 2,000 ha with double cropping on about 700 ha. Levelling and canal construction started in 1979 and completed in 1982. Rice production began in 1983. Initially the farm started as a project under the NAFCO. Later it was incorporated under the Companies Ordinance in March 1978.

Dakawa Rice Farms Ltd has a title deed of the estate, which was offered for 33 years tenure from 1978 for agricultural purposes. This title deed was, however,

seized by the National Bank of Commerce in 1993 as a result of failure by the Farm to repay the borrowed money from the Bank. As for the infrastructure including an intake diversion weir, the main and distributary canals, a rice mill, and other supporting facilities is currently not in a good condition due to lack of repair and maintenance. Besides, the farm had no production since 1997/98 at all due to lack of working capital. Poor performance of the farm is attributed to various reasons including poor land levelling, lack of farm machinery, soil problems, poor management, damaged irrigation infrastructure, weeds problems, vermin and recent lack of working capital.

(4) Kapunga Rice Farm

The Kapunga Rice Project consisted of the following three components:

- (a) 3,000 ha to be farmed by NAFCO
- (b) 800 ha to be handled by smallholder farmers
- (c) 1,150 ha to be owned by smallholder farmers (Previously the farmers owned an area of 630 ha and the area was to be expanded to 1150 ha.)

The project implementation started in 1989 and was completed in 1992. The African Development Bank mainly provided funds for the implementation. The total project area is 7,370 ha, out of which 5,500 ha are arable. However, only 3,000 ha have been developed for agricultural activities. The project has the title deed for the period of 99 years since 1995.

The executing agency of the project is NAFCO under supervision of the Board of Directors whose members are appointed by the MADS. However, the Irrigation Section of MAFS together with the Local Government Authorities has the responsibility to the smallholder components of the project.

Paddy production started in 1990/91 with an impressive yield of 4.3 ton/ha. However, the declining trend of yields has continued with fluctuations to the lowest 1.0 t/ha in 1997/98 ever since. In fact, Kapunga has been faced with arrays of problems including, the late arrival of agricultural machinery, emergence of wild rice and the notorious barnyard grasses, gall midges, presence of wild geese and ducks, and the presently identified soil problems (acid soil and sodic soil).

In addition, lack of working capital became one of the major problems after 1996/97. Consequently, the size of cultivated area has been significantly reduced since. Furthermore, despite the reduction of production area the project still holds a large number of staff due to lack of funds for retrenchment.

1.2 Movement of Privatization

In order to revive the farms through privatization, the Government established the Ministerial Committee for agricultural sector privatization. The expert committee, as a working group was also established and presented the report on March 2001, to the Ministerial committee meeting held on 28th July 2001 in Dodoma. The expert committee proposed the following:

- The Tanzanians should be given higher priority to foreigners in privatization.
- The large farms should be divided into economically feasible size plots (small plots) and redistributed to the Tanzanians.
- Each economic activity of the farms should be sold separately to the Tanzanians.

Based on the proposed suggestions of the experts committee the Ministerial Committee instructed the relevant Ministries to visit each farm and seek the suggestion and advise from the stakeholders.

Then, at the Ministerial committee on 31 March 2001 the Minister of Agriculture and Food Security established the sub-committee of the experts to prepare the privatization strategy of the agricultural farms, particularly NAFCO. The experts of the committee were appointed from the MAFS, MLHS (Ministry of Land and Human Settlements) and NAFCO. The strategy has not yet been completed, however.

List of NAFCO Farms

Farm	Location	Size
Dakawa Rice Farm	Morogoro Rural District, Morogoro Region	2,000ha. developed for irrigation, 1,562ha. for buildings and undeveloped, Total 3,562ha.
Mbarali Rice Farm	Mbarali District, Mbeya Region.	3,200ha. developed for irrigation, 2803ha. for reserved, buildings and pasture, Total 6,003ha.
Kapunga Rice Farm	Mbarali District, Mbeya Region.	3,000ha. developed for irrigation, Total 7,850ha.
Ruvu Rice Farm	Bagamoyo District, Coast Region	Total 3,209ha.
Mbozi Maize Farm	Mbozi District, Mbeya Region	3000ha. Developed, 1,840ha. not suitable for farming, Total 4,840ha.
Nantumbo Maize farm	Songea Rural District, Ruvuma Region.	4,000ha. developed (1,000 ha. suitable for irrigation), 1,000ha. for settlement, 1,000ha. for reserve, river, Total 6000ha.
<i>Mbozi Coffee Farms:</i> 1. Ng'anda -Jhanda -Hauseketwa, 2. Ndugu 1, 3. Ndugu, 4. Ishera, 5. Ruanda, 6. Tukumbi, 7. Shiwande	Mbozi District, Mbeya Region	Total 2,226ha.
<i>West Kilimanjaro Heifer Farms</i> 1. Harlington 2. Foresters 3. Friesian 4. Journey's End 5. Roeyfn 6. Kanamondo 7. Matadi	Hai District, Kilimanjaro Region.	Total 5,013.5ha.
<i>Hanang Wheat Farms:</i> 1. Basotu Plantations, 2. Setch, 3. Mulbadawa, 4. Murjanda, 5. Gawal, 6. Gidagamowd, 7. Warret, 8. CMSC	Hanang/Babati Districts, Arusha Region	(1) 5,138ha., (2) 6,300ha., (3) 5,490ha., (4) 5,160ha., (5) 5,720ha., (6) 6,330ha., (7) 6,720ha., (8) 205ha., Total 41,063ha.

Source: NAFCO