

## **Part III**

### **Master Plan and a Model Approach**



## **21. Process of Formulating Village Development Master Plan**

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### **21.1 Process of Formulating Village Development Master Plan**

Village development master plan was formulated through the following four steps:

- 1) The identification of problems and needs
- 2) The translation of problems and needs into basic development objectives
- 3) The designing of the appropriate strategies to achieve the basic development objectives
- 4) The planning of the realistic action programs to implement the above-designed strategies

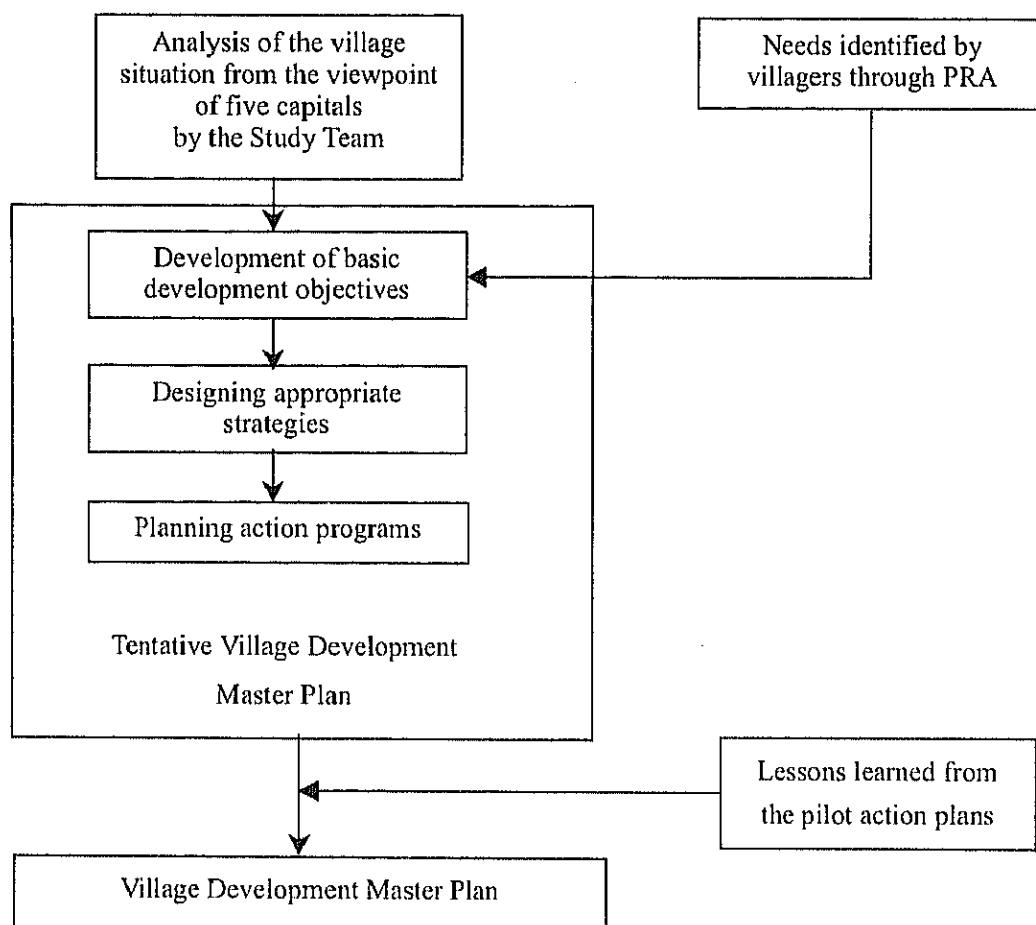
Identification of problems and needs was conducted in two ways in the Study: 1) through PRA (Participatory Rural Appraisal) conducted in mid-September to mid-October 2000 in the Study Area, and 2) through the analysis of five capitals (natural capital, social capital, human capital, physical capital, and financial capital) in the Study Area. In PRA, the villagers were involved in identifying the most urgent problems and needs for them. The analysis of five capitals was conducted as a more systematic and analytical exercise by the Study Team. The results of these two methods were consolidated into one result, which means that the needs and problems were translated into the common set of development objectives.

After identifying the development objectives, the appropriate strategies to achieve each of the development objectives were developed with keeping the villagers' capacity as well as the government's capacity in mind, and the action programs were designed in line of these strategies. These development goals, strategies and action programs are the contents of the village development master plan.

After developing the tentative village development master plan in December 2000, the pilot action plans were implemented by the villagers from May 2001 to February 2002. The lessons learned from the implementation of the pilot action plans were integrated into the final master plan, particularly by making the action programs more realistic ones in terms of the implementation capacity of the villagers and the government.

Figure 21.1 summarizes the process of how the village development master plan in the Study Area was formulated.

**Figure 21.1 Process of Formulating Village Development Plan in the Study Area**



## 21.2 Basic Development Objectives Based on Analysis of Five Capitals

The present conditions of the villages were analyzed by using the concept of five capitals, namely natural capital, social capital, human capital, physical capital, and financial capital, which are defined as follows<sup>1</sup>:

- *Natural capital*: referring to the land, water and biological resources that are utilized by the local people to generate the means of survival. Sometimes named as environmental resources.
- *Social capital*: referring to reciprocity within communities and between households based on trust deriving from social ties.
- *Human capital*: referring to the labor available to the household; its education, skills, and health.
- *Physical capital*: referring to the physical means or infrastructure for economic production (such as buildings, irrigation canals, roads, tools, machines) and for human resources (such as schools, health centers).
- *Financial capital*: referring to stocks and credit of money to which the household has access.

<sup>1</sup> Quoted from Frank Ellis, *Rural Livelihoods and Diversity in Developing Countries* (Oxford University Press, UK, 2000)

The strength, weakness, opportunity and threat (SWOT) in terms of five capitals in the Study Area were analyzed by the Study Team, using the survey results during the first fieldwork (from July to December 2000) in Mozambique. The result of the analysis was shown in Table 21.1

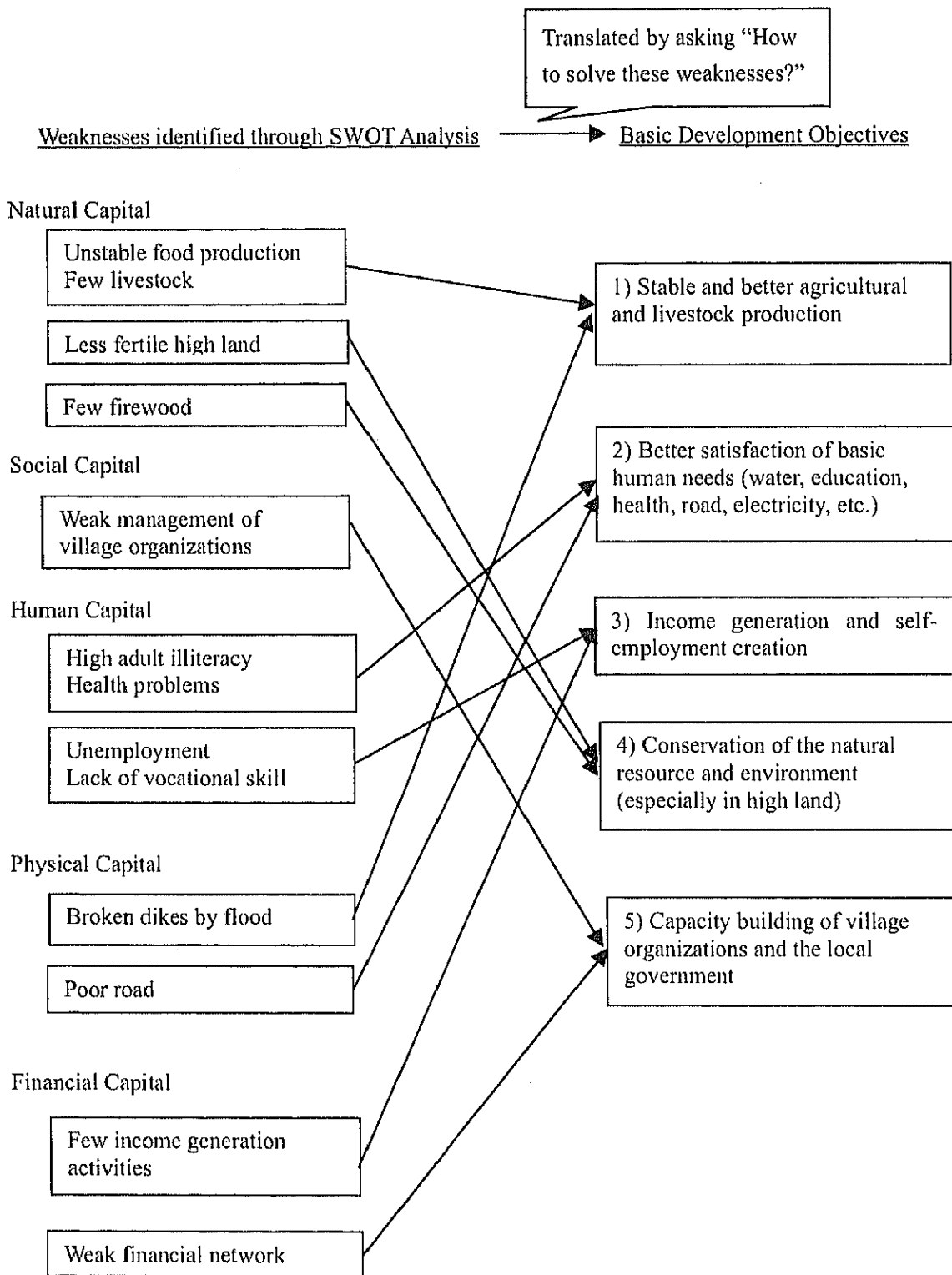
**Table 21.1 Strength, Weakness, Opportunity and Threat (SWOT) regarding Five Capitals**

	Natural Capital	Social Capital	Human Capital	Physical Capital	Financial Capital
<b>Internal Strength</b>	<ul style="list-style-type: none"> <li>• fertile low land along the River Incomati</li> </ul>	<ul style="list-style-type: none"> <li>• 21 village organizations</li> <li>• community work sharing</li> <li>• women's mutual help network</li> </ul>	<ul style="list-style-type: none"> <li>• economically active women</li> </ul>	<ul style="list-style-type: none"> <li>• existing dikes and drainage</li> <li>• existing schools</li> <li>• existing health centers</li> </ul>	<ul style="list-style-type: none"> <li>• banana and sugarcane as cash crops</li> </ul>
<b>Internal Weakness</b>	<ul style="list-style-type: none"> <li>• unstable food production</li> <li>• less fertile high land</li> <li>• few livestock</li> <li>• few firewood</li> </ul>	<ul style="list-style-type: none"> <li>• weak women's leadership</li> <li>• weak management of village organizations</li> </ul>	<ul style="list-style-type: none"> <li>• high adult illiteracy (especially among women)</li> <li>• health problems</li> <li>• unemployment</li> <li>• lack of vocational skill</li> </ul>	<ul style="list-style-type: none"> <li>• poor roads</li> <li>• broken dikes by flood</li> </ul>	<ul style="list-style-type: none"> <li>• few income generation activities</li> <li>• weak financial network</li> </ul>
<b>External Opportunity</b>	<ul style="list-style-type: none"> <li>• support for agricultural development in low land and afforestation in high land</li> </ul>	<ul style="list-style-type: none"> <li>• support for capacity building of village organizations</li> </ul>	<ul style="list-style-type: none"> <li>• support for adult education, health, women, skill development and self-employment creation</li> </ul>	<ul style="list-style-type: none"> <li>• support for dike rehabilitation and cleaning irrigation channels</li> </ul>	<ul style="list-style-type: none"> <li>• support for income generation</li> <li>• introduction of micro credit and saving club</li> </ul>
<b>External Threat</b>	<ul style="list-style-type: none"> <li>• flood</li> <li>• erratic rainfall (sometimes drought)</li> </ul>	<ul style="list-style-type: none"> <li>• theft to rob livestock by outsiders</li> </ul>	<ul style="list-style-type: none"> <li>• migration</li> <li>• diseases</li> </ul>	<ul style="list-style-type: none"> <li>• vandalism to destroy village infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• economic crisis</li> </ul>

As shown in Figure 21.2, by asking "How to solve these weaknesses?," the various weaknesses of five capitals identified in Table 21.1 were translated into the following five basic development objectives:

- 1) Stable and better agricultural and livestock production
- 2) Better satisfaction of basic human needs (water, education, health, road, electricity, etc.)
- 3) Income generation and self-employment creation
- 4) Conservation of the natural environment (especially in high land)
- 5) Capacity building of village organizations and the local government

**Figure 21.2 Translating Results of SWOT Analysis into Basic Development Objectives**



The relationships between the weaknesses and the basic development objectives in Figure 21.1 are fairly obvious, but it is worthy to mention the need of capacity building of the local government in this relationship. One of the objectives of the Study is to facilitate the local government and local people to plan and implement a village development plan and the action programs. Village organizations in the

Study Area indeed have a potential to plan and implement a village development plan and the action programs, but currently their limited capacity and poor management have been serious bottlenecks for realizing this potential, so it is necessary for the local government to assist these village organizations to improve the capacity of village organizations. But the local government also suffers from the lack of the capacity to monitor what is happening in the villages and assist village organizations to work better for the villagers, so it is important to improve the capacity of local government in order to serve better for the local population and assist village organizations. Since it is also well known that the local government suffers from the shortage of financial and human resources, it is important to plan the “realistic” and “affordable” action programs which can be implemented under the current financial and human resources of village organizations and the local government.

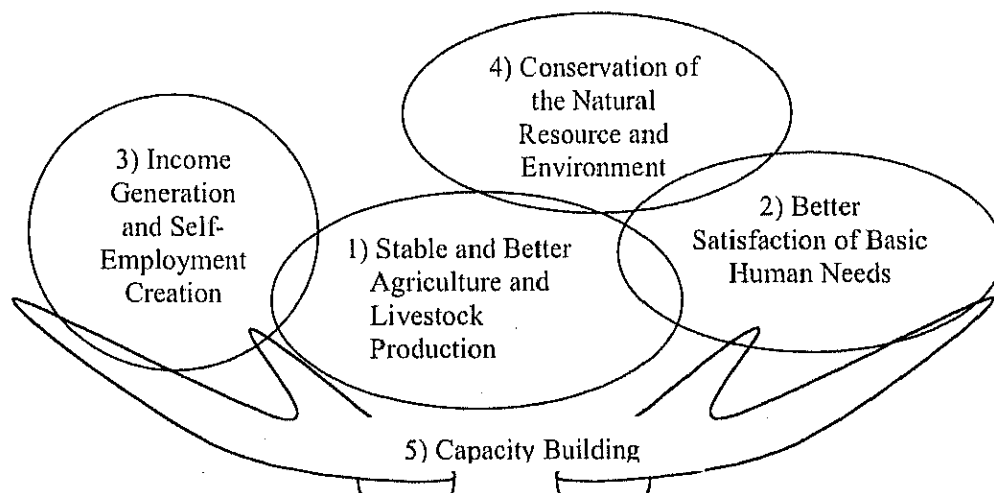
### 21.3 Needs Identified through PRA

Through PRA (Participatory Rural Appraisal) conducted from mid-September to mid-October 2000, the villagers in Munguine and Maluana identified the following common problems and needs in almost every location in the Study Area:

- 1) The need to reconstruct and extend the dike
- 2) The maintenance and clearance of the drainage channels
- 3) Lack of agricultural tools (hoes, large knives, oxen and ploughs) and seeds
- 4) Supply of clean and safe water
- 5) Improved health services
- 6) Lack of a secondary school
- 7) Lack of employment

These identified needs in PRA are simply the reflection of what the local people want from the donors, so it is regarded as the villagers’ wish list of goods and services which they expected from the donors. When these needs by the villagers are compared with the basic development objectives identified in the previous section, it is easily understood that all of these needs are covered by the five basic development objectives. So it can be regarded these villagers’ needs are incorporated into the five basic development objectives.

**Figure 21.3 Relationship among Five Basic Development Objectives**



The relationship among the five basic development objectives is illustrated in Figure 21.3, which shows capacity building component is supporting all other components. The need for capacity building of the village organizations and local administration was never mentioned during the PRA session, but it is an essential component in order to ensure the sustainability of village development and spread the successful model of participatory village development to other areas. The village organizations suffer from poor management, and local administration suffers from shortage of manpower and finance, so their capacity building needs to be implemented step by step by starting from the identification of problems through self-assessment<sup>2</sup> of the organization, which can be one of the most effective measures for the capacity building of the organizations under the difficult circumstances.

It is important to keep balance among the other four components of basic development objectives: agricultural and livestock production, basic human needs, income generation, and natural environment. For example, expanding agricultural and livestock production and income generation projects should not damage the natural environment, and income generation can be achieved after achieving food self-sufficiency and meeting the basic human needs such as access to the clean safe water.

#### **21.4 Basic Framework of Village Development Master Plan**

The village development master plan is divided into three periods: that is, short-term (from 2003 to 2005), mid-term (from 2006 to 2010), and long-term (from 2011 to 2020). Table 21.2 shows the development objectives in short-term, mid-term and long-term in each of sub-sectors classified under the five development objectives. In order to achieve these objectives in a short term, mid term and long term under each sub-sector, appropriate action programs are designed, and these action programs are described in the next chapter.

As explained in Chapter 11, the pilot action plans were proposed by the village organizations after explaining them about the tentative village development master plan, so the selected pilot action plans are closely related with the village development master plan as shown in Table 21.3. It can be said that the pilot action plans were selected and implemented as the first actions to achieve the short-term development objectives identified in the village development master plan.

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<sup>2</sup> Self-assessment is a tool for participatory capacity building, in which the members of the organization identify problems, define their roles, and make visions for the future in a participatory manner.



**Table 21.2 Short-, Mid- and Long-Term Objectives in Village Development Master Plan**

Basic Development Objective	Sub-sectors	Short-Term (2003-2005)	Mid-Term (2006-2010)	Long-Term (2011-2020)
1) Stable and better agricultural and livestock production	1-1) Agriculture	<ul style="list-style-type: none"> <li>to achieve food self-sufficiency (food security)</li> </ul>	<ul style="list-style-type: none"> <li>to improve the agricultural production and productivity</li> </ul>	<ul style="list-style-type: none"> <li>to establish strategic production and marketing system</li> </ul>
	1-2) Agricultural Infrastructure	<ul style="list-style-type: none"> <li>to protect against the flood and improve on-farm water management</li> </ul>	<ul style="list-style-type: none"> <li>to continue to protect against the flood and improve on-farm water management</li> </ul>	<ul style="list-style-type: none"> <li>to improve the canal and farm roads</li> </ul>
	1-3) Livestock	<ul style="list-style-type: none"> <li>to improve agricultural production through animal traction</li> </ul>	<ul style="list-style-type: none"> <li>to increase income through better livestock production</li> </ul>	<ul style="list-style-type: none"> <li>to further increase income through better livestock production</li> </ul>
2) Better satisfaction of basic human needs	2-1) Education	<ul style="list-style-type: none"> <li>to improve literacy rate especially among women</li> </ul>	<ul style="list-style-type: none"> <li>to improve the access to the upper primary and secondary education</li> </ul>	<ul style="list-style-type: none"> <li>to improve the access to the higher education</li> </ul>
	2-2) Health	<ul style="list-style-type: none"> <li>to improve the health of mothers and children</li> </ul>	<ul style="list-style-type: none"> <li>to improve the quality of health services</li> </ul>	<ul style="list-style-type: none"> <li>to establish sustainable and affordable health service for all villagers</li> </ul>
	2-3) Water	<ul style="list-style-type: none"> <li>to sustain water supply pilot action plan</li> </ul>	<ul style="list-style-type: none"> <li>to rehabilitate or construct at least 10 water points</li> </ul>	<ul style="list-style-type: none"> <li>to rehabilitate or construct at least 10 water points</li> </ul>
	2-4) Road	<ul style="list-style-type: none"> <li>to conduct a feasibility study for road improvement and implement two pilot activities</li> </ul>	<ul style="list-style-type: none"> <li>to continue road improvement and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>to continue road improvement and maintenance</li> </ul>
	2-5) Electricity	<ul style="list-style-type: none"> <li>to conduct a feasibility study for rural electrification</li> </ul>	<ul style="list-style-type: none"> <li>to implement small scale rural electrification pilot projects</li> </ul>	<ul style="list-style-type: none"> <li>to scale up rural electrification projects</li> </ul>
	2-6) Women	<ul style="list-style-type: none"> <li>to reduce women's work burden</li> </ul>	<ul style="list-style-type: none"> <li>to improve women's economic status</li> </ul>	<ul style="list-style-type: none"> <li>to improve women's political status</li> </ul>
3) Income generation and self-employment creation		<ul style="list-style-type: none"> <li>to continue successful income generation pilot action plans</li> </ul>	<ul style="list-style-type: none"> <li>to expand income generation and self-employment activities</li> </ul>	<ul style="list-style-type: none"> <li>to disseminate experiences of income generation &amp; self-employment creation</li> </ul>
4) Conservation of the natural resource and environment		<ul style="list-style-type: none"> <li>to plant fruit trees in high lands</li> </ul>	<ul style="list-style-type: none"> <li>to cover the high lands with green</li> </ul>	<ul style="list-style-type: none"> <li>to establish sustainable production system in high lands</li> </ul>
5) Capacity building	5-1) Village Organizations	<ul style="list-style-type: none"> <li>to continue village organization development pilot action plan</li> </ul>	<ul style="list-style-type: none"> <li>to diversify activities of village organizations</li> </ul>	<ul style="list-style-type: none"> <li>to disseminate experiences of village organization development</li> </ul>
	5-2) Local Administration	<ul style="list-style-type: none"> <li>to implement Village Development Program with Local Administration Component</li> </ul>	<ul style="list-style-type: none"> <li>to improve District-level planning capacity</li> </ul>	<ul style="list-style-type: none"> <li>to support National Public Servants Training System (SIFAP)</li> </ul>

**Table 21.3 Relationship between Village Development Master Plan and Pilot Action Plans**

<b>Development Objective</b>	<b>Short-Term Objective</b>	<b>Related Pilot Action Plans</b>	<b>Objective of Pilot Action Plan</b>
(1) Better agricultural production	<ul style="list-style-type: none"> <li>• Food self-sufficiency</li> </ul>	2) Animal Traction Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To expand cultivated land through the provision of traction animals</li> <li>• To facilitate marketing activities through the provision of ox-cart as transportation means</li> <li>• To improve farm economy through increasing agricultural production</li> </ul>
		3) Low External Input Agriculture Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To stabilize agricultural production through crop diversification</li> <li>• To improve productivity through low external input farming</li> <li>• To improve farm economy through transaction of cash crops, especially vegetables</li> </ul>
(2) Improved basic human needs	<ul style="list-style-type: none"> <li>• Less illiteracy among women</li> <li>• Improvement of health &amp; hygienic condition</li> <li>• Better access to safe water</li> <li>• Mitigation of women's burden of domestic work</li> </ul>	4) Rural Water Supply and Water User's Group Capacity Building Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• More access to safe water</li> <li>• Sustainable use of safe water</li> <li>• To improve health and hygienic condition through hygienic education</li> </ul>
		5) Improved Cooking Stove Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To mitigate women's burden of domestic work</li> <li>• To prevent water-related diseases through a campaign of usage of boiled water</li> </ul>
(3) Income generation	<ul style="list-style-type: none"> <li>• Promotion of self-help micro projects</li> </ul>	5) Improved Cooking Stove Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To generate income for women through making and selling cooking stove to others</li> </ul>
		6) Chicken Raising Program (Phase 2)	<ul style="list-style-type: none"> <li>• To generate income through sustainable chicken raising</li> </ul>
		7) Food Shop Management Program for Widows and Single Mothers (Phase 2)	<ul style="list-style-type: none"> <li>• To generate income through sustainable food shop management</li> <li>• To generate employment for widows and single mothers</li> </ul>
		8) Sewing Training Program for Youth (Phase 2)	<ul style="list-style-type: none"> <li>• To generate income and self-employment for the youth through sewing shop management</li> </ul>
(4) Conservation of the natural environment	<ul style="list-style-type: none"> <li>• Conservation of the vegetation in the highland</li> </ul>	5) Improved Cooking Stove Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To conserve the vegetation in the highland through reducing the amount of firewood for cooking</li> </ul>
		3) Low External Input Agriculture Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To accelerate afforestation through planting fruit trees in the highland</li> </ul>
(5) Capacity building	<ul style="list-style-type: none"> <li>• Capacity building of the village organization</li> <li>• Capacity building of local administration</li> </ul>	1) Village Organization Development Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To enhance the management and implementation capacity of the village organization</li> </ul>
		9) Local Administrative Capacity Building Program (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To enhance the management and implementation capacity of local administration</li> </ul>
		10) All pilot action plans (Phase 1 & 2)	<ul style="list-style-type: none"> <li>• To enhance the management capacity of village organizations through the implementation of pilot action plans</li> </ul>

## **22. Major Lessons Learned from Pilot Action Plans**

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### **22.1 Strengths and Limits of the Pilot Action Plans**

Table 22.1 summarizes the target groups and the major activities of each pilot action plan. The objectives of implementing the pilot action plans are not only to meet the urgent needs for the local population by implementing some of the priority action programs identified in the village development master plan, but also to test the appropriateness and effectiveness of the basic approaches of this Study which described in Chapter 1, as well as experiment the participatory implementation method of each pilot action plan.

It is important to analyze the strengths and limits of the pilot action plans in order to identify the major lessons from pilot action plans. As mentioned earlier, there are two types of the lessons, that is, lessons for the village development master plan in the Study Area, and lessons for the action programs, particularly on the participatory implementation methods of them. Both lessons can contribute to the formulation of the model for self-reliant village development in Mozambique. The strengths and limits of the pilot action plans were identified through direct observation, monitoring, and participatory evaluation, and the results are summarized in Table 22.2, which are in fact the lessons learned from the pilot action plans for Village Development Master Plan.

### **22.2 Major Lessons Learned for the Implementation Methods of Action Programs**

As for the implementation methods of the action programs, the following five methods were identified as effective methods for the organizational capacity building of village organizations:

#### *1) Competition-based selection of the proposals for the pilot action plan*

All village organizations were given the opportunity to participate in the training workshops and prepare their own proposal for the pilot action plan, and this process facilitated the willing organizations to work hard to prepare their proposal and improve their planning capacity. As mentioned earlier, the contents of the proposals in Phase 2 became more realistic, as compared to the contents of the proposals in Phase 1. This was partly because more village organizations became to understand the Study Team's approach of self-reliant village development which use appropriate low-cost technologies, but also because many village organizations just decided to follow the Study Team's low-external-input approach to get the fund after understanding the result of the proposal selection in Phase 1.

**Table 22.1 Target Groups and Major Activities of the Pilot Action Plans (1/2)**

Pilot Action Plans	Target Groups and Budget	Major Activities
<p>1. Village Organizations Development Program (Phase 1 &amp;2)</p>	<p>All village organizations in Munguine, pateque and Maluana (21 member organizations in Zonal Union of Associations and Co-operatives in Munguine)</p> <p>Total No. of Beneficiaries: 129 Budget: US\$ 25,400-</p>	<ul style="list-style-type: none"> <li>• Village Organization Development Seminar (August 2001, 2-3 days x 3 places + 1 day common, 67 participants in total, collaboration with Kulima)</li> <li>• Agriculture Management Seminar (October – November 2001, 4 days x 2 places, 27 participants in total, collaboration with Kulima)</li> <li>• Small Business Management Seminar (November 2001, 3 days x 2 places, 27 participants, collaboration with Kulima)</li> <li>• Study Tour to Cumbene (October 2001, 8 participants, collaboration with ActionAid UK)</li> </ul>
<p>2. Animal Traction Program (Phase 1&amp;2)</p>	<p><u>Phase 1</u></p> <p>(1) Association of Ex-Miners (18 members) (2) Co-operative Maguiguana (94 members) (3) Association Pateque Block 1 (14 members)</p> <p><u>Phase 2 (in Pateque and Maluana)</u></p> <p>(4) Association Pateque Block 2 (104 members) (5) Association Pateque Block 3 (97 members) (6) Co-operative Maluana (100 members)</p> <p>Total No. of Beneficiaries: 427 Budget: US\$ 18,700-</p>	<ul style="list-style-type: none"> <li>• Provision of Animal Traction Sets through Cost Sharing (1 set = 2 oxen, 1 plough, 1 harrow, 1 ox-cart) (Phase 1: June 2001, Phase 2: September 2001)</li> <li>• Monitoring how the village organizations were utilizing the animal traction set (how to charge and collect the fee from users, fairness in deciding the users, transparency in accounting, capacity to solve the problems when they occurred, etc.) (ATAP veterinarian collaborated to keep the oxen healthy.)</li> </ul>
<p>3. Low External Input Agriculture Program (Phase 1&amp;2)</p>	<p><u>Phase 1 (Low Land, Mainly Vegetables and Crops)</u></p> <p>(1) Association of Ex-Miners (2) Co-operative Maguiguana (3) Association Pateque Block 1</p> <p><u>Phase 2 (High Land, mainly Fruit Trees)</u></p> <p>(4) Association Pateque Block 1 (5) Co-operative Maluana</p> <p>Total No. of Beneficiaries: 427 Budget: US\$ 20,300-</p>	<ul style="list-style-type: none"> <li>• Establishment and Management of Model Farms (Low Land : 0.15-0.30 ha x 3 Farms, High Land: 0.50-1.00 ha x 2 Farms, Using the Communal Lands where villagers voluntarily work 1-2 days per week)</li> <li>• Natural Farming Seminars by South African Permaculturist (July 2001, 2 days x 3 places; February-March 2002, 2 days x 5 places)</li> <li>• Study Tour to Maputo Central Market and Vegetable Farms near Maputo City (November 2001, 16 participants)</li> </ul>
<p>4. Rural Water Supply and Water User's Group Capacity Building Program (Phase 1&amp;2)</p>	<p>(1) Maluana Bairro 1 No. of users of the borehole: 73 households</p> <p>(2) Munguine Bairro 2 No. of users of the borehole: 116 households</p> <p>Total No. of Beneficiaries: 189 households Budget: US\$ 46,500-</p>	<ul style="list-style-type: none"> <li>• Digging 2 Boreholes through Cost Sharing (September – October 2001)</li> <li>• Training of Water Group members (5 in Maluana, 6 in Munguine), Maintenance and Repair Groups (6 in Maluana, 8 in Munguine), Hygiene Education Promoters (8 in Maluana, 7 in Munguine, mainly female)</li> <li>• Hygiene Education in Schools and at Home</li> <li>• Charging Monthly Water Fee</li> <li>• Monitoring Maintenance Situation</li> </ul>

**Table 22.1 Target Groups and Major Activities of the Pilot Action Plans (2/2)**

<b>Pilot Action Plans</b>	<b>Target Groups and Cost</b>	<b>Major Activities</b>
5. Improved Cooking Stove Program (Phase 1&2)	(1) Women in Munguine (through Zonal Union of Associations and Co-operatives in Munguine)  (2) Women in Maluana (through Co-operative Maluan)  (3) Women in Pateque (through Association Pateque Block 1)  Total No. of Beneficiaries: 77 Budget: US\$ 5,600-	<ul style="list-style-type: none"> <li>• Survey of Existing Cooking Stoves (October 2001, 1 day x 3 places)</li> <li>• Improved Cooking Stove Introductory Seminar (November 2001, 2 days x 3 places, 39 participants in total, collaboration with Tanzanian staff in UNDP)</li> <li>• Improved Cooking Stove Manufacturing Seminar (November 2001, 3 days x 2 places, 38 participants in total, collaboration with Tanzanian staff in UNDP)</li> <li>• Manufacturing and Dissemination of Improved Cooking Stove by Seminar Participants and Monitoring</li> </ul>
6. Chicken Raising Program (Phase2)	Association Cubomo (2 poultry groups were organized, and from each group, 10 core members were trained.)  Total No. of Beneficiaries: 116 Budget: US\$ 6,200-	<ul style="list-style-type: none"> <li>• Chicken Raising Seminar (October – November 2001, 1 day common + 4 days per group, 20 participants in total, collaboration with University Eduardo Mondlane)</li> <li>• Implementation of First Round of Chicken Raising through Cost Sharing (November – December 2001, construction of 2 chicken houses, 100 chicks per group which can grow to enough size for sale in about 40 days)</li> <li>• Implementation of Second and Third Round of Chicken Raising using the Sales of First Round (December 2001 – March 2002)</li> </ul>
7. Food Shop Management Program for Widows and Single Mothers (Phase 2)	Association of Ex-Miners (8 single mothers and widows in particular)  Total No. of Beneficiaries: 18 Budget: US\$ 4,900-	<ul style="list-style-type: none"> <li>• Construction of Food Shop near Munguine Railway Station through Cost Sharing (November 2001)</li> <li>• Small Shop Management Seminar (December 2001, 5 days, 11 participants, collaboration with Ministry of Labor's training and Consulting Unit, CEFE)</li> <li>• Selection of Employees for Food Shop (mainly single mothers and widows)</li> <li>• Operation and Management of Food Shop (from February 2002)</li> </ul>
8. Sewing Training Program for Youth (Phase 2)	Zonal Union of Associations and Co-operatives in Munguine (unemployed youth in particular)  Total No. of Beneficiaries: 4 Budget: US\$ 160-	<ul style="list-style-type: none"> <li>• Repair of 3 sewing machines donated by NGO and purchase of cloths (November 2001)</li> <li>• Operation of Sewing Shop by Local Tailor (from November 2001)</li> <li>• Sewing Training of Youth by Local Tailor (February – March 2002, 15 days, 3 participants)</li> </ul>
9. Local Administrative Capacity Building Program (Phase 1&2)	Staff of Manhiça District Administration including Administrative Post of Maluana  Total No. of Beneficiaries: 154 Budget: US\$ 5,100-	<ul style="list-style-type: none"> <li>• First Local Administration Workshop (August 2001, 1 day, 35 participants)</li> <li>• Second Local Administration Workshop (November 2001, 1 day x 2 places, 40 officials and 30 village leaders)</li> <li>• Third Local Administration Workshop (February 2002, 1 day, 25 participants, collaboration with ActionAid UK)</li> <li>• Workshop for IMAP trainers (March 2002, 1 day, 24 participants)</li> </ul>

**Table 22.2 Strengths and Limits of the Pilot Action Plans: Lessons for Master Plan**

Pilot Action Plans	Strengths	Limits
1. Village Organizations Development Program (Phase 1 &2)	<ul style="list-style-type: none"> <li>• Flexible workshop design based on the villagers' needs and capacity.</li> <li>• Use of local facilitators and lecturers from local NGO.</li> <li>• Emphasis on practical experience on organizational management through implementation of pilot action plans</li> </ul>	<ul style="list-style-type: none"> <li>• Limited number of participants from village organizations (mainly only leaders attended).</li> <li>• For some topics, mainly lectures were given, which were less practical to villagers.</li> </ul>
2. Animal Traction Program (Phase 1&2)	<ul style="list-style-type: none"> <li>• Increased cultivated land.</li> <li>• Utilizing elders' traditional knowledge for animal traction.</li> <li>• Managing animal traction was a good practical experience to improve organizational capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Limited number of village organizations participated.</li> <li>• In some organizations, leaders monopolized the use of oxen.</li> <li>• Strong demand for female cows to reproduce.</li> </ul>
3. Low External Input Agriculture Program (Phase 1&2)	<ul style="list-style-type: none"> <li>• Positive effects of some low external input techniques which use local resources without the cost.</li> <li>• Use of communal land for demonstration farms and use of communal work system</li> <li>• Income generation through vegetable growing</li> </ul>	<ul style="list-style-type: none"> <li>• More time needed to show the effectiveness of organic agriculture</li> <li>• Difficulty to transfer agricultural techniques and knowledge to a large number of villagers through demonstration farms.</li> </ul>
4. Rural Water Supply and Water User's Group Capacity Building Program (Phase 1&2)	<ul style="list-style-type: none"> <li>• Responding to the villagers' strong need for new boreholes.</li> <li>• Practical training for water committees, maintenance groups, and hygiene education volunteers.</li> <li>• Community decision to share the initial cost of the borehole and collect monthly water fee.</li> </ul>	<ul style="list-style-type: none"> <li>• High cost for digging a borehole.</li> <li>• Difficulty to collect water fee from the outsiders who live outside of the community but come to the borehole.</li> <li>• Difficulty to keep collecting the monthly water fee when there is no breakdown of the well.</li> </ul>
5. Improved Cooking Stove Program (Phase 1&2)	<ul style="list-style-type: none"> <li>• Effective demonstration on how to make improved cooking stoves.</li> <li>• Utilization of local material only with simple technology.</li> <li>• Income generation by constructing the stove for others.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited number of participants.</li> <li>• Weekly maintenance of the stove is necessary, although it is simple.</li> <li>• Need for the ceiling to protect the stove from the rain.</li> <li>• Need to cut the firewood to the appropriate sizes to put in the stove.</li> </ul>
6. Chicken Raising Program (Phase2)	<ul style="list-style-type: none"> <li>• Sustainable operation by using profit</li> <li>• Good management due to the strong leadership.</li> <li>• High incentive due to the profit.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited number of participants.</li> <li>• High cost for improved chicks and special feeds (modern technology).</li> <li>• Little use of local resources.</li> <li>• Market for chicken may become more competitive in the future.</li> </ul>
7. Food Shop Management Program for Widows and Single Mothers (Phase 2)	<ul style="list-style-type: none"> <li>• Sustainable operation by using profit</li> <li>• Women hired as shop keepers.</li> </ul>	<ul style="list-style-type: none"> <li>• Men dominating in management and accountancy.</li> <li>• High competition with the similar food shops.</li> </ul>
8. Sewing Training Program for Youth (Phase 2)	<ul style="list-style-type: none"> <li>• Good operation of a sewing shop.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited number of the youth trained.</li> <li>• Market for sewing in the village may be not big enough.</li> </ul>
9. Local Administrative Capacity Building Program (Phase 1&2)	<ul style="list-style-type: none"> <li>• Participatory workshops were effective to motivate local administration staff for better work.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited budget and resources in local administration restrict the work of local administration staff.</li> </ul>

There was some limitation: most organizations could not estimate the cost for their proposal, although the Study Team provided some cost information. It seemed that the most village organizations were unaware of the cost when they were planning activities. However, the processes of formulating proposals facilitated the village organization to plan the activity, make a vision for the future and learn from other organizations:

#### *2) Cost sharing*

Initially it was very hard to introduce cost sharing for the pilot action plans, but eventually the villagers accepted it. Requirement of cost sharing for the pilot action plans made the villagers to propose only what they really need, and cost sharing is considered as testifying their strong will to implement and maintain the pilot action plans. Percentage of cost sharing was varied by the nature of the pilot action plans, for example the higher percentage for income generating projects, but it generally ranged from 5% (water project) or 10% (animal traction or agriculture projects) to 50% (income generation projects). It is important to understand how the villagers with different economic status are actually sharing the cost, which may reveal the voluntary help to the poorer members by the villagers.

#### *3) Farmer-to farmer learning through study tours to other villages*

Study tours arranged by the Study Team were very effective to motivate the villagers, because 'seeing is believing' for villagers. Farmer-to-farmer knowledge and experience exchange was found a very effective way for learning new techniques and ideas such as agricultural techniques and the concept of self-reliant village development. Unfortunately the study tours were conducted in the latter part of the pilot action plans, but if it were conducted in the beginning of the pilot action plans, it would be more impacts on the villagers' attitude and behaviors.

#### *4) Importance of the monitoring*

Since all pilot action plans aimed at improving the implementation capacity of the village organizations, the monitoring of the pilot action plans is essential to understand the process of the organizational development. The Study Team requested village organizations to keep records of discussions in the meetings, sometimes directly participated in the decision-making process in order to observe how the villagers reach to the consensus, and requested some village facilitators to write monthly monitoring reports. It is also important to feedback what learned from the monitoring to the villagers and share the lessons learned from the monitoring with all villagers.

### *5) Importance of flexibility*

It is very difficult to clearly identify target groups and the contents of the pilot action plans in advance. For example, it was expected that drinking water drilled from borehole at Munguine is for the villagers at Munguine Bairro 2, but it was turned out that unexpectedly the neighboring villagers came to the borehole and used the water without paying monthly water charge. After discussions between the original beneficiaries and the neighboring villagers, the neighboring villagers agreed to pay water charge. The lesson learned from this case is that it is important to respond to the unexpected problems quickly, and the solution can be developed through participatory discussions and democratic decision-making process among the stakeholders.

### **22.3 Major Lessons Learned for Village Development Master Plan in the Study Area**

From the strengths and limits of the pilot action plans identified in Table 22.2, the following major lessons for the village development master plan were learned:

- Importance of integrating various action programs for the common purpose of capacity building of villagers
- Effective capacity development through “learning by doing,” that is, by combining the training seminars and workshops with the actual implementation of the projects
- Flexible design of the action programs in order to respond to the changing needs and conditions in the village
- Importance of using simple and low cost technologies which villagers can afford
- Importance of utilizing local resources and traditional knowledge
- Promoting self-reliant village development by soliciting proposals from villagers, introducing cost sharing, and facilitating farmer-to-farmer learning through study tours
- Emphasis on the learning process rather than the short-term outcome of the projects



## 23. Village Development Master Plan for the Study Area

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After deciding the short-, mid- and long-term development objectives for each sub-sector of the five basic development objectives as shown in Table 21.2, the short-, mid- and long-term action programs under each sub-sector were designed and the details of each action programs are described in the following sections. The implementation schedule of all action programs is shown in Table 23.1.

Based on the result of PRA (Participatory Rural Appraisal), the Study Area can be divided into two zones: the lowland and the highland. The characteristics of each zone are described in Table 23.2. Table 23.3 indicates where is the target area for each of the action programs: the lowland or/and the highland. The action programs which particularly target the highland are indicated by the double circles, while the other programs with single circles mean those implemented in the highlands. As shown in Table 23.3, the approach towards the highland is mainly to conserve the natural resource and environment.

Table 23.3 also indicates who are the target groups for each action program. The target groups are classified into three groups: above the middle class, poor, and very poor. The definitions of these categories are given in Table A.2.5.2-4 in Annex 2.5, and they are based on the local people's perceptions which were identified in Participatory Wealth Ranking exercise during Baseline Survey. The action programs which particularly target the very poor are indicated by the double circles in Table 23.3, which illustrates the major approach to the very poor people is through social development programs such as education and health.

Table 23.4 indicates the roughly estimated annual cost for each action programs, which is divided into two categories of the cost: (i) the cost for hard components such as costs for infrastructure construction, equipment, and materials; and (ii) the cost for soft components such as costs for training, seminars, research and disseminations. It also shows the community's expected cost sharing in three levels: low (0-5% of the total cost), medium (5-10% of the total cost), and high (10-20% of the total cost). It is important to note the cost estimation is based on the current price as of August 2002, and the level of cost estimation is very rough because no details of the action programs are specified.

**Table 23.1 Implementation Schedule of Action Programs in Village Development Master Plan**

Sector	Sub-sector	Action Program	Implementation Schedule		
			Short-term (2003-2005)	Mid-term (2006-2010)	Long-term (2011-2020)
1. Agriculture and Livestock	1.1 Agriculture	(1) Ecological Agriculture and Livestock Production Extension Program	○		
		(2) Group Marketing Program		○	
		(3) Agri-product Processing Program		○	
		(4) Strategic Marketing Promotion Program			○
	1.2 Agricultural Infrastructure	(1) Flood Protection Dike Program	○	○	
		(2) On-farm Water Management Program	○	○	
		(3) Canal Improvement Program	○	○	○
	1.3 Livestock	(1) Animal Traction Program	○		
		(2) Chicken Raising Program	○	○	
		(3) Livestock Revolving Program	○	○	
		(4) Intensive Livestock Development Program			○
	2. Basic Human Needs	2.1 Education	(1) Adult Literacy Program for Women	○	
(2) Educational Awareness Campaign			○		
(3) Primary School Teachers and Principals Capacity Building Program			○		
(4) Upper Primary and Secondary School Construction Program				○	
(5) Secondary School Teachers and Principals Capacity Building Program				○	
(6) Scholarship Revolving Fund Program					○
2.2 Health		(1) Nutrition Education Program	○		
		(2) Health Education and Immunization Program	○		
		(3) Health Personnel Capacity Building Program		○	
		(4) Traditional Health Practitioners Capacity Building Program		○	
		(5) Health Center Facility Expansion and Upgrading Program			○
		(6) Community Health Financing and Insurance Program			○
2.3 Water		(1) Demand-Responsive Rural Water Supply Program	○	○	○
2.4 Road		(1) Rural Road Program	○	○	○
2.5 Electricity		(1) Rural Electrification Program	○	○	○
2.6 Women		(1) Improved Cooking Stove Program	○		
		(2) Capacity Building Program for Rural Women		○	
		(3) Women Leadership Development Program			○
3. Income Generation and Self-Employment Creation		(1) Successful Income Generation Projects Expansion Program	○		
		(2) Community Development Micro Finance Program	○		
		(3) Scaling Up Income Generation and Self-Employment Program		○	
	(4) Community-Financed Income Generation and Self-Employment Program		○		
	(5) Village Self-Development Training School Program			○	
4. Natural Resource and Environment	(1) High Land Fruit Tree Planting Program	○			
	(2) High Land Green Covering Program		○		
	(3) Integrated Agro-Pastoral Production Program			○	
5. Capacity Building	5.1 Village Organizations	(1) Village Organization Capacity Building Program	○		
		(2) Model Village Organization and Social Equity Program		○	
		(3) Village Organization Capacity Development Dissemination Program			○
	5.2 Local Administration	(1) Village Development Program with Local Administration Component	○	○	○
		(2) District-Level Planning Capacity Building Program	○	○	○
		(3) National Public Servants Training System (SIFAP) Support Program	○	○	○

**Table 23.2 Zoning of the Study Area Based on the Result of PRA**

Zone	Locations	Major Characteristics	Major Development Needs
Lowland (along Incomati River)	Munguine Bairro 1, 2, 3 Xerindza	<ul style="list-style-type: none"> <li>● Population: around 7,500</li> <li>● History: Many residents came from inland area during the civil war.</li> <li>● Farm: fertile lowland</li> <li>● Agricultural Infrastructure: comparably well developed</li> <li>● 13 Village Organizations</li> <li>● Good access to water</li> <li>● Poor access to EN1 road</li> <li>● Good access to railway</li> <li>● 1 Health Post</li> <li>● 1 Upper Primary, 2 Lower Primary and 2 Community Schools</li> </ul>	<ul style="list-style-type: none"> <li>● Agriculture</li> <li>● Livestock</li> <li>● Income generation</li> <li>● Road</li> <li>● Literacy education for women</li> <li>● Capacity building of village organizations</li> </ul>
	Munguine Bairro 4, 5 Pateque	<ul style="list-style-type: none"> <li>● Population: around 3,000</li> <li>● History: Many residents came from inland area during the civil war.</li> <li>● Farm: fertile lowland</li> <li>● Agricultural Infrastructure: comparably less developed</li> <li>● 6 Village Organizations</li> <li>● Poor access to water</li> <li>● Poor access to EN1 road</li> <li>● Good access to railway</li> <li>● 2 First Aid Posts</li> <li>● 1 Lower Primary and 1 Community School</li> </ul>	<ul style="list-style-type: none"> <li>● Agricultural Infrastructure</li> <li>● Water</li> <li>● Health</li> <li>● Income generation</li> <li>● Road</li> <li>● Literacy education for women</li> <li>● Primary school</li> <li>● Capacity building of village organizations</li> </ul>
Highland (along EN 1)	Maluana Bairro 1, 2, 3 Musutho	<ul style="list-style-type: none"> <li>● Population: around 2,500</li> <li>● History: Many residents went near River Incomati during the civil war and came back after the war.</li> <li>● Farm: dry highland</li> <li>● Agricultural Infrastructure: almost none</li> <li>● 2 Village Organizations</li> <li>● Poor access to water</li> <li>● Good access to EN1 road</li> <li>● Poor access to railway</li> <li>● 1 Health Center with Maternity Wards</li> <li>● 2 Lower Primary Schools</li> </ul>	<ul style="list-style-type: none"> <li>● Income generation</li> <li>● Dry land agriculture</li> <li>● Afforestation</li> <li>● Mobilization of the villagers into village organizations</li> </ul>

**Table 23.3 Target Area and Groups in Action Programs in Village Development Master Plan**

Sector	Sub-sector	Action Program	Target Area		Main Target Groups		
			Lowland	Highland	Above Middle Class	Poor	Very Poor
1. Agriculture and Livestock	1.1 Agriculture	(1) Ecological Agriculture and Livestock Production Extension Program	○	⊗	○	○	
		(2) Group Marketing Program	○	○	○	○	
		(3) Agri-product Processing Program	○	○	○	○	
		(4) Strategic Marketing Promotion Program	○		○	○	
	1.2 Agricultural Infrastructure	(1) Flood Protection Dike Program	○		○	○	
		(2) On-farm Water Management Program	○		○	○	
		(3) Canal Improvement Program	○		○	○	
	1.3 Livestock	(1) Animal Traction Program	○	○	○	○	
		(2) Chicken Raising Program		○	○	○	
		(3) Livestock Revolving Program		○	○	○	
		(4) Intensive Livestock Development Program		○	○	○	
	2. Basic Human Needs	2.1 Education	(1) Adult Literacy Program for Women		○		○
(2) Educational Awareness Campaign				○		○	⊗
(3) Primary School Teachers and Principals Capacity Building Program				○		○	○
(4) Upper Primary and Secondary School Construction Program				○	○	○	○
(5) Secondary School Teachers and Principals Capacity Building Program				○	○	○	○
(6) Scholarship Revolving Fund Program				○	○	○	○
2.2 Health		(1) Nutrition Education Program		○		○	⊗
		(2) Health Education and Immunization Program		○		○	⊗
		(3) Health Personnel Capacity Building Program		○	○	○	○
		(4) Traditional Health Practitioners Capacity Building Program		○		○	⊗
		(5) Health Center Facility Expansion and Upgrading Program		○	○	○	○
		(6) Community Health Financing and Insurance Program		○	○	○	⊗
2.3 Water		(1) Demand-Responsive Rural Water Supply Program		○	○	○	○
2.4 Road		(1) Rural Road Program		○	○	○	○
2.5 Electricity		(1) Rural Electrification Program		○	○	○	
2.6 Women		(1) Improved Cooking Stove Program		⊗	○	○	⊗
		(2) Capacity Building Program for Rural Women		○	○	○	⊗
		(3) Women Leadership Development Program		○	○	○	⊗
3. Income Generation and Self-Employment Creation		(1) Successful Income Generation Projects Expansion Program		○	○	○	○
		(2) Community Development Micro Finance Program		○	○	○	⊗
	(3) Scaling Up Income Generation and Self-Employment Program		○	○	○	○	
	(4) Community-Financed Income Generation and Self-Employment Program		○	○	○	○	
	(5) Village Self-Development Training School Program		○	○	○	○	
4. Natural Resource and Environment	(1) High Land Fruit Tree Planting Program		⊗	○	○	○	
	(2) High Land Green Covering Program		⊗	○	○	○	
	(3) Integrated Agro-Pastoral Production Program		⊗	○	○	○	
5. Capacity Building	5.1 Village Organizations	(1) Village Organization Capacity Building Program		○	○	○	○
		(2) Model Village Organization and Social Equity Program		○	○	○	⊗
		(3) Village Organization Capacity Development Dissemination Program		○	○	○	○
	5.2 Local Administration	(1) Village Development Program with Local Administration Component					
		(2) District-Level Planning Capacity Building Program					
		(3) National Public Servants Training System (SIFAP) Support Program					

**Table 23.4 Roughly Estimated Cost of Action Programs in Village Development Master Plan**

Sector	Sub-sector	Action Program	Years of Implementation	Rough Estimation of Yearly Cost			Community's Expected Cost Sharing (Low: 0-5%; Medium: 5-10%; High: 10-20% in Total Cost)
				Cost for Hard Components (US\$)	Cost for Soft Components (US\$)	Total Cost per Year (US\$)	
1. Agriculture and Livestock	1.1 Agriculture	(1) Ecological Agriculture and Livestock Production Extension Program	3	25,000	50,000	75,000	Low
		(2) Group Marketing Program	3	8,000	17,000	25,000	High
		(3) Agri-product Processing Program	3	7,000	17,000	24,000	High
		(4) Strategic Marketing Promotion Program	3	5,000	15,000	20,000	High
	1.2 Agricultural Infrastructure	(1) Flood Protection Dike Program	18	400,000	100,000	500,000	Low
		(2) On-farm Water Management Program	8	20,000	6,000	26,000	High
		(3) Canal Improvement Program	5	40,000	7,000	47,000	Medium
	1.3 Livestock	(1) Animal Traction Program	3	20,000	30,000	50,000	Medium
		(2) Chicken Raising Program	8	20,000	30,000	50,000	Medium
		(3) Livestock Revolving Program	8	20,000	30,000	50,000	Medium
		(4) Intensive Livestock Development Program	10	20,000	30,000	50,000	Medium
	2. Basic Human Needs	2.1 Education	(1) Adult Literacy Program for Women	3	20,000	30,000	50,000
(2) Educational Awareness Campaign			3	20,000	30,000	50,000	Medium
(3) Primary School Teachers and Principals Capacity Building Program			3	20,000	30,000	50,000	Medium
(4) Upper Primary and Secondary School Construction Program			5	20,000	30,000	50,000	Medium
(5) Secondary School Teachers and Principals Capacity Building Program			5	20,000	30,000	50,000	Medium
(6) Scholarship Revolving Fund Program			10	20,000	30,000	50,000	Medium
2.2 Health		(1) Nutrition Education Program	3	20,000	30,000	50,000	Medium
		(2) Health Education and Immunization Program	3	20,000	30,000	50,000	Medium
		(3) Health Personnel Capacity Building Program	5	20,000	30,000	50,000	Medium
		(4) Traditional Health Practitioners Capacity Building Program	5	20,000	30,000	50,000	Medium
		(5) Health Center Facility Expansion and Upgrading Program	10	20,000	30,000	50,000	Medium
		(6) Community Health Financing and Insurance Program	10	20,000	30,000	50,000	Medium
2.3 Water		(1) Demand-Responsive Rural Water Supply Program	13	40,000	20,000	60,000	Low
2.4 Road		(1) Rural Road Program	10	30,000	20,000	50,000	Medium
2.5 Electricity		(1) Rural Electrification Program	5	30,000	20,000	50,000	Medium
2.6 Women		(1) Improved Cooking Stove Program	3	20,000	30,000	50,000	Medium
		(2) Capacity Building Program for Rural Women	5	20,000	30,000	50,000	Medium
		(3) Women Leadership Development Program	10	20,000	30,000	50,000	Medium
3. Income Generation and Self-Employment Creation		(1) Successful Income Generation Projects Expansion Program	3	20,000	30,000	50,000	Medium
		(2) Community Development Micro Finance Program	3	20,000	30,000	50,000	Medium
	(3) Scaling Up Income Generation and Self-Employment Program	5	20,000	30,000	50,000	Medium	
	(4) Community-Financed Income Generation and Self-Employment Program	5	20,000	30,000	50,000	Medium	
	(5) Village Self-Development Training School Program	5	30,000	20,000	50,000	Medium	
4. Natural Resource and Environment	(1) High Land Fruit Tree Planting Program	3	45,000	30,000	75,000	Low	
	(2) High Land Green Covering Program	5	45,000	30,000	75,000	Low	
	(3) Integrated Agro-Pastoral Production Program	10	45,000	30,000	75,000	Low	
5. Capacity Building	5.1 Village Organizations	(1) Village Organization Capacity Building Program	3	20,000	30,000	50,000	Medium
		(2) Model Village Organization and Social Equity Program	5	20,000	30,000	50,000	Medium
		(3) Village Organization Capacity Development Dissemination Program	10	20,000	30,000	50,000	Medium
	5.2 Local Administration	(1) Village Development Program with Local Administration Component	13	67,000	50,000	117,000	Low
		(2) District-Level Planning Capacity Building Program	13	20,000	30,000	50,000	Medium
(3) National Public Servants Training System (SIFAP) Support Program		13	20,000	30,000	50,000	Medium	

Note: Cost for hard components include costs for infrastructure construction, equipment, and materials.

Cost for soft components include costs for training, seminars, research and disseminations.

## **23.1 Agriculture and Livestock**

### **23.1.1 Agriculture**

Agricultural sector is the most important economic activities in the Study Area, so increase of the agricultural productivity, which leads to improvement of farmers' livelihoods and income, should be given the first priority in the master plan of agriculture production and marketing.

Regarding the approach to increase the agricultural productivity, it can be said too early to promote "inorganic" farming, which is too costly for small-scale farmers under the condition that credit schemes for procurement of farm inputs are almost non-existent. Furthermore, the application of a large amount of inorganic materials, such as chemical fertilizers, pesticides and herbicides, not only destroys the environment, but also is harmful to human beings. So "inorganic" farming is considered an obstacle against establishing sustainable production system on a long-term basis.

Taking into consideration the current situation in the Study Area, development of agriculture and marketing should be achieved through low external input agriculture which makes the best use of local resources. This approach aims to achieve both goals of increase in food production and sustainability.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objectives**

During this development stage, food security in the Study Area should be achieved by increasing production of staple food crops through dissemination of appropriate practices and skills for small-scale farmers.

##### **b) Development Strategies**

For small-scale farmers who have difficulty in accessing formal credit schemes for purchasing farm input, low external input sustainable farming which does not require costly farm inputs such as chemical fertilizers and chemicals will need to be promoted taking into consideration the topographic conditions in the Study Area such as follows:

###### **1) Farming in the lowland area**

- a. Target group: Village organizations
- b. Objective: to acquire adequate farming skills on staple food crops (cereal, roots, beans, vegetables) and traditional cash crops (banana and sugarcane) with the improvement of on-farm water management

###### **2) Farming in the highland area**

- a. Target group: Village organizations and/or villagers who have no access to the lowland for farming

- b. Objective: to promote agro-forestry that is a kind of land use in combination with agriculture and forestry

Based on the development strategies mentioned above, productivity of each crop will be increased by five percent on average. Regarding marketing aspects, it is also necessary that the regular trade in banana and sugarcane should be stabilized.

### **c) Action Program**

With the aim at establishing low external input agriculture among small-scale farmers, Ecological Agriculture and Livestock Production Extension Program will be implemented during this phase. Concept of this program is almost the same as that of the pilot action program implemented during the Study. A feature of this program is to disseminate farming practices combined with livestock raising in order to establish sustainable production system.

Although several model farms, which have already been established in the Study Area, will be the cores of the activities, the program will be expanded to cover the whole Maputo Province, taking account of the ripple effect on the other areas. The base of research activities and administration will be based in Maputo city and extension activities will be carried out at the model farms established in each program area including the Study Area.

Details about this action program are summarized in Table 23.5.

Three advisers will be assigned for implementing the program: 1) a chief adviser in charge of rural extension; 2) an adviser on organic farming; and 3) an adviser on village organization and marketing. These advisers can be recruited not only from Japan but also from an appropriate developing country (for example, Brazil) in order to promote South-to-South Cooperation. Short-term advisers will be mobilized according to the needs arisen during the program, for example in the following areas: livestock farming, soil conservation, small-scale irrigation, fruit gardening and agro-forestry, etc.

Collaboration with the Food and Agriculture Organization of the United Nations (FAO) will be important, because FAO has many experiences in developing and disseminating the Integrated Pest and Production Management (IPPM) system in other developing countries, which can be used in low external input agriculture.

### **d) Remarks for Implementation**

Agricultural development policy in Mozambique should put more emphasis on increasing the productivity of small-scale farmers, who are the majority of rural producers, through the use of low external input agriculture techniques, which are affordable for them. It is hoped that the Ministry of Agriculture and Rural Development, the responsible agency of agricultural development in Mozambique, plays a key role in research, education and extension for disseminating these low external input agriculture techniques.

**Table 23.5 Program Digest**

<b>Program Title</b>	<b>Ecological Agriculture and Livestock Production Extension Program</b>
<b>Objectives</b>	This program aims at developing and disseminating Ecological Agriculture and Livestock Production System, an integrated food production system with low external input, which is ecologically sound and sustainable and economically affordable for small-scale farmers in Mozambique.
<b>Program Area</b>	Maputo Province (Program Area might be expanded to the whole Southern Region, that is, Maputo, Gaza and Inhambane Provinces, based on the progress of the Program.)
<b>Implementation Agency</b>	Ministry of Agriculture and Rural Development or NGOs which are actively promoting sustainable agriculture in Mozambique
<b>Proposed Date of Commencement of the Program</b>	FY2003
<b>Proposed Duration</b>	Three to five years
<b>Activities</b>	<p>1) Research Activities</p> <p>Ecological Agriculture and Livestock Production System suitable for small-scale farmers will be experimented and developed in cooperation with the existing agricultural and livestock research institutions (such as INIA, University of Eduardo Mondlane, etc.) and small-scale farmers in the pilot areas. Some agricultural techniques to be developed are as follows:</p> <ul style="list-style-type: none"> <li>● Organic farming</li> <li>● Zero-tillage cultivation</li> <li>● Integrated Pest and Production Management (IPPM), etc.</li> </ul> <p>2) Extension Activities</p> <p>After the techniques for Ecological Agriculture and Livestock Production System are developed and tested in the field, they will be disseminated through "farmer-to-farmer" extension method. In collaboration with the local farmers, several model farms will be established under different agricultural environments in the Program Area, and they will be used as "Farmer Field School," where local farmers can demonstrate and teach other visiting farmers on techniques for Ecological Agriculture and Livestock Production System.</p>

As lessons from the pilot action plan, some important factors for implementation of the program are mentioned as follows:

- The appropriate size of a model farm should be determined in order to manage the program properly. Large field may require more time to spend on management of the field, rather than on technical instruction and technology transfer to farmers.



- Farmer-to-farmer approach should be adopted in the extension activities. The result of study tours and farmer-to-farmer learning carried out in the pilot action plan proved the effectiveness of this approach.
- Continuous support and assistance by extension workers are required until new farming skills take root, but it might be difficult for the government to station the required number of extension workers due to the limited budget. Appointment of extension workers from NGOs and/or private firms such as nursery companies will need to be considered under the coordination of the Ministry of Agriculture and Rural Development.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objectives**

After food security is achieved at the community level, income generation at the household level will be aimed at through improving agricultural productivity furthermore.

### **b) Development Strategies**

Although the lowland in Mozambique has rich soil for agricultural production, current land use ratio is less than 50 % due to the limitation of labor force and poor drainage. As a result of livestock development program in the first development stage, it is expected that the number of cattle will increase in the Study Area. Use of draft animals, introduction of labor-saving practice such as zero tillage farming, and construction of flood protection dikes will increase the cultivated area up to almost 80 % of the total land. On the other hand, efforts to conserve natural environment in the highland will be made through planting fruit trees and other useful tree crops. Surplus crops due to the expanded farms and improved productivity will be transacted in the nearby local markets such as those in Bobole or Manhiça through village organizations.

### **c) Action Programs**

#### **1) Group Marketing Program**

- a. Target group: Village organizations
- b. Outline: In order to promote group marketing activities, some simple facilities such as a storehouse and a collecting point will be constructed with technical assistance.

#### **2) Agri-product Processing Program**

- a. Target group: Village organizations
- b. Outline: In order to utilize surplus fruits, especially mango, some simple facilities and equipments such as a solar dryer and a processing equipment will be provided together with technical assistance.

#### **d) Remarks for Implementation**

Agriculture and market development in the Study Area should be facilitated by strengthening the Provincial and District Departments of Agriculture. All action programs will be implemented on demand basis and on the principal of cost sharing in partnership with NGOs and/or private companies.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objectives**

Development objectives in this stage are to grow beyond subsistence farming and to establish a commercial production and marketing system in order to maximize agricultural income and to meet the increased demand of food which corresponds to population increase in and around the Study Area.

#### **b) Development Strategies**

This development stage is a turning point from subsistence agriculture to commercial agriculture. As farmers' capacity in agricultural production and marketing is improved, they will be able to promote more commercial agricultural production and marketing activities. In addition to increasing productivity of major crops such as maize, beans and vegetables, the quality of these produces needs to be improved in order to compete with produces imported from South Africa and Swaziland. In addition to the traditional cash crops such as banana and sugarcane, paddy rice can be promoted as a new cash crop in the lowland. There are some existing production centers such as Boane which are supplying perishable and daily produces to Maputo. But if the villagers in the Study Area can improve the quality of produces and reduce the cost of the production, they may be able to get contract production with particular retailers and consumers.

#### **c) Action Program**

##### **1) Strategic Marketing Activity Promotion Program**

- a. Target group: Village organizations
- b. Outline: This program will be implemented as a model for contract farming. Production under a contract with retailers or consumers will be sought for, after improving production management skills such as planning of production and shipping, quality control, cost reduction, etc.

#### **d) Remarks for Implementation**

It is desirable that a role of the government is limited to formulate the policy and provide necessary technical advices in order to facilitate the small farmers' initiatives. Local population can play a major role in project management throughout the project cycle from planning to evaluation.

### 23.1.2 Agricultural Infrastructure

#### (1) Overall Plan

More effective than subsidies in alleviating poverty is the provision of agricultural infrastructure on which farm productivity depends on. The low productivity of agriculture reflects, among other things, limited investments in water, road, and the like. The infrastructure development usually has a long construction period, and consequently a large initial investment is definitively required. The master plan for agricultural infrastructure development has been formulated based on the results of situation analysis presented in chapter 9, Part I of this report.

It has been proposed to implement the agricultural infrastructure development program that consists of the following sub-programs:

#### 1) Flood Protection Dike Program

Flood protection is a prerequisite for sustainable agricultural development in the Study area. To prevent the farmland from flooding of the Incomati River, the program will improve the existing dikes of 4.2 km, construct new dikes of 12.1 km. with a total length of 16.3 km, and provide drainage outlets. The summary of the program is given below:

**Table 23.6 Flood Protection Dike Program**

Particulars	Upstream Area	Downstream Area	Total
Construction Works			
- improvement works (km)	1.1	3.1	4.2
- new construction (km)	8.6	3.5	12.1
Total	9.7	6.6	16.3
Beneficial Land Area (ha)	1,250	670	1,920

The objectives of the program are to prevent the farmland from flooding damages as experienced in 2000, 1995, 1983, and 1981, and to intensify the land use in the rainy season with the canal improvement program.

For the implementation of Flood Protection Dike Program, preparatory works are needed such as engineering investigations, detail designs, and preparation of related documents. The fill materials will be derived from shallow borrow pits located near the sites of dike. For the stability of dikes, the moisture-content control is an important engineering work to maintain the water content close to optimum during the compaction of fill.

Flood Protection Dike Program will commence in 2003 with the preparatory works and with the construction period of five years. The construction works will be carried out on the contract basis.

The Maputo Provincial Office of the Ministry of Agriculture and Rural Development will be the executing agency responsible for implementation of Flood Protection Dike Program, and employ consulting firms for conducting the preparatory works and supervision of the construction works. After completion of the construction works, dikes will be transferred for operation and maintenance to the farmers' group to be organized by the beneficiary farmers.

## 2) On-farm Water Management Program

The objective of On-farm Water Management Program is to raise the farmers' awareness of the effect of on-farm water management on crop growth through on-the-site training at their own farm fields as demonstrated during the course of the pilot action plan of this program.

Interested farmers will organize groups to join in this program. The standard size of farmland of one (1) group will be around 10 ha. for easy management of the program. Flat land having impermeable subsoils with shallow topsoil frequently requires surface drainage because subsurface drains are not practicable. Parallel open ditches are dug on the border of every farm plots to control the groundwater table and provide surface drainage; water in open ditches is used for surface irrigation of crops. Parallel open ditches are connected with the existing canals, and at the connecting points check structures be constructed to control the water table.

Under the supervision of the Ministry of Labor, the farmers groups will be responsible for preparation of plans, and operation and maintenance of the program. They shall be mobilized to take part of the construction works. The groups are expected to form a sub unit of a water users' association to be organized to take the responsibility of the management of the program after the construction of proposed agricultural infrastructure development program has been completed.

## 3) Canal Improvement Program

The objectives of the program are to accelerate the improvement of on-farm water management, to drain the excess water from the lowland area into the Incomati River and to deliver the irrigation water to the farm fields. The program will provide for the improvement of the existing distribution canals developed over the lowland area and the inception canals constructed along the hillside to collect the shallow groundwater charged in the highland area. The total length of the canals to be improved is 45 km as given below:

**Table 23.7 Canal Improvement Program**

Particulars	Upstream Area	Downstream Area	Total
Inception Canal (km)	5	6	11
Distribution Canal (km)	19	15	34
Total	24	21	45

With the sufficient experience in conducting this type of program, the Ministry of Labor will be the executing agency responsible for planning, detail design and supervision of the program. The farmers will organize a water users' association responsible for operation and maintenance of the program at their financial contribution.

In order to attain the objective of the canal improvement program, the study of appropriate low cost method for irrigation in the Study Area will start around 2003, and the construction work will be implemented after the flood protection program is completed.

#### **4) Funding of Agricultural Infrastructure Development Programs**

The executing agencies are responsible for the mobilization, negotiation and disbursement of funds concerning the implementation of the agricultural infrastructure development program in close coordination with the central office concerned. The community is responsible for operation, maintenance, repair and replacement of the program works, and this is guaranteed by its financial contribution.

##### **(2) Short-term Plan (2003-2005)**

###### **1) Flood Protection Dike Program**

Prior to commencement of the construction works, the following preparatory works will be carried out to complete by 2005 to able to start the construction works in 2006:

- Selection of consultants, route selection, topographic survey of the proposed routes, hydrological survey, geological investigation and soil analysis, feasibility study, detail design, cost estimate, preparation of bid document, and selection of contractors

###### **2) On-farm Water Management Program**

Preparatory works will be completed in 2003. The program will be implemented for 20 groups of farmers (100 ha) a year for the period of two years from 2004 to 2005, totaling to 200 ha during the period. At the initial stage of the program, enterprising farmers preferably be selected; thus, they are expected to act as leading farmers. For this purpose, they will be provided with close back up from agricultural extension services to demonstrate the effect of the on-farm water management improvement.

###### **3) Canal Improvement Program**

To respond to the high demand for irrigation by the local population, a feasibility study will be conducted in order to investigate appropriate low-cost methods and systems for irrigation in the lowland of the Study Area, so that the local population can easily operate and manage the irrigation systems not only technically, but also financially and institutionally.

### **(3) Mid-term Plan (2006-2010)**

#### **1) Flood Protection Dike Program**

Construction works will start in the downstream lowland area, where periodical flooding takes place, for the period of three years from 2006 to 2008 (dike length of 6.6 km). On completion of the works in the downstream area, the works will shift to the upstream lowland area. With the two-year construction period from 2009 to 2010, new construction and improvement works in the upstream area will be completed (dike length of 9.7 km).

#### **2) On-farm Water Management Program**

During this mid-term plan period, the program will be implemented for the farmland of 1,500 ha at the rate of 300 ha a year. In the year 2010 when the flood protection program is scheduled to complete, the total farmland with on-farm water management will amount to 1,700 ha.

#### **3) Canal Improvement Program**

After Flood Protection Program in the downstream lowland area is completed in 2008, Canal Improvement Program in the same area will be implemented from 2009 to 2010.

### **(4) Long-term Plan (2011-2020)**

#### **1) Canal Improvement Program**

After Flood Protection Program in the upstream lowland area is completed in 2010, Canal Improvement Program in the same area will be implemented from 2011 to 2013.

#### **2) Remarks on New Irrigation System**

With the completion of the proposed programs, water management of the irrigation systems will be improved with provision of flood protection dikes, distribution canals and farm ditches. The systems depend on the shallow groundwater, which fluctuates seasonally, for their irrigation water sources. The canal systems are operated for dual purposes of irrigation and drainage.

The second stage improvement of water management, if necessity arises, will be the establishment of new irrigation systems with pumping stations and water delivery pipelines. However, management of such irrigation systems requires skilled professionals at all levels, adequate guidelines, specialized machinery and equipment. Successful water management depends largely on how farmers are organized to participate in the systems. It is necessary, therefore, to carry out monitoring on the progress of the proposed agricultural infrastructure development programs, and then feasibility studies of new irrigation systems should be carried out during the period from 2003 to 2005 to determine whether to implement new irrigation systems or not. Agricultural infrastructure development programs should be formulated taking into consideration the interest and capability of individual farmers to achieve development goals of the programs.

### **23.1.3 Livestock**

Dependence for livestock on keeping its lives of householders is very high rate in rural areas. Livestock in rural area play direct roles to produce foods such as milk, meat and eggs for self-consuming and sale. It has the important functions as live banks, insurance and food security in case of needs, draught and purchasing expensive materials. They are moreover utilized for the purpose as the power for animal traction and transportation, producers of organic fertilizers from its feces, exception of biomass after harvesting.

In recent years, the number and kinds of livestock are increasing although its number were decreased drastically during civil war. Householders and rural areas however have to increase numbers and species of livestock more and more to keep their lives for food security and increasing of incomes. Obstacle for increasing of its sizes and species of livestock are follows:

1) Farmers in rural area:

- lack of funds to purchase livestock and its fadders
- lack of human resources and technique to handle livestock

2) Support systems:

- lack of extension workers in the fields
- insufficient funds and workers for NGO's to operate its activities

3) Disease control:

- lack of vaccine and medicine
- insufficient veterinary serviced and staffs
- poor infrastructure such as decayed dipping tanks or crushes

Under this circumstance, how to activate livestock raising is the most important matter for poverty's eradication, their food security and its income generation.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objectives**

Short-term objectives for livestock development are as follows:

- 1) To improve agricultural production through animal traction and use of cattle dung as the organic fertilizer
- 2) To create self-employment and income through better agricultural production and livestock raising

##### **b) Development Strategies**

In order to achieve the above development objectives, the following strategies are proposed:

- 1) To continue the successful pilot action plans such as Animal Traction Program and Chicken Raising Program
- 2) To reduce the cost for the livestock program by utilizing locally available resources

3) To increase the number of the livestock through the revolving scheme

#### **c) Action Programs**

##### **1) Animal Traction Program**

Animal Traction Program successfully introduced in the pilot action plan will be continued. Cattle can cultivate more land if better trained, and the cattle dung will be utilized as the organic fertilizer to improve the agricultural productivity. Ox-carts will be used to carry the agricultural produce to the market so that it will facilitate the income generation by agriculture.

##### **2) Chicken Raising Program**

Chicken Raising Program successfully introduced in the pilot action plan will be continued and expanded. In order to reduce the cost for Chicken Raising Program, the research will be made to explore the possibility to use the local varieties of chicks and feeds, in collaboration with the veterinary faculty of the university. This low-cost chicken raising method will benefit the poor farmers, while the continuing Chicken Raising Program using imported chicks and expensive feeds will become a large-scale profit-oriented business for the village entrepreneurs such as the members in Association Cubomo due to its high input and high return nature in a short period.

##### **3) Livestock Revolving Program**

In order to increase the number of the livestock, the livestock revolving scheme will be introduced, in which a cattle, a pig or a goat will be rented out to a farmer and when it reproduces, the newly born cattle, pig or goat will be rented out to another farmer. To keep the livestock healthy and make them reproduce properly, farmers will be trained by the university or NGO about:

- Animal husbandry, health care and disease control
- Breeding management and feeding management

The university staff or NGO workers can also assist the farmers to control animal diseases in the field. The veterinary faculty in Japanese universities may collaborate in the fields of disease control and livestock raising in order to improve the diagnostic function and livestock management. Since the livestock is always associated with the risk of dying, it is important to make some insurance mechanism against the animal death.

#### **d) Remarks for Implementation**

The roles of government are:

- 1) to find the fund to start Livestock Revolving Program
- 2) to send extension workers for farmers and rural areas
- 3) to implement regular vaccination fully to control diseases as plans

The roles of the communities:

- 1) to implement animal traction and ox-cart properly
- 2) to expand the farm lands for crops and grazing by animal traction



- 3) to study and practice livestock husbandry, management, fodder control, breeding and etc., in collaboration with the university's veterinary faculty and spread their knowledge in the village

The roles of donor are:

- 1) to assist the government to prepare the fund to start the Livestock Revolving Program, if the government is unable to find the fund
- 2) to explore and co-ordinate the possibility of technical co-operation with Japanese universities
- 3) to offer farmers the opportunities to study and practice various aspects of the livestock programs.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objective**

Mid-term objective for livestock development is as follows:

- 1) To improve the economic status through the increased productions and sales of livestock and livestock products

### **b) Development Strategies**

In order to achieve the above development objectives, the following strategies are proposed:

- 1) To continue and expand the successful programs to the wider population
- 2) To increase the number of livestock through livestock revolving program

### **c) Action Programs**

#### **1) Chicken Raising Program**

This is the continuation and expansion from the short-term action program. Based on the results of the research during the short-term action program, Chicken Raising Program using local varieties of chicks and feeds will be implemented and expanded to as many small-scale farmers as possible, so that the impact on uplifting the economic status of the villagers can be realized.

#### **2) Livestock Revolving Program**

This is the continuation and expansion from the short-term action program. It is important to monitor the impact of the increased number of livestock on the natural environment, so that the next program can start in time before any serious land degradation happens in the high land.

### **d) Remarks for Implementation**

Government should supervise all action programs, and provide or arrange necessary training, study tour, and technical advice to the farmers on livestock through the veterinary officers. With the governmental support and services, the small-scale farmers can become more independent and self-reliant and finally achieve the better economic status. Donors can advise suitable solutions to the

villagers' problems and provide financial supports and appropriate information for villagers, if necessary.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objectives**

Long-term objectives for livestock development are as follows:

- 1) To improve the economic status by selling more livestock products
- 2) To improve the nutritious status by consuming more livestock products

#### **b) Development Strategies**

In order to achieve the above development objectives, the following strategy is proposed:

- 1) To expand the sales and consumption of livestock products by intensifying and scaling up the livestock raising

#### **c) Action Program**

##### **1) Intensive Livestock Development Program**

Some farmers who have accumulated the certain number of livestock can scale up the livestock program by intensifying the production system, for example, by introducing appropriate machinery and facilities to deal with the large number of livestock more effectively and efficiently. If the cost of intensification and mechanization is too expensive for one farmer, they can form a group to buy and share the machinery.

#### **d) Remarks for Implementation**

In this stage, farmers and communities do not need so much support from the government and donors, because they can manage their own activities and bear the cost by themselves.

## **23.2 Basic Human Needs**

### **23.2.1 Education**

While the need assessment in PRA identified education as a high priority for the Study Area, education is not tackled in the pilot action plans because educational development such as school construction needs more time than the nine-month period allocated for the pilot action plans. PRA revealed the low status of educational background in the local population is one of the key constraints for village development, because it narrows local people's options for village development and seriously affects people's capacity to think about the sustainable future and collaborate together to realize it. So educational development is a must for long-term development in the Study Area.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objective**

A short-term goal for educational development is to improve literacy rate among the villagers, especially among women. Literacy rate in the Study Area is currently around 30 % for all adult villagers, but only for about 15 % for adult women. Since improving the literacy rate is the foundation for long-term village development, and it needs a long time to have an impact, it is important to start this program as soon as possible.

##### **b) Development Strategies**

In order to improve the literacy rate in the Study Area, the following three strategies are proposed:

- 1) to improve the literacy rate among the adult women by organizing adult literacy classes for women using REFLECT methodology
- 1) to improve the literacy rate among the children by reducing the dropouts from the school through the educational awareness campaign for parents
- 1) to improve the educational capacity of the primary school teachers and the management capacity of the primary school principals in order to make primary schools more interesting and useful learning centers for the children

##### **c) Action Programs**

###### **1) Adult Literacy Program for Women Using REFLECT Methodology**

REFLECT (Regenerated Freirean Literacy through Empowering Community Techniques) is a participatory methodology developed by ActionAid UK for adult literacy classes with community development objectives, and it is currently used in many literacy programs implemented jointly by ActionAid UK and Ministry of Education in Mozambique. Since REFLECT is praised as a powerful tool to empower rural women, it is better to utilize REFLECT methodology in the Study Area by getting technical assistance from ActionAid UK. While there are so many illiterate women in the Study Area, it is important to start from a small scale, which means starting with a few women's

groups whose members can be small in the number but must be well motivated to learn and educate themselves. Since other women are always watching this first selection of the groups, when this small number of the groups start to perform well and actually improve women's lives after a few years' intervention, many other women will form their own groups and start to demand for literacy classes for their own groups.

## **2) Educational Awareness Campaign for Parents (especially through Folk Media)**

It is important to make the parents understood the importance of education for children, so the educational awareness campaign should be organized using every occasions to communicate this message, such as the talks in the village meetings, the posters posted in the public offices, hospitals, schools and market places, and broadcasting the message through local radio programs. Since the songs, dances and dramas are the very popular and traditional media in the village, it is useful to motivate the local population to develop the traditional folk media such as songs, dances and dramas which appeal the villagers the importance of education for children, parents and the whole village. The church leaders, schools teachers and local artists can become good teachers for the villagers to make these songs, dances and theaters. These traditional folk media are inexpensive, but can reach the wider audience and will make a big impact if they are appealing to the villagers. It is also important to note that the villagers can continue the educational awareness campaign using these traditional media by themselves, because these media are inexpensive and affordable to them as well as entertaining and fun to them.

## **3) Primary School Teachers and Principals Capacity Building Program**

The above-mentioned educational awareness campaign cannot succeed unless the education in schools becomes more relevant for the villagers and more interesting for the children. So it is important to organize the capacity building program for primary schools teachers in order to make them familiar with the participatory educational techniques which make the school lessons more lively and interesting for the children and more responsive to the children's practical learning needs from the real world. Such lessons can include the lesson to encourage the children to investigate the issues familiar to them, the lesson to discover something new and unexpected using their own sense, and the lesson to express the emotions using their imagination and creativity. Learner-centered approach is the important principle in order to make the learning fun to the children. The primary school principals can also be trained on the management of the school and teachers, and the better communication with the parents and the local community in order to involve them more actively in various school activities such as PTA activities, the home visits, the parents' day at school, the sport or art festival, and so on.

## **d) Remarks for Implementation**

To implement these programs, the central government (Ministry of Education) must take a lead to start these programs, and provide teachers enough training to conduct these programs, in collaboration with the local district government. The communities must collaborate with the government especially in the educational awareness campaign by participating in various traditional folk media activities. Technical assistance from donors may be solicited for all three programs, if the government requests.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objective**

A mid-term goal for educational development is to improve the access to the second level primary education (EP2 schools for 6th and 7th grade) and the general secondary education (ESG1 schools for 8th to 10th grade) in the Study Area, because there are only one EP2 school and no ESG1 school in the Study Area.

### **b) Development Strategies**

In order to improve the access to the second level primary education and the general secondary education in the Study Area, the following three strategies are proposed:

- 1) to construct a new EP2 school in Pateque area and a new ESG1 school in Munguine area
- 2) to improve the educational capacity of the secondary school teachers and the management capacity of the secondary school principals in order to make secondary schools more interesting and useful learning centers for the students

### **c) Action Programs**

#### **1) Upper Primary and Secondary School Construction Program**

This program aims at constructing a new EP2 school with 4 classrooms in Pateque area because there is no EP2 school in Pateque area, and a new ESG1 school with 3 classrooms in Munguine area because there is no ESG1 school in the Study Area and Munguine is the most populous center in this area. These schools can be constructed with the labor contribution by the local population, but the government must assign the enough number of the full-time teachers for these schools as soon as the school buildings are complete and the schools are ready to start operation. It is important for these schools to offer the evening courses for the adults who have completed only the lower primary school education.

#### **2) Secondary School Teachers and Principal Capacity Building Program**

Construction of the secondary school is useful only when the capacity building program for secondary teachers and the principal is conducted concurrently. Since the teachers in the secondary schools are subject-specific teachers, it is necessary to conduct training by subject. Like the farmer-to-farmer technical exchange which was conducted in the pilot action plan and proved very effective, teacher-to-teacher exchange of experiences and ideas can be the most effective way for teacher training. It is useful to organize the networks of teachers by subject, and encourage teachers to experiment new ideas and ways of teaching by themselves and to exchange their experiences with other teachers.

### **d) Remarks for Implementation**

To implement these programs, the central government (Ministry of Education) must take a lead to start these programs, and provide teachers enough training to conduct these programs, in collaboration with the local district government. The communities can collaborate with the government especially in the

School Construction Program by working as voluntary laborers. Technical assistance from donors may be solicited for all three programs, if the government requests.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objective**

A long-term goal for educational development is to improve the access to the higher education for villagers in order to develop the capacity of the village leadership.

#### **b) Development Strategy**

In order to improve to the higher education for villagers in the Study Area, the following strategy is proposed:

- 1) to establish a scholarship revolving fund which provides scholarship loans to the villagers who are selected in the village committee due to their past commitment and accomplishment in village development.

#### **c) Action Program**

##### **1) Scholarship Revolving Fund Program**

This program aims at establishing a scholarship revolving fund basically by the community's own fund raising efforts. Some donor may assist this fund by donating the part of the initial fund as a matching fund, but it is important for the community to mobilize at least the half of the fund locally, because it will give the true sense of the ownership in the villagers and they will become more serious in managing this revolving fund in a sustainable manner. The scholarship loans will be provided to the villagers who are selected in the village committee due to their past commitment and accomplishment in village development and they will study in the higher education institutions in order to improve their leadership capacity and widen their knowledge on village development. Since the scholarships are the loans, the recipients must start to return the scholarship loan and its interest every month from the fifth year after receiving loans. The scholarship recipients are expected to work for the village after finishing the study and become the future leaders for the village. If they cannot fulfill this duty for the village, they have to return the total amount of the scholarship with the interest all at once as a penalty.

#### **d) Remarks for Implementation**

To implement this program, the community must take a lead to establish a fund by collecting donations from as many villagers as possible. The district government can assist the community to register the fund in the government office, to open the account in the bank, and to conduct external inspection if the community requests the government to do so. The donor may assist the management of the scholarship fund through technical assistance, as well as provide the part of the initial fund as a matching grant with the community's own fund.

### **23.2.2 Health**

Like education, health was also listed as one of the highest priority needs by the villagers in the Study Area during PRA. Local people appealed the Study Team the need to upgrade the health center in Munguine and the maternity health center in Maluana, but due to the expensive cost of the medical equipment as well as the need for the professional health personnel to operate it, the medical facility upgrading project was not included in the pilot action plan. In rural Mozambique, when the people become sick, it is still very common for them to go to the traditional healers before going to the health center or the hospital. The maternal and child health care service such as immunization and nutrition education is offered at the health centers, but most of women still give birth at home with the help of the relative or the traditional birth attendant. The most common diseases in the Study Area are malaria and diarrhea, but the preventive measures against malaria and diarrhea are poorly known to the local people and seldom practiced as a result. So there is a high need to educate the local population on health and nutrition issues.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objective**

A short-term goal for health development is to improve the health status of the mothers and children through better nutrition, health education and immunization.

##### **b) Development Strategies**

In order to achieve the development objective, the following two strategies are proposed:

- 1) to improve the nutrition status of the mothers and children through nutrition education at health centers, schools and home and home garden to grow nutritious vegetables
- 2) to improve the health status of the mothers and children through health education and immunization at health centers and the use of health and hygiene education volunteers

##### **c) Action Programs**

###### **1) Nutrition Education Program for Mothers and Children**

In order to improve the nutrition status of mothers and children, it is necessary to first conduct the nutrition survey to assess the current nutrition status of them and the contents of the every-day diet they are having at home. It is also important to investigate what kind of and how much portion of the daily diet comes from their own farm and what food they buy from others or the market. After analyzing the problems and understanding the causes of the problems, the effective intervention strategies to improve nutrition status of mothers and children can be devised. It is expected there will be a need for a two-way approach: (i) nutrition education at health centers, schools and home, and (ii) home garden to grow nutritious vegetables by themselves. Like the educational awareness campaign in the previous section, nutrition education can use talks at the public meetings, the posters posted in the public buildings, and the folk media such as songs, dances and dramas. As for the vegetables in home garden, indigenous varieties of the vegetables are often easy to grow in the local environment without

the need of expensive inputs, and more nutritious than the commercial varieties, so it is important to understand the values of the local varieties of the vegetables and promote to grow them at home gardens. Since the diet is often affected by various traditional beliefs, it is important to understand the food taboos and other food-related cultures in the Study Area and discuss the local population how these cultural practices and beliefs can be changed for the sake of the more nutritious diet.

## **2) Health Education and Immunization Program for Mothers and Children**

In the health centers, health education and immunization are already offered by the staff of these health centers, but since still many mothers and children do not come to the health centers, it is important to recruit the health education volunteers from villagers, provide them the basic primary health care training and dispatch them to visit home or the village organizations in the rural area. These volunteers can also facilitate various educational activities in the village, such as delivering the health talks or performing the songs, poems, or dramas with the health messages in the village meetings, in order to make the villagers understand the importance of the regular checkups of the mothers during the maternity, immunization for the children, and hygiene practices to avoid the diarrhea. People tend to remember the key messages when they are moved and entertained by the performances, so it is important to plan fun events to deliver the important health messages to the widest audience. This approach is often called the “edu-tainment” (= education + entertainment) approach for health education.

### **d) Remarks for Implementation**

To implement these programs, the central government (Ministry of Health) must take a lead to start these programs, assign and dispatch the necessary health professionals and recruit health volunteers to conduct these programs, in collaboration with the health centers in the Study Area and the District Hospital in Manhiça. The communities must collaborate with the government by participating in health and nutrition education activities as well as home garden activities. Technical assistance from donors may be solicited for these programs, if the government requests.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objective**

A mid-term goal for health development is to improve the quality of health services in the Study Area.

### **b) Development Strategies**

In order to improve the quality of health services in the Study Area, the following two strategies are proposed:

- 1) to improve the quality of service at the health centers through the training of health personnel.
- 2) to improve the linkage and collaboration between the western medicine and the traditional medicine through the training of the traditional healers and traditional birth attendants



### **c) Action Programs**

#### **1) Health Personnel Capacity Building Program**

Health personnel (nurses and mid-wives) in the health centers will be trained in a yearly one- or two-week updating course to update their knowledge and skills in the District Hospital in Manhiça. They will be trained not only on medical subjects, but also on the socio-cultural dimensions of the health to understand the rural people's health-related behaviors, and on the communication techniques to work with the rural population, because it is important to understand the local people's perspectives towards the health and diseases in order to design the effective intervention strategies to change their problematic behaviors.

#### **2) Traditional Health Practitioners Capacity Building Program**

Traditional health practitioners such as traditional herbalists and traditional birth attendances are the rich human resources in the Study Area, so it is useful to mobilize these often-neglected people to improve the health status of the local population. Since the Study Team found many traditional health practitioners are interested and eager to learn the modern medicine, they will be trained the basic primary health care as well as the simple medical treatment. It is important to identify when and for what kind of diseases traditional medicine works well and when and for what kind of diseases not. By finding and understanding this demarcation between the traditional medicine and the western medicine, the guidelines on when the traditional health practitioners must seek for help from the western health facilities can be developed.

### **d) Remarks for Implementation**

To implement these programs, the central government (Ministry of Health) must take a lead to start these programs, and assign and dispatch the necessary health professionals to conduct these programs, in collaboration with the health centers in the Study Area and the District Hospital in Manhiça. The communities must collaborate with the government when identifying traditional health practitioners in the Study Area. Technical assistance from donors may be solicited for these programs, if the government requests.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objective**

A long-term goal for health development is to establish sustainable and affordable health service for all villagers.

#### **b) Development Strategies**

In order to establish sustainable and affordable health service for all villagers in the Study Area, the following two strategies are proposed:

- 1) to expand and upgrade the facility in the health centers in order to keep the good quality of health services

2) to introduce cost sharing to promote community financing of health services, and health insurance scheme to make health services affordable for all villagers

### **c) Action Programs**

#### **1) Health Center Facility Expansion and Upgrading Program**

Existing health centers in Munguine and Maluana will be expanded and upgraded in this program in order to meet the increased demand from the local population, which is the result of the earlier efforts of health education as well as the quality improvement in the health care service. Collaboration and networking between the District Hospital in Manhiça and the health centers will be enhanced, by establishing a rotational visit system to the rural health centers by the medical doctors stationed in the District Hospital. The communication network of the District Hospital and the rural health centers will be also established using the mobile phone network, and it will be used for a tele-medicine system.

#### **2) Community Health Financing and Insurance Program**

To maintain the good status of the expanded and upgraded health centers for a long time, it is necessary to promote the community financing in health centers by introducing beneficiary's cost sharing in medicines and medical treatments. Cost sharing scheme might affect the poor people negatively, so it is important for the government to start health insurance scheme for all people when introducing the cost sharing scheme. Monthly fee for the health insurance will be decided by the government, but it is expected to be proportional to the insured person's income or economic status such as personal property. So the richer people must pay more, while the poorest can be exempt from the fee payment.

### **d) Remarks for Implementation**

To implement these programs, the central government (Ministry of Health) must take a lead to start these programs, and assign and dispatch the necessary health professionals to conduct these programs, in collaboration with the health centers in the Study Area and the District Hospital in Manhiça. The communities must collaborate with the government by participating in cost sharing scheme and health insurance scheme. Technical assistance from donors may be solicited for these programs, if the government requests.

### **23.2.3 Water Supply**

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objectives**

1. Guarantee the sustainability of two communities' water supply pilot projects.
2. Promote family and community level improvements of water use, conservation, hygiene and sanitation.
3. Establish broad knowledge of the Demand Responsive Approach (DRA) process for community water supply.
4. Evaluate water supply activities and prepare a mid-term rural water, hygiene education and sanitation development plan.

##### **b) Development Strategies**

- 1.1 Capacity building of Water Committees and Maintenance Groups to ensure they can resolve problems met over time related to operation and management of the community water points.
- 2.1 Health Education Promoters should be used in a season-sensitive manner to promote awareness and carry out physical and behavioral hygiene and sanitation improvements in homes in their neighborhoods.
- 3.1 Awareness-raising of the National Water Policy and Demand Responsive Approach (DRA) process should be promoted by Local Government (supported by the District representative for Public Works and Housing) throughout Administrative Post of Maluana.
- 3.2 Community applications for support in water supply improvement activities should be received and responded to by the District Administration through its local representation.
- 3.3 Applications that cannot be responded to using local resources should be passed on to the provincial level - DPOPH for inclusion in the provincial DRA planning process.
- 3.4 Links should be made with NGO projects implementing DRA, to assist in ensuring procedures are followed and understood at all levels.
- 4.1 The end of period evaluation process should lead immediately into a strategic planning exercise that will result in the mid-term plan.

##### **c) Action Program**

###### **1) Demand-Responsive Rural Water Supply Program**

- 1.1.1 Follow-up activities should focus work with water user groups to assess their principle problems, and prioritize inputs based on these results. Minimally assessment should cover:
  - Fund collection and management, including banking,
  - Community organization and awareness to ensure responsive and supportive leadership from Water Committee,

- Water Committee organization, conflict resolution and task management,
  - Status, attitude towards voluntary work and actual activities of Hygiene Education Promoters,
  - The network of support links with the Local Administration, Water, Commercial and Health sectors.
- 1.1.2 Capacity building inputs for community groups should respond to findings of the assessment and be programmed to occur over a period of at least one year through periodic low-key, sustainability-oriented sessions.
- 1.1.3 The second year should comprise of quarterly monitoring and follow-up visits focusing on the self-sustaining capacity of communities to manage their water supplies.
- 2.1.1 Following assessment of Health Education Promoters' interest in continuing their voluntary work agreement as to when they have time to participate should be established, and a program of refresher training using their own materials and Participatory Hygiene and Sanitation Transformation (PHAST) techniques should be carried out.
- 2.1.2 On-the-job support to Promoters should be in the form of information, materials, technical advice and links with health staff as supports for them (and possibly vice-versa).
- 2.1.3 Practical implementation of hygiene and sanitation improvements at family level could be supported with technical know-how training in latrine construction methods for example, and local masons could be supported in learning how to make small rural improved latrine covers. If there is a demand, they could supply services locally.
- 2.1.4 Support should be provided to monitoring Promoter's progress and motivating them to continue with their work.
- 3.1.1 The government is responsible for awareness raising about the NWP and DRA procedures only in areas where a fund is available for financing community water supply improvements. Ensure a fund is available to finance community water supply in Maluana area. Following this confirmation, communities should be informed of how many water points can be supported for development in a given year.
- 3.1.2 If a fund is available, capacity is required at local level for a communication campaign to be carried out. Local facilitators who will be responsible for spreading the information using information packs and visual storyboards from the DPOPH or Manhiça District Administration should be targeted for training. Capacity development of these people is a responsibility of the DPOPH or an NGO authorized by DPOPH to carry out water supply activities.
- 3.2.1 As part of the DRA process, community applications should be received by the District Administration, requesting assistance to improve community water supplies. The Administration should liaise with DDOPH and DPOPH to obtain technical assistance to verify the applications that are approved by the District, and following joint feasibility studies, to develop project proposals with each requesting community for each proposed activity.
- 3.2.2 Project proposals for water supply development activities should be developed together with a facilitator contracted by DDOPH or DPOPH for the purpose. If the project has local level

facilitators in Maluana that have been trained in the material, these may be used as project development facilitators with the support of a rural water supply technician.

- 3.3.1 Project proposals developed together with contracted or local facilitators must be passed to the Water and Sanitation Department of the DPOPH via the District Administration. Funds for water project development should be made available to communities from district or provincial level, depending on fund management capacity.
- 3.4.1 In order to assist in the complex DRA process, NGOs implementing DRA in the province should be sought, and experiences exchanged about how to implement the procedures. Members of the District and Local Administration should participate as well as community members.
- 4.1.1 Carry out a participatory impact, process and sustainability evaluation at the end of the three-year period.
- 4.1.2 Using the results of this evaluation and through on-the-job capacity building for strategic development planning, prepare a plan for the mid-term (2006- 2010).

#### **d) Remarks for Implementation**

- Implementation in the short term should in the first year involve an NGO to provide community capacity development and monitoring follow-up of the initial pilot projects.
- Support to the Health Education Promoters should be provided by this same NGO.
- The NGO should have relevant experience in community capacity development for sustainable water point management and experience in the use of PHAST and other participatory community development techniques.
- Capacity development of the Local and District Administration should be carried out by an organization experienced in this kind of work.
- If funds can be found to finance community water supply development in Maluana, Helvetas should be contacted to provide strategic linkages for capacity building since it is implementing a DRA support program in Maputo province.
- Capacity building would focus on communities, government and any other stakeholders (such as a local facilitating NGO without experience).
- The only pre-requisite to continuing with community water supply support activities is that funds should be identified and allocated prior to initiating an awareness-raising and DRA process.
- If funds cannot be confirmed, no DRA awareness raising should occur until such time as there are funds available.

#### **(2) Mid-term Plan (2006-2010)**

##### **a) Development Objectives**

1. Institutionalize the DRA process for community water supply so that the results are sustainable.
2. Rehabilitate or construct at least 10 water points.
3. Promote community and family level improvements of water use, conservation, hygiene and sanitation.

4. Participatory monitoring and evaluation of rural water and hygiene education and sanitation activities.

#### **b) Development Strategies**

- 1.1 Ensure funding is allocated for water supply, sanitation and hygiene education in Maluana area annually.
- 1.2 Ensure two-way links for communication are operational from communities through to DPOPH.
- 1.3 Ensure trained facilitators are available to be contracted to activate the proposal preparation and community capacity development process after community requests have been made.
- 1.4 Make efforts to link community water supply to other community development activities, particularly those that generate income and support women's involvement in development.
  
- 2.1 According to community demand, and involving all relevant stakeholders, guarantee the rehabilitation or construction of at least 10 water points or other very small water supply systems.
  
- 3.1 Involve the health sector in technical and institutional support to the Hygiene Education Promoters.
- 3.2 Involve the Hygiene Education Promoters in income-generating activities to promote the sustainability of their participation.
- 3.3 Focusing on sustainability incorporate hygiene education, good water use, conservation and sanitation improvements into community projects in other sectors.
  
- 4.1 Regular participatory monitoring integrated into the DRA for water supply, hygiene education and sanitation process.
- 4.2 Ensure the capacity of Water Committees to carry out critical evaluations and analysis of the water supply, hygiene education and sanitation improvement process using DRA.
- 4.3 Use the results of the mid-term and final evaluations of the mid-term plan to develop a long term plan (2010-2020)

#### **c) Action Program**

##### **1) Demand-Responsive Rural Water Supply Program**

- 1.1.1 Raise awareness of funding needs with DPOPH Maputo and together with DPOPH identify interested financing partners.
- 1.1.2 Initiate a mid-term (five years) low level commitment (10,000 – 20,000 USD per year) for rural water supply, hygiene education and sanitation to Maluana Administrative Post area, incorporated in annual District Development Plans.
- 1.2.1 Through awareness-raising and discussion, identify the most effective communication channels for DRA use.
- 1.2.2 Involve all relevant stakeholders and communicators in capacity building for communication and information management from community level to District Government.

- 1.3.1 Identify and train local facilitators who can be contracted to facilitate local community water supply, health and sanitation development processes.
- 1.4.1 Create awareness of the risks to clean water supplies of inadequate community funds for maintenance and repair of community water points.
- 1.4.2 Encourage communities and management groups to become involved in, or to develop, income-generating activities that can help support the recurrent costs of maintaining a clean, protected water supply.
  
- 2.1.1 In collaboration with DPOPH, DDOPH, the District government and community structures, involve communities requesting assistance with water supply development in the whole project cycle as described in the Rural Water Supply Implementation Manuals (in publication: DNA, 2002/2003).
  
- 3.1.1 Involve health staff from local health units in Maluana and Munguine in Hygiene Education Promoter capacity development.
- 3.1.2 Encourage participation of some Promoters in service provision in the health unit in order to gain experience and confidence.
- 3.2.1 Involve the Promoters in income generating activities in the area as a means of prolonging their interest and capacity to participate in hygiene education.
- 3.3.1 Using Hygiene Education Promoters and facilitators from other sectors to integrate hygiene education, good water use and conservation and sanitation improvements into interventions in other sectors.
  
- 4.1.1 Build the capacity of Promoters, intermediary facilitators and the District Administration to carry out participatory monitoring of rural water supply, hygiene education and sanitation activities.
- 4.2.1 Build the capacity of the Water Committees to manage water supply, hygiene education and sanitation planning, and progress and impact evaluation at local level.
- 4.3.1 Carry out mid-term and final participatory evaluations in the five-year period.
- 4.3.2 Carry out participatory analyses of the results, and using lessons learned from implementation incorporate the changes and adapt the implementation strategy and methodology accordingly.
- 4.3.3 Using participatory planning methods, assist the DDOPH and District Administration to develop a long-term strategic plan with all key stakeholders.

**d) Remarks for Implementation**

- The emphasis of the mid-term plan should be on passing responsibility for water supply management and supervision to the government.
- The DPOPH is responsible for water supply and DRA implementation in the province with the indispensable support of the DDOPH and District Administration and representatives.
- All must have their capacity developed to manage the program and the funds and contracts required for its implementation.
- Intersectoral collaboration should be promoted to support the water sector.

- Capacity development at all levels takes time, thus maintaining a low fund for water supply to the area should provide enough time for capacity to be built as activities proceed.
- Efforts should be made to integrate water supply, hygiene and sanitation into other sector activities to promote sustainability.
- Local facilitators to facilitate the DRA process should be trained in the material and contracted to assist in community proposal preparation and develop community capacity.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objectives**

1. Rehabilitate or construct at least 10 community water points or very small systems using the established DRA process.
2. Establish sustainable community and family level improvements of water use and conservation, hygiene and sanitation.
3. Carry out regular participatory monitoring and periodic project evaluation.

#### **b) Development Strategies**

- 1.1 Ensure funds are available at district level for implementation of the long-term water and sanitation development plan.
- 1.2 Support the District government to manage and supervise the rehabilitation or construction of at least 10 community water points or very small systems using DRA according to the long-term development plan for the area.
- 1.3 Provision of periodic capacity building inputs to the main stakeholder groups in planning, management and supervision of water supply, hygiene and sanitation improvement activities.
  
- 2.1 Integrate hygiene education, good water use and conservation and sanitation improvements into water supply and into interventions in other sectors.
  
- 3.1 Support to the District Administration to ensure regular participatory monitoring of water supply, hygiene and sanitation improvement, management, maintenance and repairs.
- 3.2 Provision of periodic capacity building inputs to the main stakeholder groups in participatory monitoring and evaluation methods for water supply, hygiene and sanitation improvement activities.
- 3.3 Support to the District Administration to ensure periodic evaluation (every two years) of water supply, hygiene and sanitation improvement and maintenance activities.

#### **c) Action Program**

##### **1) Demand-Responsive Rural Water Supply Program**

- 1.1.1 Verify the provincial government allocation of funds for local development in Maluana, and identify and secure complementary sources for this fund for the duration of the ten year period.



- 1.2.1 Provide technical and process-oriented management support to the District Government personnel involved in managing and supervising the rural water supply, sanitation and hygiene education program according to the long-term development plan.
- 1.3.1 Provide periodic on-the-job capacity building, training courses and visits to other projects for the main stakeholder groups involved in planning, management and supervision of the rural water, sanitation and hygiene education program.
- 2.1.1 Use all available facilitators at community level to integrate hygiene education, good water use and conservation and sanitation improvements into water supply as well as interventions in other sectors.
- 3.1.1 Through training and follow-up, ensure adequate capacity at local level to carry out participatory monitoring, and to provide regular accurate reports to the District Administration concerning the rural water supply, hygiene and sanitation improvement, management, maintenance and repairs program.
- 3.1.2 Provide capacity building inputs to the District Administration to support and respond to monitoring information from the Localities concerning rural water supply projects, community operation, management, maintenance and repair, including cost recovery activities.
- 3.2.1 Provide periodic capacity building inputs to the main stakeholder groups in participatory monitoring and evaluation methods for the rural water supply projects, community operation, management, maintenance and repair, also including cost recovery activities.
- 3.3.1 Through on-the-job participatory training, refresher courses and follow-up, ensure adequate capacity at District level to carry out participatory evaluations and to provide accurate analytical reports that include lessons learned, and modifications to the rural water supply, hygiene and sanitation improvement, management, maintenance, repair and cost recovery implementation strategy.

#### **d) Remarks for Implementation**

- In the long term, the focus would be on dismantling the overall project management unit in the District Administration and decentralizing its responsibilities and tasks to permanent Administration staff.
- A District Development Fund should be established and regularly financed by this time. This would be the key instrument to financing community-initiated requests for assistance with infrastructure development projects.
- The District Administration must have the capacity to manage funds and contracts for specialists to provide capacity building when and where required.
- A process of institutional analysis and capacity assessment should be established within the District Administration to facilitate its identification of its needs.
- The District Administration should have established mechanisms for guaranteeing sector support from the water, energy and roads sectors.

## **23.2.4 Road**

### **(1) Short-term Plan (2003-2005)**

#### **a) Development Objectives**

to identify a sustainable unclassified road improvement and participatory maintenance approach through pilot project activities in community prioritized areas.

#### **b) Development Strategies**

- 1 A participatory feasibility study with a demand assessment for unclassified road improvement.
- 2 Identification of at least two community prioritized pilot activities.
- 3 Implementation of two participatory pilot activities involving the local Administration in monitoring progress and participation.
- 4 Evaluation of the participatory pilot activities and development of a mid-term strategic plan (2006-2010).

#### **c) Action Program**

##### **1) Rural Road Program**

- 1.1 Together with all stakeholders carry out a feasibility study that
  - identifies priority reasons for road improvement,
  - assesses local capacity and interest to contribute to planning, labor requirements, monitoring and evaluation processes,
  - prioritizes locations for unclassified road improvement activities.
- 2.1 Through a capacity building participatory planning process, design and plan pilot community unclassified road improvement activities focusing on a low-cost sustainable maintenance output.
- 3.1 Identify funds and technical assistance to carry out pilot community road improvement activities.
- 3.2 Implement pilot participatory unclassified road improvement activities.
- 3.3 Together with the local Administration carry out progress monitoring, and establish mechanisms for communicating grievances and providing feedback from laborers.
- 4.1 Carry out a participatory evaluation of pilot road improvement activities assessing
  - socio-economic impact,
  - the processes involved,
  - participation of women and vulnerable groups,
  - sustainability of the interventions from the point of view of maintenance capacity, cost, community organization and interest, and potential institutional arrangements for sustainable area development.

4.2 Together with all stakeholders use the results of the evaluation to develop a mid-term strategic plan for unclassified road improvement in the Project area and District.

**d) Remarks for Implementation**

- Implementation in the short-term should focus on establishing effective community participation mechanisms, and linking the management and supervision of these to government representatives.
- The participation of a facilitating agency such as an NGO or private sector company with experience in community-based unclassified road improvement, capacity building at community and local government level would be necessary.
- A feasibility study and pilot activities must be undertaken to prove the viability of such activities in an area such as Maluana.

**(2) Mid-term Plan (2006-2010)**

**a) Development Objectives**

1. Scale-up the unclassified road improvement and participatory maintenance activities managed by the District / Local Administration.
2. Participatory monitoring of road improvement and maintenance activities.
3. Evaluate the road improvement and maintenance activities and design a long-term development plan 2011-2020.

**b) Development Strategies**

- 1.1 Establishment with the District Administration of the institutional basis for participatory unclassified road improvement planning, design, implementation, financing, monitoring and evaluation.
- 1.2 Establishment of a participatory demand based approach to unclassified road improvement.
- 1.3 Ensure participation of women and vulnerable groups in road rehabilitation and maintenance activities.
  
- 2.1 Involve the local Administration and residents in monitoring activities.
- 2.2 Ensure participation of women in monitoring activities, focusing on women's participation and grievances.
  
- 3.1 Using participatory mechanisms evaluate the unclassified road improvement program every two years as a means of refining implementation methods and program direction.
- 3.2 Production of a long-term strategic plan that takes into account lessons-learned and emphasizes sustainability at community and institutional levels.

## **c) Action Program**

### **1) Rural Road Program**

- 1.1.1 Build capacity of District and Local Administration to use participatory processes to plan and manage the identification, development, implementation, supervision, monitoring and evaluation of road improvement activities in the Project Area and the District.
  - 1.1.2 Support the integration of community based unclassified road development activities into annual district plans.
  - 1.2.1 Build capacity of local facilitators and Administration officials to carry out participatory demand assessments to identify priority areas for unclassified road improvements.
  - 1.2.2 Apply participatory methods to demand assessment carried out in the Project area and District.
  - 1.3.1 Apply and adapt ANE (National Roads Administration) guidelines to the involvement of women and vulnerable groups in labor-based road works.
- 
- 2.1.1 Apply and adapt ANE guidelines to the involvement of the local Administration and residents in participatory monitoring activities.
  - 2.2.1 Apply and adapt ANE guidelines to the involvement of women and vulnerable groups in participatory monitoring activities.
  - 2.2.2 Study existing communication channels and means, and create effective channels of communication for the hearing of grievances and provision of timely feedback, particularly involving women for women's issues.
- 
- 3.1.1 Carry out participatory evaluations at the end of each improvement activity, and of all on-going and maintenance activities every two years to assess the impact, process, and sustainability implications at various stages post-improvements.
  - 3.2.1 Analyze the results together with stakeholders and identify lessons-learned that can inform long-term planning.
  - 3.2.2 Carry out a participatory planning process using the results of the evaluations to produce a long-term plan for unclassified road improvement and maintenance.

### **d) Remarks for Implementation**

- Mid-term roads infrastructure development activities should focus on institutional establishment of planning, management and supervision processes as well as a decentralized capacity to participate in monitoring and evaluation processes.
- Project activities should link with and exchange experiences with the national level District Planning and Decentralization Program currently in its design stage, the regional Roads Administration and the representatives of DDOPH and DPOPH.
- Capacity development should occur at all levels: community, Local and District Administration to plan, manage and supervise unclassified road development.
- A project management unit in the District Administration should contract capacity building inputs if a District Development Fund is made available for this purpose.

- Contracted NGOs or private sector companies with relevant experience should manage project implementation in the field that focuses on community capacity development.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objectives**

1. Improved unclassified roads developed in the Project area according to local demand and willingness to participate in upgrading and maintenance.
2. Regular participatory monitoring and evaluation of unclassified road improvement and maintenance activities.

#### **b) Development Strategies**

- 1.1 Support to the District Administration to manage and supervise unclassified road improvements according to the long-term development plan for the area.
- 1.2 Provision of periodic capacity building inputs to the main stakeholder groups in planning, management and supervision of unclassified road improvement activities.
  
- 2.1 Support to the District Administration to ensure regular participatory monitoring of unclassified road improvement and maintenance activities.
- 2.2 Provision of periodic capacity building inputs to the main stakeholder groups in participatory monitoring and evaluation methods for unclassified road improvement activities.
- 2.3 Support to the District Administration to ensure periodic evaluation (every two years) of unclassified road improvement and maintenance activities.

#### **c) Action Program**

##### **1) Rural Road Program**

- 1.1.1 Provide technical and process-oriented management support to District Administration personnel involved in managing and supervising unclassified road improvements according to the long-term development plan.
- 1.2.1 Provide periodic on-the-job capacity building, training courses and visits to other projects for the main stakeholder groups in planning, management and supervision of unclassified road improvements.
  - 2.1.1 Through training and follow-up, ensure adequate capacity at local level to carry out participatory monitoring, and to provide regular accurate reports to the District Administration concerning road improvement activities.
  - 2.1.2 Provide capacity building inputs to the District Administration to support and respond to monitoring information from the Localities concerning unclassified road improvement and maintenance activities.

- 2.2.1 Provide periodic capacity building inputs to the main stakeholder groups in participatory monitoring and evaluation methods for unclassified road improvement activities.
- 2.3.1 Through on-the-job participatory training, refresher courses and follow-up, ensure adequate capacity at District level to carry out participatory evaluations and to provide accurate analytical reports that include lessons learned, and modifications to the unclassified road improvement and maintenance implementation strategy.

**d) Remarks for Implementation**

- In the long term, the focus would be on dismantling the overall project management unit in the District Administration and decentralizing its responsibilities and tasks to permanent Administration staff.
- A District Development Fund should be established and regularly financed by this time. This would be the key instrument to financing community-initiated requests for assistance with infrastructure development projects.
- The District Administration must have the capacity to manage funds and contracts for specialists to provide capacity building when and where required.
- A process of institutional analysis and capacity assessment should be established within the District Administration to facilitate its identification of its needs.
- The District Administration should have established mechanisms for guaranteeing sector support from the water, energy and roads sectors.

## **23.2.5 Electricity**

### **(1) Short-term Plan (2003-2005)**

#### **a) Development Objectives**

A feasibility study for rural electrification in the Project Area that facilitates initiation of pilot isolated system activities.

#### **b) Development Strategies**

- 1 Assessment of the technical and socio-economic demand for electrification in the Project Area, costs of alternative supply sources, and of district electrification plans. Identification of at least two small viable pilot electrification activities.
- 2 Initiation of participatory pilot activities to install isolated systems for economically viable small-scale projects.
- 3 Monitoring progress of small-scale projects.
- 4 Evaluation of the small-scale projects and development of a mid-term development plan (2006-2010).

#### **c) Action Program**

##### **1) Rural Electrification Program**

- 1.1 Together with all stakeholders carry out a feasibility study that
  - identifies priority reasons for electrification activities and socio-economic demand,
  - assesses technical demand,
  - assesses local capacity and interest in contributing to costs, management, operation and maintenance as well as monitoring and evaluation processes,
  - prioritizes appropriate low-cost, easily maintained and managed electrification interventions.
- 2.1 Through a capacity building participatory planning process, design and plan pilot community electrification projects focusing on low-cost management and maintenance outputs that generate power that supplies income generating activities which are used to cover operation, maintenance, repair and management costs.
- 3.1 Identify funds and technical assistance to carry out pilot community electrification projects.
- 3.2 Implement pilot participatory electrification projects.
- 3.3 Together with the Local Administration carry out progress monitoring, and establish mechanisms for communicating grievances and providing feedback from project sites and their associated income generating activities.
- 4.1 Carry out a participatory evaluation of pilot electrification projects assessing:
  - socio-economic impact particularly on women and vulnerable groups,
  - effectiveness and appropriateness of cost recovery processes involved,

- sustainability of the interventions from the point of view of maintenance and repair capacity, costs, community organization and interest, and potential institutional arrangements for sustainable area development.

4.2 Together with all stakeholders use the results of the evaluation to develop a mid-term strategic plan for rural electrification development in the Project area and District.

#### **d) Remarks for Implementation**

- Implementation in the short-term should focus on establishing effective community participation mechanisms, and linking the management and supervision of these to government representatives.
- The participation of a facilitating agency such as an NGO or private sector company with experience in community level small-scale electrification projects, capacity building at community and local government level would be necessary.
- Feasibility studies and pilot activities must be undertaken to prove the viability of such activities in an area such as Maluana.

#### **(2) Mid-term Plan (2006-2010)**

##### **a) Development Objectives**

1. Establish the institutional basis for implementation of small-scale electrification projects.
2. Implement small-scale electrification projects after individual participatory and feasibility studies performed.
3. Monitor and evaluate the small-scale electrification projects and develop a long term plan (2011-2020) for electrification in the project area based on demand.

##### **b) Development Strategies**

- 1.1 Institutionalization of a participatory planning process for the financing, design, implementation, monitoring and evaluation of small-scale electrification projects.
- 1.2 Establishment of a participatory demand based approach to small-scale electrification projects.
- 2.1 Annual participatory feasibility studies to prioritize and design appropriate small-scale electrification projects.
- 2.2 Implementation of projects that guarantee cost recovery and sustainability at community level.
- 3.1 Establishment of a participatory monitoring system for all phases of electrification projects including follow-up after their conclusion.
- 3.2 Use of participatory mechanisms to assess the impact, process, and sustainability of the rural electrification program every two years.
- 3.3 Production of recommendations for a long-term plan that take into account lessons learned and emphasize sustainability at project and institutional levels.



## **c) Action Program**

### **1) Rural Electrification Program**

- 1.1.1 Build capacity of District and Local Administration to use participatory processes to carry out demand based planning and manage the identification, development, implementation, supervision, monitoring and evaluation of a rural electrification program in the Project Area and in the District.
- 1.1.2 Support the integration of community based rural electrification activities into district annual plans.
- 1.2.1 Build capacity of local facilitators and Administration officials to carry out participatory demand assessments to identify priority small-scale electrification projects.
- 1.2.2 Apply participatory methods to demand assessments carried out in the Project area and District.
  
- 2.1.1 Carry out participatory feasibility studies of project requests received each year.
- 2.1.2 Prioritize the projects in terms of appropriateness and feasibility ensuring that cost recovery and sustainability are guaranteed, and inform the selected communities.
- 2.2.1 Contract organizations from the private sector to implement electrification projects that support income generating activities, and that build local capacity to manage, maintain and repair equipment in order to ensure sustainability.
  
- 3.1.1 Carry out participatory monitoring of all phases of electrification projects including follow-up after their conclusion to ensure mechanisms for income generation support on-going costs incurred by electricity generating system.
- 3.2.1 Carry out participatory evaluations at the end of each project, and of all on-going projects and maintenance activities every two years to assess the impact, process, and sustainability implications at various stages post-electrification.
- 3.3.1 Analyze the results together with stakeholders and identify lessons-learned that can inform long-term planning.
- 3.3.2 Carry out a participatory planning process using the results of the evaluations to produce a long-term plan for rural electrification development.

### **d) Remarks for Implementation**

- Mid-term activities should focus on institutional establishment of demand based planning, management and supervision processes as well as a decentralized capacity to participate in monitoring and evaluation of projects.
- Project activities should link with and exchange experiences with the national level District Planning and Decentralization Program currently in its design stage, as well as the energy sector at provincial level.
- Capacity development should occur at all levels: community, Local and District Administration to plan, manage and supervise rural electrification development.

- A project management unit in the District Administration should contract the required capacity building inputs if a District Development Fund is made available for this purpose.
- Contracted NGOs or private sector companies with relevant experience should manage project implementation in the field that focuses on community capacity development.

### **(3) Long-term Plan (2006-2010)**

#### **a) Development Objectives**

1. Implementation of the rural electrification program designed for the area based on demand.
2. Regular participatory monitoring and evaluation of electrification projects.

#### **b) Development Strategies**

- 1.1 Support to the District Administration to manage and supervise the rural electrification program according to the long-term development plan for the area.
- 1.2 Provision of periodic capacity building inputs to the main stakeholder groups in planning, management and supervision of electrification activities.
- 2.1 Support to the District Administration to ensure regular participatory monitoring of rural electrification activities.
- 2.2 Provision of periodic capacity building inputs to the main stakeholder groups in participatory monitoring and evaluation methods for rural electrification activities.
- 2.3 Support to the District Administration to ensure periodic evaluation (every two years) of rural electrification activities.

#### **c) Action Program**

##### **1) Rural Electrification Program**

- 1.1.1 Provide technical and process-oriented management support to District Administration personnel involved in managing and supervising the rural electrification program according to the long-term development plan.
- 1.2.1 Provide periodic on-the-job capacity building, training courses and visits to other projects for the main stakeholder groups in planning, management and supervision of the rural electrification program.
- 2.1.1 Through training and follow-up, ensure adequate capacity at local level to carry out participatory monitoring, and to provide regular accurate reports to the District Administration concerning the rural electrification program activities.
- 2.1.2 Provide capacity building inputs to the District Administration to support and respond to monitoring information from the Localities concerning rural electrification projects, community operation, management, maintenance and repair, including cost recovery activities.

- 2.2.1 Provide periodic capacity building inputs to the main stakeholder groups in participatory monitoring and evaluation methods for the rural electrification projects, community operation, management, maintenance and repair, also including cost recovery activities.
- 2.3.1 Through on-the-job participatory training, refresher courses and follow-up, ensure adequate capacity at District level to carry out participatory evaluations and to provide accurate analytical reports that include lessons learned, and modifications to the rural electrification, management, maintenance and repair, implementation strategy.

**d) Remarks for Implementation**

- In the long term, the focus would be on dismantling the overall project management unit in the District Administration and decentralizing its responsibilities and tasks to permanent Administration staff.
- A District Development Fund should be established and regularly financed by this time. This would be the key instrument to financing community-initiated requests for assistance with infrastructure development projects.
- The District Administration must have the capacity to manage funds and contracts for specialists to provide capacity building when and where required.
- A process of institutional analysis and capacity assessment should be established within the District Administration to facilitate its identification of its needs.
- The District Administration should have established mechanisms for guaranteeing sector support from the water, energy and roads sectors.

Note: Lessons learned from pilot projects could only be incorporated into the water supply infrastructure Master Plan since none of the other infrastructure types were included as pilot projects of the Study.

### **23.2.6 Women**

The majority of the population in the Study Area is women. It is also women who are very active and busy in agriculture in the farm, household chores such as fetching water and firewood, processing and cooking food, washing dishes and clothes, and economic activities such as selling the harvested agricultural produces at the market, because many men are out of the rural villages and looking for employment in urban areas. So it is very important to improve women's life and improve their economic, political and social status in the family, community and the society.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objective**

A short-term goal for women's development is to reduce women's burden on household chores.

##### **b) Development Strategies**

In order to achieve the development objective, the following two strategies are proposed:

- 1) to reduce women's work burden on cooking and firewood fetching by introducing improved cooking stoves at home

##### **c) Action Programs**

###### **1) Improved Cooking Stove Program**

The pilot action plan showed that improved cooking stoves are very effective in shortening the cooking time and have reduced women's work load, and become very popular among women because they can earn the money by making improved cooking stoves for other people. The key reason for the success of this program is that all materials for the cooking stoves are locally available and no money is necessary to make improved cooking stoves. So it is important to publicize the positive impacts of the improved cooking stoves using all occasion, for example demonstration of the improved cooking stoves in the market, village meetings, and public space. Since there is already some momentum to diffuse the improved cooking stoves, with a small push, it will have a big impact to change women's life in the village.

##### **d) Remarks for Implementation**

To implement Rural Water Supply Program, the central government (Ministry of Public Works) must take a lead to start the program, assess the demand for water, locate, design and dig the appropriate water point, and train the maintenance team of the villagers, in collaboration with the district office in Manhiça. The communities must collaborate with the government by participating in cost sharing and labor contribution for well construction. For Improved Cooking Stove Program, the community can take an initiative to start the program. Technical assistance from donors may be solicited for these programs, if the government or the community requests.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objective**

A mid-term goal for women's development is to improve the women's economic status through income generation projects.

### **b) Development Strategies**

In order to achieve the development objective, the following strategy is proposed:

- 1) to improve the capacity of rural women in planning and implementing various development projects

### **c) Action Programs**

#### **1) Capacity Building Program for Rural Women**

Most of rural women in the Study Area have a lower educational background than their husband and they have been given less opportunity for training than men. So it is important to design women-only training program to enhance their capacity without getting any help from men. In Japan, there are many women's colleges where women have to do every thing without help from men. So the graduates from these women's colleges are often considered as more self-reliant and independent from men. The same principle can apply for designing the women-only training courses. Since there are many women who have a strong entrepreneurship spirits in the Study Area, entrepreneurship training can be offered for women to start a new business.

### **d) Remarks for Implementation**

For Income Generation Program, the community must take an initiative to start the program. For Capacity Development Program for Women, the central government (Ministry of Social Welfare and Women) or NGOs can take a lead to start the program, in collaboration with the District Government in Manhiça. The communities must collaborate with the government or NGO by selecting their women representative to participate in capacity building program. Technical assistance from donors may be solicited for these programs, if the government or NGO requests.

## **(3) Long-term Plan (2011-2020)**

### **a) Development Objective**

A long-term goal for women's development is to improve women's political status in the family, community and society.

### **b) Development Strategy**

In order to achieve the development objective, the following strategy is proposed:

- 1) to train and develop women leaders in various sectors and promote women in management and leadership in various public as well as private organizations and official committees

### **c) Action Program**

#### **1) Women Leadership Development Program**

Although the majority of the members in village organizations in the Study Area are women, leaders and management in these organizations are still dominated by men. So it is necessary to develop women leaders and managers as a long-term goal to improve women's political status and negotiating power. Since the women's political status can be upgraded only when their economic status is improved, this program must come after the above Income Generation Program.

### **d) Remarks for Implementation**

To implement this program, the central government (Ministry of Social Welfare and Women) or NGOs can take a lead to start the program, in collaboration with the District Government in Manhiça. The communities must collaborate with the government or NGO by selecting their women leaders for leadership development program. Technical assistance from donors may be solicited for this program, if the government or NGO requests.

### **23.3 Income Generation and Self-Employment Creation**

In these days, most people become unable to survive without cash income. But it is very difficult to earn cash in rural villages. If the villages are located near the city, the villagers may have a higher chance to earn cash. Thus, the chances to earn cash are often dependent on the access to the market.

For income generation and self-employment creation in the villages, it is necessary to consider the access to the market and the availability of local resources. Agricultural production is crucial to the villagers' livelihoods, so it is natural to use agricultural and livestock production for income generation. The opportunities of income generation and self-employment must be closely related to villagers' daily life, namely livestock, housing construction, sewing, food shops, and so on. It is also important to use simple and low cost technologies.

Chicken Raising Program, Food Shop Management Program, and Sewing Training Program selected as pilot action plans for income generation and self-employment creation, are the result of responding to the present conditions and market. All these income generation programs had successfully created self-employment in the village, and they used both training workshops and on-the-job training. So the income generation and self-employment creation need to be integrated in one project which uses not only training workshops but also on-the-job training.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objective**

The development objective in the short-term plan is to generate income generation and create self-employment in more village organizations in the Study Area by continuing and expanding successful activities from the income generating pilot action plans such as Chicken Raising Program, Food Shop Management Program and Sewing Training Program through provision of appropriate training and micro credit.

##### **b) Development Strategies**

The basic strategies to achieve the above development objective are as follows:

- 1) to continue and expand the successful income generation activities from the pilot action plans.
- 1) to establish a Community Development Revolving Fund in the Study Area in order to provide micro credit for village organizations to replicate the successful income generation activities.

##### **c) Action Programs**

###### **1) Successful Income Generation Projects Expansion Program**

Among three income generating pilot action plans, Food Shop Management Program and Sewing Training Program might be difficult to expand due to the small market in the village, while there might be more space to expand Chicken Raising Program due to the possibility to access the larger market. So Food Shop Management Program and Sewing Training Program will be continued in the original

implementing organizations mainly for providing on-the-job training to more members, but Chicken Raising Program can be expanded to other organizations through the provision of training and micro credit opportunity to other village organizations, because there is so far a strong demand for chicken within and around the village. However, since the supply of chicken will soon increase and the competition will become high, it is important to make an effort to reduce the cost of chicken raising in order to maintain the competitive advantage. For that purpose, it is urgently needed to explore the possibility of using local crops or grasses to feed the chicken or producing appropriate feed crops locally.

## **2) Community Development Micro Finance Program**

Village organizations will be eager to replicate the successful and profitable activities from the pilot action plans, if they are given appropriate information and training from the original implementing organizations and can borrow the small credit for starting up their own new business from the Community Development Revolving Fund. Community Development Revolving Fund is proposed to be established in the Study Area with the initial fund from the cost sharing matching grant from JICA Study Team and the profit sharing from the income generating pilot action plans. The democratic management structure and the rules and regulations for the fair and transparent operation must be discussed and decided by the community. It is also important to explore the possibility to mobilize more local financial resources for small-scale community development activities through the establishment of the saving function in Community Development Revolving Fund. This saving function means that the persons who want to borrow money from Community Development Revolving Fund must first save a certain amount of money every month in Community Development Revolving Fund for a certain time, then after they save enough amount of money, they are now eligible for a certain amount of credit which is of course bigger than their saved money, but can be easily returned by continuing the monthly saving.

### **d) Remarks for Implementation**

The sustainability of the income generation projects is dependent on the market, the quality of products, services, and human resources, and the availability of the investment fund, just like other business. It is still too early to identify lessons from the implementation of three income generating pilot action plans due to the short time of implementation. However, since these activities are implemented by the village organizations, the member's mutual co-operation is crucial for good organizational management. Since income generation projects produce the cash income, transparent accounting of these cash income by the village organizations is the precondition for sustainable operation of the income generation projects.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objective**

The development objective in the mid-term plan is to establish the foundation for the long-term income generation and self-employment creation in the Study Area, through the formulation of the



village-wide vision, strategy and action plans for income generation and self-employment creation based on the lessons learned from the previous implementation of the income generation projects, and implementation of the action plans identified in this process.

#### **b) Development Strategies**

The basic strategies to achieve the above development objective are as follows:

- 1) to formulate the vision, strategy and action programs to scale up income generation and self-employment creation in the Study Area, based on the lessons learned from the previous implementation of the income generation projects
- 2) to implement the action plans identified in the above process, using micro credit from the Community Development Revolving Fund expanded by the saving promotion

#### **c) Action Programs**

##### **1) Scaling Up Income Generation and Self-Employment Creation Program**

The village-wide vision, strategy and action programs for income generation and self-employment creation will be formulated based on the lessons learned from the previous implementation of income generation and self employment creation projects. Villagers will share the experience and lessons learned from the previous income generation projects, and discuss how to scale up the successful income generation activities to level up the whole villagers' lives. It is noted that the rural road development discussed in the previous section will also provide the better marketing opportunity for income generation projects.

##### **2) Community-Financed Income Generation and Self-Employment Program**

After identifying the most promising income generation projects for the village during the above strategy formulation process, starting up of these projects can be facilitated with the micro credit from the Community Development Revolving Fund. To meet the increased demand, the Community Development Revolving Fund must increase their fund through the promotion of the savings from villagers. Various campaigns in the village can be organized in order to encourage the villagers to save the money in the Community Development Revolving Fund.

#### **d) Remarks for Implementation**

District Government in Manhiça should facilitate the participatory workshops for Vision and Strategy Formulation Program for Scaling Up Income Generation and Self-Employment Creation, in which the community should participate actively. After the vision and strategy are shared and decided by the community, it is basically up to the community's own efforts to initiate the proposed action programs, but the community may request technical assistance from the government, if they feel necessary.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objective**

The development objective in the long-term plan is to disseminate the appropriate technologies and know-how for the income generation and self-employment creation within and beyond the Study Area by establishing a village self-development training school in the Study Area.

#### **b) Development Strategy**

The basic strategy to achieve the above development objective is to plan and implement a village self-development training school in the Study Area.

#### **c) Action Program**

##### **1) Village Self-Development Training School Program**

The possibility of establishing a village self-development training school in the Study Area will be carefully examined by the government and the community. This school aims to disseminate the village entrepreneurs' successful experiences and know-how and appropriate technologies for income generation and self-employment mainly to the unemployed youth and women not only in the Study area, but also from the surrounding villages. This school will be managed and operated by the committee which includes the village leaders and the successful village entrepreneurs in the Study Area and the representatives from the local government and the surrounding villages.

#### **d) Remarks for Implementation**

The initial fund for establishing a village self-development training school might be provided by the government or other donors, but the operational cost of the school must be born by the benefiting villages. The trainees in this school will be requested to pay tuition for the courses, but it is also necessary for the school to provide a scholarship loan to the needy youth and women who are eager to attend this school and learn skills for self-employment. After earning money using the skills learned in this school, the students can return the scholarship loans to the school.

## **23.4 Natural Resource and Environment**

Soil's moisture at high lands in study areas is lower than low lands. At present, led by lack of power such as the animal traction to cultivate high lands, most of high lands are rough with shrubs and used as grazing pasture. A few area of high lands is just utilized for cultivation. And the areas are covered with natural vegetation of low nutritive values for livestock.

High land with low moisture is possible to produce fodders for livestock, because that some grasses and fodder crops for livestock need less moisture than crops in low lands. As the number of livestock is increasing, the competition between agricultural cultivation and pasture grazing in high lands will be escalating gradually. In order to solve this problem in high lands, it is necessary to widen pasture for grazing with improved nutritive fodder grasses and to plant fodder crops for livestock.

### **(1) Short-term Plan (2003-2005)**

#### **a) Development Objective**

The short-term development objective is to increase the green by continuing and expanding the fruit tree planting in high lands.

#### **b) Development Strategies**

The basic strategy to achieve the above development objective is to plant more fruit trees in high land which can contribute not only for environmental conservation, but also for income generation.

#### **c) Action Program**

##### **1) High Land Fruit Tree Planting Program**

In this program, the following activities will be implemented:

- i) to find the appropriate fruit trees for high lands
- ii) to cultivate the more land in high lands through animal traction
- iii) to plant more fruit trees in high lands

#### **d) Remarks for Implementation**

The roles of the government are:

- 1) To provide micro-credit funds to cultivate more lands in high lands and buy fruit tree seedlings
- 2) To train and send extension workers to assist villagers in planting and managing the fruit trees

The roles of the communities are:

- 1) To implement animal traction for land expansion in high lands for fruit trees
- 2) To plant the fruit trees and water them regularly
- 3) To study about management of fruit trees

The roles of donor are:

- 1) To provide the initial start-up fund if the government is impossible to find the fund for the micro-credit fund
- 2) To offer the training opportunities for farmers

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objective**

The mid-term development objective is to protect the vegetation in high lands against the increased number of livestock by covering the high lands with fodder crops or grasses.

### **b) Development Strategies**

The basic strategies to achieve the above development objective are as follows:

- 1) to cultivate more lands in high land areas through the animal traction
- 2) to plant fodder crops or grasses for livestock and increase grazing pasture in high land areas
- 3) to arrange the rotational grazing system for livestock

### **c) Action Program**

#### **1) High Land Green Covering Program**

In this program, the following activities will be implemented:

- i) to cultivate the land in high land areas through the animal traction except shrubs and trees.
- i) to plant fodder crops or grasses for livestock and examine them to decide whether they are suitable fodder crops or grasses
- i) to take seeds from suitable fodder crops or grasses, and plant them in the wider area of high lands in order to prepare grazing pasture for livestock
- i) to develop the rotating grazing system for livestock in order to avoid the overgrazing

#### **d) Remarks for Implementation**

The role of the government is to train extension workers on how to grow fodder crops or grasses for livestock and to make hay and silage.

The roles of the communities are:

- 1) To continue animal traction for land expansion in high lands
- 1) To plant and manage the fodder crops or grasses in high lands
- 3) To learn the methods to make silage and hay, and keep silage and hay for dry season

The role of donors is to give suitable advices and information, and sometimes small financial support.

### **(3) Long-term Plan (2011-2020)**

#### **a) Development Objectives**

The long-term development objective is to establish the stable and sustainable food production system in high lands.

#### **b) Development Strategies**

The basic strategy to achieve the above development objective is to experiment, develop and disseminate the ecological and sustainable agriculture and livestock production system in high lands.

#### **c) Action Program**

##### **1) Integrated Agro-Pastoral Production Program**

In this program, the following activities will be implemented:

- i) to experiment and establish the integrated agriculture and livestock production system in high lands
- ii) to disseminate the integrated agriculture and livestock production system to other high land areas

#### **d) Remarks for Implementation**

Farmers and communities can implement this program without any help from the government and the donors, because they are expected to have learned all the necessary skills and accumulated some fund before starting this program.

## **23.5 Capacity Building**

### **23.5.1 Village Organizations**

There is a great potential for the existing village organizations in the Study Area to plan and implement various development activities, but still many organizations in the Study Area have a very limited capacity to do so. At present, the major role of the village organizations is just to provide the members with the right to use agricultural land in the low land. It is also noted that the capacity development of the village organizations is a difficult task, and will need a long time. So it is important to use a gradual approach for capacity building of the village organizations. The village organizations can gradually expand into various activities such as group purchase, production, and sale, if the basic organizational management is improved.

From the experiences of the pilot action plans, the effective way to build the organizational capacity of the village organizations is through practical experience of implementing some projects. There were two types of pilot action plans carried out in the Study Area: namely (i) the programs aimed at improving basic management, such as Animal Traction Program, Low External Input Agriculture Program, Rural Water Supply and Water Users' Group Capacity Building Program, and (ii) income generation programs such as Chicken Raising Program, Food Shop Management Program, and Sewing Training Program. Better-managed village organizations were selected to implement income generation programs in Phase 2.

It is also important to understand the different levels of capacity of the village organizations. Some village organizations are managed well and willing to expand their activities, but other village organizations are not so active and the members cannot trust the management of their organizations. It is expected that if some village organizations become successful models in the Study Area, other organizations might follow these successful organizations, if they are well informed and trained to do so. Therefore, the capacity building of the poorly managed village organizations must be continued until they will decide to change themselves. Village organizations will continue to play key roles in village development, and it is expected that more groups will be established in the Study Area, such as youth groups, women's groups and so on.

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objective**

The development objective for the short-term plan is to continue the capacity building of the village organizations through the voluntary continuation of the pilot action plans by the implementing organizations and the training of all village organizations in order to share and disseminate the appropriate technologies which found effective in the pilot action plans as well as other lessons learned from the pilot action plans.

## **b) Development Strategies**

The strategies to achieve the above development objective are as follows:

- 1) to encourage the implementing organizations of the pilot action plans to voluntarily continue their development activities through monitoring and technical support
- 2) to organize the training workshops for all village organizations in order to share and disseminate the appropriate technologies which found effective in the pilot action plans as well as other lessons learned from the pilot action plans.

## **c) Action Program**

### **1) Village Organizations Capacity Building Program**

Since capacity building of the village organizations will take a long time, and the pilot action plans are too short for it, it is important to continue these pilot action plans. The implementing village organizations will be encouraged to continue their efforts by regularly visited and monitored by the outsiders such as the government or NGO.

It is important to disseminate the appropriate technologies which found effective in the pilot action plans as well as other lessons learned from the pilot action plans to all village organizations in the Study Area, so the continuing training workshops and study tours will be arranged to motivate all village organizations in the Study Area. As learned from the experiences of the pilot action plans, the capacity building of the village organizations cannot be achieved just by providing training and study tours, so it is necessary to provide opportunities for them to actually implement small scale projects. The Community Development Revolving Fund proposed in the Chapter 23.3 can provide such opportunities for more village organizations, after they improve their management. It is expected that the capacity of village organizations will be developed through the process of solving the problems which unexpectedly happened.

## **d) Remarks for Implementation**

The government or NGO is expected to monitor the Study Area to encourage the village organizations to continue the pilot action plans, and arrange training workshops and study tours for all village organizations to share the experiences, technologies and knowledge for self-reliant village development.

## **(2) Mid-term Plan (2006-2010)**

### **a) Development Objectives**

The development objective for the mid-term plan is to diversify the activities in village organizations in the Study Area into not only development activities, but also social welfare activities.

## **b) Development Strategy**

The strategy to achieve the above development objective is to assist the most successful village organizations to start more development and social welfare activities and become models for other village organizations.

## **c) Action Program**

### **1) Model Village Organization Development and Social Equity Program**

Since it is difficult to expect that all village organizations will make progress equally, the better performing groups will be focused in this phase. They will be assisted to diversify their activities into not only more income generation activities for themselves, but also social welfare activities which can help the poorest and disadvantaged members in the society, in order to become model organizations in the Study Area. Social welfare activities can include activities such as providing training, a scholarship loan or micro credit to the poorest or the disadvantaged people. As model organizations, they are also expected to help other organizations by sharing their experiences, skills and know-how through training workshops and study tours.

## **d) Remarks for Implementation**

The community or Zonal Union of Associations and Co-operatives is expected to initiate this program, but the local government or NGO might be approached by the community or Zonal Union for the technical assistance, if necessary.

## **(3) Long-term Plan (2011-2020)**

### **a) Development Objectives**

The development objective for the long-term plan is to disseminate and expand know-how and skills on the capacity building of village organizations from the model organizations to other organizations in and outside the Study Area.

### **b) Development Strategies**

The strategy to achieve the above development objective is to use the model village organizations to disseminate and expand know-how and skills on the capacity building of village organizations to other village organizations in order to raise the level of all village organizations in the Study Area as well as other organizations in the nearby villages.

## **c) Action Program**

### **1) Village Organization Capacity Building Dissemination Program**

The model village organizations will be actively involved in the Village Self-Development Training School proposed in Chapter 23.3, and play an important role in disseminating know-how and skills on the capacity building of village organizations to other organizations. Based on their experiences, the



training modules for the capacity building of village organizations will be developed with technical assistance from the government or NGO.

**d) Remarks for Implementation**

The community or Zonal Union is expected to initiate this program and co-ordinate the training workshops which support the capacity building of all village organizations in the Study Area. The local government or NGO might be approached by the community or Zonal Union for the technical assistance, if necessary.

### **23.5.2 Local Administration**

As for possible local administration capacity building programs that can be developed based on the findings and lessons learned during the Pilot Action Plan phase of this project (plus experiences prior to joining the Pilot Action Plan team, not only with various JICA's training programs that are conducted in Japan, but also training courses that were provided for local government officials, teachers and corporate employees in Japan), at least three different scenarios can be drawn. They range from:

- Scenario (1) making one important component of village development project,
- Scenario (2) learning from other donors, especially Dutch, building district level planning capacity to be the focus of the project, and
- Scenario (3) because extensive decentralization and professionalization of public sector is already underway, supporting SIFAP effort might be quite beneficial from the point of view of the Mozambique government.

The major beneficiaries of each scenario are:

- Scenario (1) village people and staffs at district and administrative posts
- Scenario (2) staffs at district and administrative posts and village people
- Scenario (3) staff involved in SIFAP at national level and those who take courses related to SIFAP

It must be emphasized that without capable specialists in training or capacity building, scenario (1) and (2), and even (3) will not work.

#### **23.5.2.1 Village Development Program with Local Administration Component**

##### **(1) Short-term Plan (2003-2005)**

###### **a) Development Objectives**

What the Pilot Action Plan did was to support the village organizations financially and materially, in order to strengthen their organizations, utilize their capacity and resources, and empower village people. Giving training courses were the means to achieve those goals, together with financial and material support. Why not doing the same for local administration?

###### **b) Development Strategies**

Basically the problems local administration is facing are the same as those of village people and organization. That is lack of funding, infrastructure, materials, skills and knowledge. Through the Pilot Action Plan, it was proved that by providing some funding and materials with new knowledge and skills will work. Then, it should be the same for local administration. Just giving training courses, without providing any financial or material support, civil servants will have hard time realizing their ideals. The local civil servants too need opportunities to be successful, not just attend training courses.

### **c) Action Programs and Remarks for Implementation**

Basically the steps that will be taken will be similar to those of Pilot Action Plan. Staffs at Administrative Post and various departments within the district government will receive training in planning and budgeting. Some project will be selected based on stated criteria (i.e., feasibility, impact, sustainability, etc). The projects will be carried out with support from outside experts if necessary. Then, the project will be evaluated by various actors including the beneficiaries and recommend suggestions for improvement. In short, the staffs responsible for the project will go through Plan-Do-See cycle, with necessary training courses and coaching. This is to be carried out in one or two districts to start with. One of them should be Manhiça.

In Manhica District, the kinds of skills that the civil servants wished to acquire were following:

- Solving problems skills
- Research skills
- Management skills
- Carry out proceedings
- Decision making skills
- Capacity of supporting / coaching skills
- Broad knowledge
- Planning skills
- High ethics
- Grasping needs of the residents
- Capacity to identify the problems

So the training to acquire these skills will be the first priorities.

### **(2) Mid-term Plan (2006-2010) onwards**

This is the phase, in which the area covered is broadened and training of some local consultants/experts will be identified and trained, in order to spread this approach to even broader area in the the phase (2011-2020).

### **23.5.2.2 District-Level Planning Capacity Building Program**

#### **(1) Short-term Plan (2003-2005)**

##### **a) Development Objectives**

As was explained in Section 2.3, this is something that several donors, including Dutch, are already doing for the past several years. Much in depth study had to be carried out, in order to learn from their experiences. But, at least for the Dutch project, together with UNDP and MAE, it was recognized as successful project and funding are already decided to spread to other provinces, besides the original sites of several districts in Nampula.

It might be quite possible that what Dutch and other donors have been doing at district level is quite similar to what is proposed as Scenario (1) above.

## **b) Development Strategies and Remarks for Implementation**

What is different in Dutch experience is that village level operation is conducted by Dutch NGO, SNV. Similarly, the project run by ActionAid UK in Manhica District is quite comparable to JICA's Pilot Action Plan. Considering the cost and expertise that NGOs have in this type of project, it might be quite sensible to involve Japanese NGO(s) or any international NGO(s), especially when continuation and spreading of this type of project is seriously considered.

### **(2) Mid-term Plan (2006-2010) and onwards**

Spreading of regions, as with Dutch case.

## **23.5.2.3 National Public Servants Training System (SIFAP) Support Program**

### **(1) Short-term Plan (2003-2005)**

#### **a) Development Objectives**

Although this program does not have specific areas/regions as its target beneficiaries, its aim is certainly to upgrade the education level and professionalism of public servants throughout Mozambique.

#### **b) Development Strategies**

As it was described briefly in Section 2.4, it has a number of components to achieve the above stated objectives. However, it is quite certain that (1) two additional training centers in Beira and Lichinga, in addition to the one already exists just outside of Maputo, (2) training of trainers, and (3) development of module scheme for distance learning, are the three most crucial aspects of SIFAP initiative.

#### **c) Action Programs**

As for additional centers in Beira and Lichinga, funding for building and equipments and securing the instructors are the major components. As for distance learning scheme, the key is the incentive to take such courses and existence of means of communication to sustain on-going learning and to be able to provide necessary advises and encouragement to continue learning. It is, unfortunately, quite likely that these will not be available until the next phase (2006-2010). One possible way to overcome this shortcoming is to establish groups of learners in each location, so that course takers can meet regularly and support each other.

#### **d) Remarks for Implementation**

Then, even though the officials who are promoting SIFAP says that the above three aspects are crucial for the success of SIFAP initiative, it all comes down to securing and training capable instructors/trainers. That is not only true for (2) training of trainers, but also the success of (1) two training centers and (3) distance learning scheme.

By reading the report on training of trainers, the courses offered are much better than any programs that are available in Japan at present. However, by interviewing one of those trainers who had actually completed the course and observing the courses offered at IFAPA, it is sad to say but much learning is hardly taking place. Teaching may be there, but not learning. This is the reason why the fourth scenario is crucial in supporting capacity building programs.

However, interviewing just one person out of 40 or so is not certainly enough to judge the effectiveness of the course itself. Further investigation is necessary, if one decide to take up this scenario.

## **(2) Mid-term Plan (2006-2010) and onwards**

Without having a cadre of reasonably good trainers, all three major components of SIFAP (namely, training centers, training the trainers courses, and distant learning) will not run effectively and objectives of the effort will not be met, especially those that trying to improve the level of public services.



## 24. Model Approach for Self-Reliant Village Development in Mozambique

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The model approach for self-reliant village development is developed from the experiences of the Study Team to pursue the self-reliant village development in the Study Area. Although it was developed in the Study Area, there are many common characteristics among the rural villages in Mozambique as described in the following section, so the applicability of this model is considered as high. The main users of this model will be the government ministries, NGOs and other donors who would like to embark the self-reliant village development projects in Mozambique.

### 24.1 Common Situation of Rural Villages in Mozambique

Through the experiences of working with the rural communities in the Study Area, the Study Team has become aware of the following common problems which the most rural villages in Mozambique suffer from:

- *Legacy of the civil war and loss of livestock and fruit trees:* The rural villages in Mozambique suffer from the legacy of the 15-year civil war, which caused the small number of the livestock and the fruit trees in villages. Many livestock was taken from villagers and eaten by the army, and in some areas, the landmines were buried around the fruit trees which were planted near the homestead in order to make villagers inaccessible to the villages. This has caused the villagers not to have enough stock (e.g. livestock, fruit trees, etc.) to cope with the emergencies such as the floods and droughts.
- *High mobility of the population and the weak collaboration among villagers:* The civil war also caused the exodus of the rural people from the war-affected areas to the less affected areas. For example, many households in Munguine came from the area near the national road (EN1) and settled down in Munguine to escape the war damage. Some households returned to the original area after the ceasefire, but many decided to stay in Munguine because of the availability of the fertile low land. As the result of this movement of the villagers, the communities in Munguine tend to have a short history of settlement and the mutual collaboration among the villagers are not well developed yet. Many families became nuclear, which made the aged family members living alone without the support of the young members of the family.
- *Low educational background of villagers:* In Munguine, average villagers have educational background of only five years of schooling. The best educated person in Munguine has 10 years of schooling, but many villagers (especially girls) dropped out of the school after a few years. After the independence, many educated people lived in Mozambique escaped to Portugal and South Africa, and it caused the serious shortage of well educated teachers in schools, and the long civil war seriously deteriorated educational standards of Mozambican people. Lack of education makes the villagers' options for development narrow, so it is important to provide villagers (especially female villagers) with continuous education and practical training to widen their knowledge so that they can be empowered to control and change their own future.

- *Caution against outsiders:* The experiences of the divided two groups fighting each other in a country made the villagers extremely cautious to the outsiders, because they are not sure they are friends or enemies. Therefore for any donor, NGO, or even the government, it is necessary to take enough time to become familiar with the villagers before starting any community development activities.
- *Dependency on outside assistance:* Mozambique often suffered from the natural disasters such as floods and droughts, and the donors and NGOs assisted the Mozambican government and the local population with emergency assistance such as providing food, seeds, agricultural tools and equipment, shelters, and so on. But this frequent assistance from the outside made the local population dependent on outside assistance and very passive in their village development. When the Study Team visited the Study Area for the first time, the local people asked “What kind of goodies have you brought for us?” This type of attitude to wait for the donation from the outside donors is very common among the villagers who received a lot of emergency assistance before. Development assistance must start from changing this kind of people’s passive mentality to the active one, by making the local population understood that it is no use to wait in vain for someone to come and help them, but instead it is important to realize how they are resourceful and capable of changing their own future by their own efforts, so it is necessary to start village development with their own initiatives in order to make their living better.

The structure of these problems is described in Figure 24.1.

## **24.2 Typical Steps for Self-Reliant Village Development**

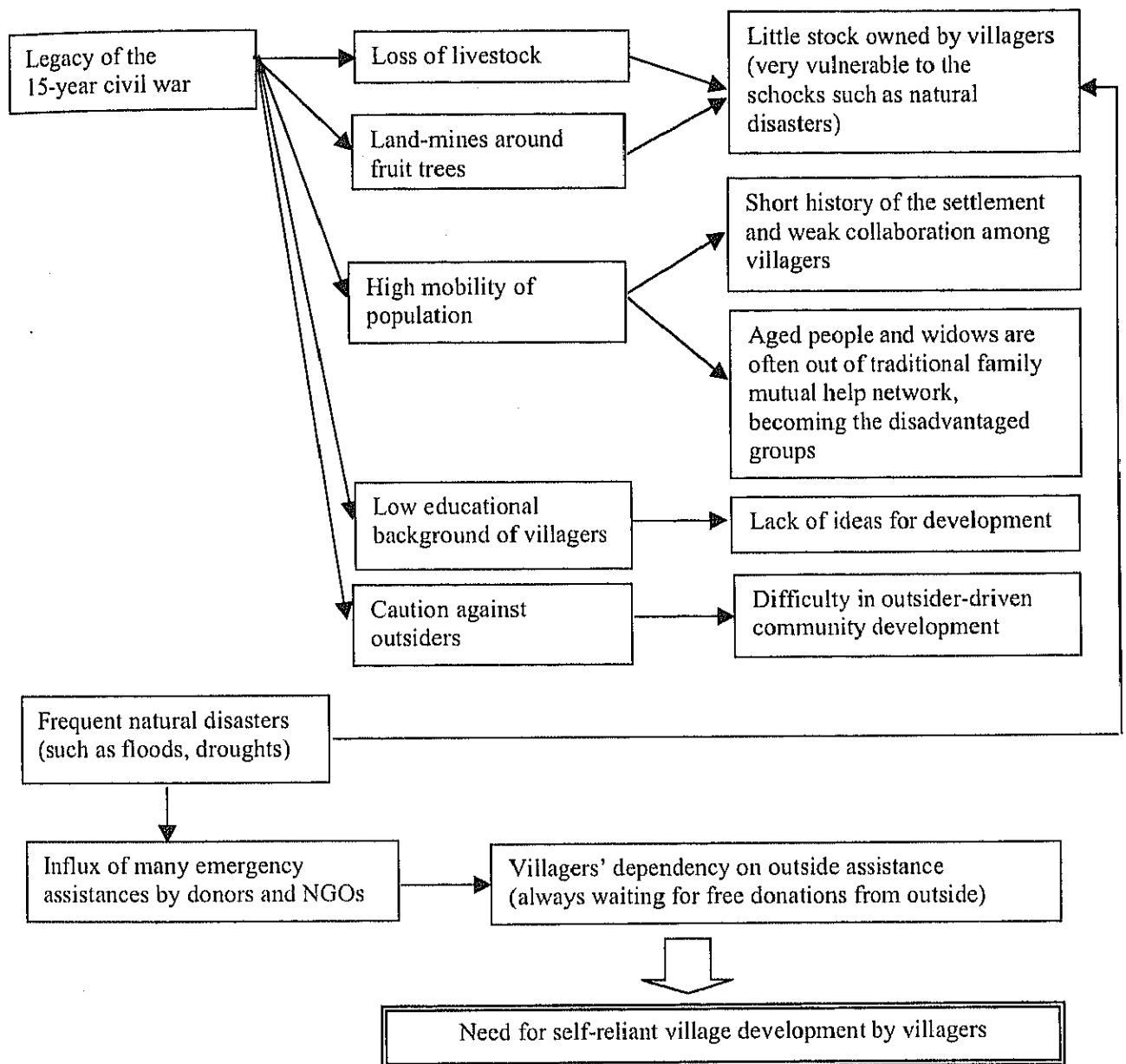
The situation described in the previous section is commonly observed in most of rural villages in Mozambique, and can be described as a state of the low social capital and human capital. So in order to remedy this situation, the Study Team developed a model approach whose typical steps are described in Figure 24.2. It is important to first enhance social and human capitals through discovery of existing resources and strengths (Step 1) as well as capacity building of the village organizations (Step 2). Then appropriate small-scale pilot projects should be developed together with the local population (Step 3) and implemented by the local population themselves (Step 4). Experiences of implementing the pilot projects should be evaluated to learn the lessons and disseminate these lessons to the government agencies, NGOs and other donors (Step 5).

### **Step 1: Discovery Stage -Participatory Survey and Study Tour**

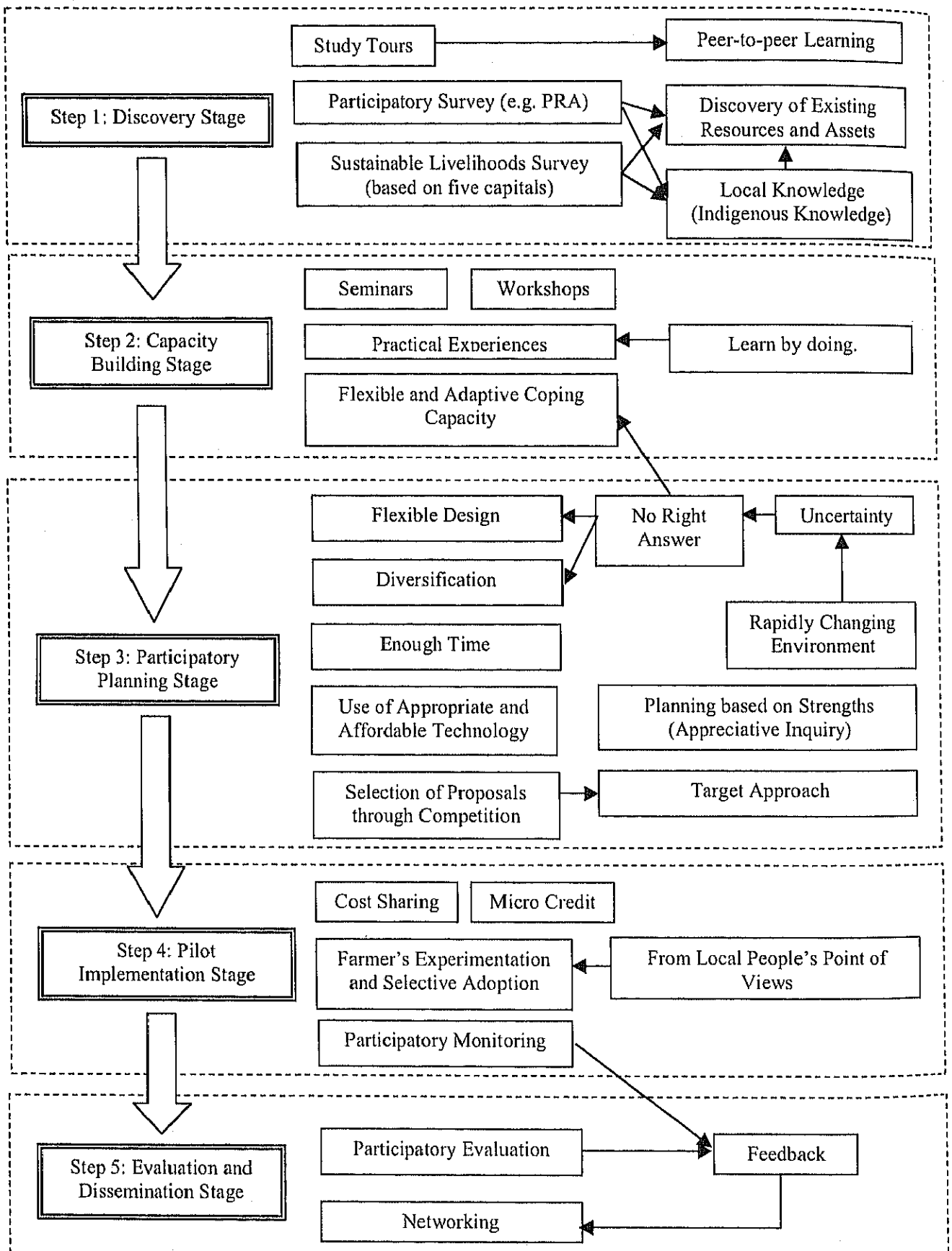
- *Discovery of local resources and knowledge through participatory surveys:* It is important to let villagers discover local resources useful for village development, such as traditional knowledge and technologies, mutual help activities in the village life, etc. through participatory rural appraisal (PRA). One of the pilot action plans introduced animal traction which was traditionally practiced in this area, but the techniques for it have been forgotten and lost during the civil war. In the pilot action plan, the old men revived their knowledge and transferred it to the younger generation.



**Figure 24.1 Structure of the Common Problems in Rural Villages in Mozambique**



**Figure 24.2 Typical Steps for Planning and Implementing Self-Reliant Village Development Programs**



- *Peer-to-peer learning through study tours to visit other farmers:* From the experiences of the pilot action plans, the study tours in which the villagers visited other villages are found the most effective way for them to learn new technologies as well as to motivate them to start their own development initiatives when they return to the village. Participatory rural appraisal (PRA) conducted in Study Area proved how the local people's ideas for development were bound by their previous experience in development. Since many villagers associated development with the public works by the government or the donation from foreign donors or NGOs, they listed these public works or donation as their needs in PRA exercise. But the study tours to other villages have widened their views on development, and now they realized they can start their own development by themselves.

## **Step 2: Capacity Building Stage**

- *Capacity building of local people and village organizations:* Before implementing any development activities in the village, it is important to develop the capacity of the implementing agencies, that is, local people and village organizations. It is necessary to provide not only a series of practical training for them, but also an opportunity for them to implement an actual project, whose scale must be appropriate for their capacity, because they will learn through actual experiences. Since the capacity building of village organizations is an on-going process, it is important to closely monitor the progress of it.
- *Participatory and learning process to plan, implement and evaluate development activities:* The capacity building of local people and village organizations can be achieved if they are actively involved in the whole process of the project planning, implementation, and evaluation. While planning is an important exercise to realize the villagers' dreams, it is also important to make the plan of village development as flexible as possible, because it is difficult to predict everything in the plan and always something unexpected will happen when implementing a plan. Villagers and village organization will learn lessons and develop their capacity through this participatory process of discussing the encountered problems and finding solutions by themselves.
- *Developing the flexible and adaptive capacity to cope with the uncertainty:* The natural condition in the Study Area and most of rural villages in Mozambique can be characterized by erratic rain falls, and under such as an uncertain circumstance, it is important to make living as diverse as possible and a development plan as flexible as possible. There is no one "right" way to develop the community, but the community must be prepared for and adaptive to the changing situations. The "static" plan can be outdated soon and not so useful for the community, but what is necessary is the community's flexible and "dynamic" capacity to respond to the changing situation. So the Study Team emphasized to develop this kind of capacity of the village organizations by encouraging them to solve any unexpected problems by themselves.
- *Capacity building of village organizations is a long-term process:* Although capacity building of village organizations was the main activity in the pilot action plan, 9-month period was found too short to realize any sustainable change in capacity. Even in Japan, the capacity building of organizations takes a long time, and Table 24.1 shows one example from post-war Japanese experience on how women's livelihoods improvement groups gradually develop their capacity

during 10 years. Table 24.2 shows the model process of capacity building of village organizations in Mozambique. Table 24.3 is a sample of the capacity assessment sheet for village organization based on Table 24.2, which can be used by the village organizations, NGO or the donor to assess the capacity of the village organization.

- *Participation from the Bottom vs. from the Top?:* The participation from the bottom is only possible when the grassroots people are already empowered enough to do so. So it is often necessary to approach the local population from the top or from the outside in order to develop their capacity to become more self-reliant. It is important to not naively believe in the bottom-up participation at any time. First think about the capacity of the local population before talking about the participation!

### Step 3: Participatory Planning Stage

- *Selection of the proposals for the pilot action plans through competition:* To encourage the free and fair competition among village organizations, all 21 village organizations in the Study Area were trained how to discuss and prepare the proposal with their members, then the willing village organizations submitted their proposals, and the pilot action plans were selected and decided based on these proposals. This proposal preparation and selection process was conducted two times, first in February to March 2001, and secondly August to September 2001, because only three organizations were selected in the first round, so the Study Team decided to give another opportunity for other organizations to work hard, improve their organizational capacity and try again for the proposal competition.

**Table 24.1 Process of Capacity Development of Rural Women's Groups in Post-War Japan**

Introductory Phase (from 1st to 2nd year)	Learning Phase (from 3rd to 5th year)	Self-Reliance Phase (from 6th to 10th year)
<ul style="list-style-type: none"> <li>● Passive participation in group's meetings because they were requested to participate.</li> <li>● Only few participants speak in the group's meetings.</li> <li>● Rarely practice the techniques or skills learned in the training by themselves, and do not teach them to other people.</li> <li>● Wanting for new and expensive things to show off.</li> <li>● Thinking it impossible to improve livelihood without money.</li> </ul>	<ul style="list-style-type: none"> <li>● Eager to learn the really needed technologies which are appropriate for the members' technical and economic capacity.</li> <li>● Eager to experiment the techniques or skills learned in the training by themselves, and teach them to other people.</li> <li>● Mutual information exchange and learning among the members.</li> <li>● More variety of available technologies for the members.</li> <li>● Understand technologies more deeply and become more confident on them.</li> </ul>	<ul style="list-style-type: none"> <li>● Lively discussion by all members and democratic decision-making with due considerations on the minority opinions.</li> <li>● Fewer gossips and rumors on other people.</li> <li>● Feel free from the social or economic class or status which one belongs to, and express their opinions more confidently.</li> <li>● Make decisions by women themselves.</li> <li>● Discover the group's problems by themselves, and solve them through collaboration among members.</li> <li>● Think of the villagers' collective future, rather than aiming at the member's personal benefits.</li> </ul>

**Table 24.2 Model Process of Capacity Building of Village Organizations**

	<b>Short-term (Low capacity)</b>	<b>Mid-term (Medium capacity)</b>	<b>Long-term (High capacity)</b>
<b>Cooperative Spirits among Members</b>	<ul style="list-style-type: none"> <li>● Little cooperation among the members.</li> <li>● Organizations are broken up by many factions.</li> <li>● A few people are monopolizing important resources of the organization.</li> </ul>	<ul style="list-style-type: none"> <li>● Organizations are broken up by a small number of the factions.</li> <li>● Factions in the organization are competing for leadership and resources.</li> </ul>	<ul style="list-style-type: none"> <li>● A lot of cooperation among the members.</li> <li>● Organization has a common vision and goals shared by all members.</li> </ul>
<b>Leadership</b>	<ul style="list-style-type: none"> <li>● Dominating and dictating leadership.</li> <li>● A small number of people decide without participation of the majority of the members.</li> </ul>	<ul style="list-style-type: none"> <li>● Weak leadership often neglected by the members</li> <li>● Indecisive and inconclusive discussion among the members.</li> </ul>	<ul style="list-style-type: none"> <li>● Strong, democratic and trusted leadership good at making consensus among the members.</li> </ul>
<b>Collective Action</b>	<ul style="list-style-type: none"> <li>● No interest in collective actions among the members.</li> </ul>	<ul style="list-style-type: none"> <li>● Difficult to mobilize the members into collective actions.</li> </ul>	<ul style="list-style-type: none"> <li>● Willing to participate in collective actions.</li> </ul>
<b>Relation with External Organizations</b>	<ul style="list-style-type: none"> <li>● No relation with the government and NGOs.</li> </ul>	<ul style="list-style-type: none"> <li>● Weak relation with the government and NGOs.</li> </ul>	<ul style="list-style-type: none"> <li>● Strong relation with the government and NGOs.</li> </ul>
<b>Mobilization of Local Resources (human, technical, financial, social resources)</b>	<ul style="list-style-type: none"> <li>● Cannot mobilize local resources for the common purpose.</li> </ul>	<ul style="list-style-type: none"> <li>● Can mobilize only a small portion of local resources for the common purpose.</li> </ul>	<ul style="list-style-type: none"> <li>● Can mobilize local resources fully for the common purpose.</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>● No regular meetings.</li> <li>● Many members do not pay the membership fee by due date.</li> <li>● No record keeping of the meetings and financial transactions.</li> <li>● Poor communication among the members.</li> </ul>	<ul style="list-style-type: none"> <li>● Poor record keeping of the meeting and financial transactions, and these records are not open to all members.</li> </ul>	<ul style="list-style-type: none"> <li>● Regular meetings.</li> <li>● Many members pay the membership fee by due date.</li> <li>● Good record keeping of the meetings and financial transactions.</li> <li>● Good communication among the members.</li> </ul>

**Table 24.3 Sample of Capacity Assessment Sheet for Village Organizations**

Question	Answer	
<b>1. Cooperative Spirits among Members</b>		
(1) Is there a lot of cooperation and mutual help among the members?	Yes	No
(2) Is the organization fragmented with the number of the factions?	No	Yes
(3) Are a few people monopolizing the important resources of the group?	No	Yes
(4) Does the group have a common vision and goals shared by all members?	Yes	No
<b>2. Leadership</b>		
(1) Is the leader of your group dominating and dictating?	No	Yes
(2) Do a small number of people decide for the group without any participation of the majority?	No	Yes
(3) Are there many occasions when the leader's opinions are ignored by others?	No	Yes
(4) Are there many occasions when nobody can decide in the group meeting?	No	Yes
(5) Is the leader of your group trusted by many members?	Yes	No
(6) Is the leader good at listening to the members' opinions and making sound consensus among the members?	Yes	No
<b>3. Collective Action</b>		
(1) Are many members interested in working together in the group?	Yes	No
(2) Are many members willing to volunteer their labors and time for the group work?	Yes	No
<b>4. Relation with External Organizations</b>		
(1) Does your group have a strong relationship with the government?	Yes	No
(2) Does your group have a strong relationship with NGO?	Yes	No
<b>5. Mobilization of Local Resources</b>		
(1) Is it easy for your group to mobilize the members' technical skills or expertise for the group purpose?	Yes	No
(2) Is it easy for your group to mobilize the money from the members for the group purpose?	Yes	No
<b>6. Organization</b>		
(1) Is there regular meetings (such as monthly or weekly meetings) in your group?	Yes	No
(2) Are there many members who usually do not pay the membership fee by due date?	No	Yes
(3) Is there the record of the group meetings?	Yes	No
(4) Is there the record of financial transactions by the group?	Yes	No
(5) Is the financial record always explained and open to every member?	Yes	No
Total Number	(Column A)	(Column B)

*Instruction:* Please answer the above 21 questions either by Yes or No, and circle your answer either in column A or B. Then count how many circles you got in Column A. If the number is more than 15, the capacity of your group is evaluated as High. If between 15 and 8, it is Medium, and if less than 8, it is Low.

- *Growth-oriented Approach versus Equity-oriented Approach:* As a result of the above competition-based selection process, the Study Team worked with the better performing village organizations in the Study Area, and tried to develop their capacity further in order to make them the model organizations for other organizations. This strategy can be described as Growth-oriented Approach, which is contrary to Equity-oriented Approach focusing on assisting the poorest population. Comparison between Growth-oriented Approach and Equity-oriented Approach are summarized in Table 24.4. The Study Team adopted Growth-oriented Approach and started the pilot action plans with the selected village organizations, but it is hoped that in future, the village organizations will become more active in many development activities, increase its membership in the village, and try to reach and benefit more disadvantaged people in the village as a part of their development activities.

**Table 24.4 Comparison between Growth-oriented Approach and Equity-oriented Approach**

	<b>Growth-oriented Approach</b>	<b>Equity-oriented Approach</b>
<b>Objective</b>	to work with and develop the capacity of the villagers and the village organizations who are willing to initiate their own actions	to identify and help the most disadvantaged segment of the society, that is, the poorest people such as the elders, female-headed households, the handicapped, and so on
<b>Emphasis</b>	emphasis on self-help	emphasis on welfare
<b>Way of Support</b>	often supporting self-help activities through micro-finance (sometimes mobilizing local funds for development through village banks or saving clubs)	providing food, subsidy, and so on to help the poorest and the hungry (including Food for Work programs)
<b>Impact</b>	Sustainable development, replication to other areas, and less dependency on donors are expected.	Useful for emergency assistance, but cannot be sustained with outside finance. So it is necessary to establish domestic source of fund for this kind of social welfare program.

- *Use of appropriate and affordable technologies:* Since most farmers cannot afford to buy the chemical fertilizers and the pesticides, the pilot action plan demonstrated the natural farming techniques such as organic fertilizers and natural pesticides which use only the locally available resources instead of external inputs. The farmers carefully observed the effects of each techniques, and once they are convinced the effectiveness, they are quick to adopt them. These techniques are also easy for villagers to replicate and maintain, so it can promote self-reliant sustainable development based on the local resources, independent of external resources from donors and NGOs.
- *Local people's view versus scientist's view:* When the agriculture specialists of the government visited the demonstration fields in the Study Area which use low external input agriculture techniques, they often criticized the situation of the fields from the scientific point of view, for example, by saying that the germination rate is low, there are too many pests and diseases in vegetables, and so on. But the important thing is not to look at the situation from the scientist's microscopic eye, but to understand the farmer's perception and enthusiasm on low external input agriculture techniques from the more holistic point of view. Since organic agriculture has just

started in the demonstration field and it emphasizes the importance of making good soils in order to keep crops and vegetables healthy, it will usually take a few years to produce such effective soils. So it is quite premature to judge the effectiveness of organic agriculture techniques at this moment, but what is sure now is the farmer's enthusiasm and willingness to adopt organic agriculture techniques which are affordable for them. They have also started to experiment and innovate new agricultural techniques by themselves, triggered by the effectiveness of these simple low-external-input agriculture techniques.

- *Food security through the diversification of the food production system:* After the food shortage due to the flood in 2000, food security is a priority in the Study Area. The Study Team adopted a strategy to make the food production system more stable and secure by promoting the cultivation of many kinds of crops and fruit trees, keeping a variety of live stocks, and using not only fertile lowlands (mainly for crop and vegetables), but also dry high lands close to their homestead (mainly for fruit trees and livestock). This diversification of the food production system will increase the stock (such as fruit trees and livestock) for farmers and improve the stability of the whole system by minimizing the risk to natural disasters.

#### **Step 4: Implementation Stage**

- *"Think small and start now by yourself.":* It is important not to plan too big projects which the local population cannot implement without assistance from the government, NGO or donor, but to plan small projects which they can start now with their own initiatives. Many rural people in Mozambique have been accustomed to waiting for outside assistance, but often in vain. Development is not something which the government or donors can bring to the local people as a gift, but it is something which must be initiated by the local people with their own needs and ideas.
- *Learn by doing:* Pilot action plans were found as the valuable experiences for the villagers, because they were able to learn by doing, which means, for example, they tried some newly learned low-external-input agriculture techniques in the demonstration field, and only when they evaluated the technique useful, they adopted such techniques in their own field. Sometimes they even improvised the improved techniques based on their own ideas and experiences. The Study Team encouraged farmers' on-farm experiments and comparison between the traditional ways and the new ways.
- *Cost sharing by local people:* When the village organizations were preparing proposals for the pilot action plans, the Study Team emphasized they should only select the projects for which they are willing to share the initial cost as well as the maintaining cost. This condition encouraged the local population to think seriously what they really need and what are their urgent and important needs, rather than requesting for whatever they would like to get as donation from the government or outside donors.

#### **Step 5: Evaluation and Dissemination Stage**

- *Participatory Evaluation:* The Study Team found it very useful to ask the local people to evaluate their own experiences of implementing the village development programs, and identify what they learned and how they changed through these experiences. The local people can present



the results of their self-evaluation to the government and the donors, and this experience will certainly enhance the local people's capacity to communicate and negotiate with external organizations.

- *Collaboration with other donors and NGOs:* Rural development in Mozambique is a big task which one donor or one project cannot cover, so from the beginning, the Study Team adopted an approach to collaborate, exchange information, and share experiences with other donor and NGOs. Donors and NGOs working in the rural areas of Maputo Province are invited to attend at the Steering Committee meetings for the Study, and the final rural development seminar to disseminate the major findings of the study to the wider audience is expected to be held later in 2002.

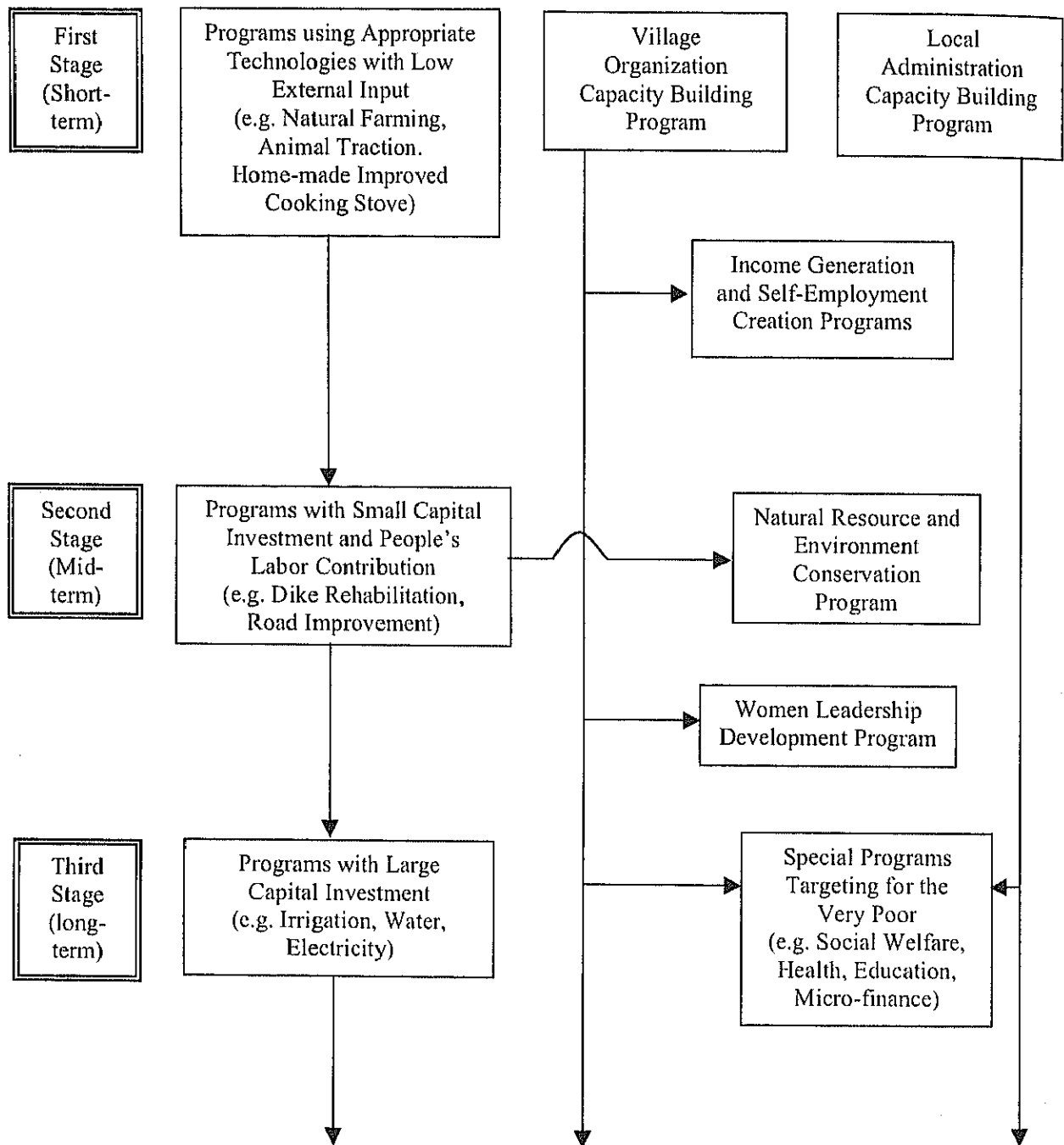
### **24.3 Example of Appropriate Programs for Self-Reliant Village Development**

Based on the experiences of the pilot action plans, the Study Team can propose one example for how to implement the appropriate programs for self-reliant village development as shown in Figure 24.3. While this example might be considered as a typical selection and logical sequence of the action programs from the first stage (the short-term), through the second stage (the mid-term), and to the third stage (the long-term), but it is important to think flexibly according to the local people's needs and capacity.

What kind of the action programs can be implemented during the first stage (the short-term) can be determined using the following criteria which aim at encouraging the small-scale village development projects managed and sustained by the villagers:

- A small-scale project using appropriate technology for local population
- Short-term impacts in the village can be expected within 6 months
- The minimal outside assistance is needed, because it is a self-help community projects.
- Benefiting the disadvantaged people (such as widows, the poor, women, etc.)
- Long-term sustainability due to technical and financial feasibility
- Group members' willingness to participate in this project and share the cost of investment and maintenance
- Managerial and organizational capacity and the quality of leadership of the group

**Figure 24.3 One Example of Appropriate Programs for Self-reliant Village Development**



## **24.4 Possible Funding Mechanism for Village Development: Community Development Revolving Fund**

The Study Team proposed the local community of the Study Area to think the possibility of establishing the Community Development Revolving Fund to finance small scale self-help activities by the poor villagers, and asked the community to discuss, modify if necessary, and design the details of the implementing organization, the operational procedures and the rules and regulations for the Community Development Revolving Fund. If the community is interested in this idea, the community can prepare the counter-proposal, which describes how they are going to establish and manage the Community Development Revolving Fund in details (including the organization for managing the Fund and the various rules and procedures for the Fund operation).

### **(1) Objective to Establish the Community Development Revolving Fund**

To establish a sustainable revolving fund (Community Development Revolving Fund) which funds small-scale self-reliant income generation projects by the community members in Munguine, Pateque and Maluana

### **(2) Possible Sources for the Fund**

- Initial donation from the donor
- Profit sharing collected every month (donation of 10 % of monthly profit from Chicken Raising Program implemented by Association Cubomo and Food Shop Management Program implemented by Association of Ex-Miners)

The Fund money must be deposited in a bank.

### **(3) Proposed Organization to Manage the Fund**

#### **i) Fund Management Committee**

Fund Management Committee should be established in order to manage Community Development Revolving Fund. The number of members of Fund Management Committee will be five to eight persons who must include representatives from Maluana and Pateque. Among the committee members, they will elect Chairperson, Vice Chairperson, Treasurer and Secretary. The term of the committee member will be one year. Fund Management Committee members should not serve more than three terms consecutively, in order to avoid the personal favoritism and corruption.

Fund Management Committee meets every month in order to:

- disburse the credit to the borrowers whose proposals are approved by Supervisory Committee
- review the credit disbursement and repayment situation by checking the accounting book and the money deposited in the bank,
- monitor the borrower's progress in income generation projects and provide advice if necessary, and

- discuss any problem associated with the use and repayment of the credit and take action to solve it.

#### **ii) Supervisory Committee**

Supervisory Committee should be established independently from Loan Management Committee, which means Supervisory Committee must be composed of the members different from those in Loan Management Committee in order to avoid the concentration of the power in a few people. The number of members of Supervisory Committee will be three to four persons who must include representatives from Maluana and Pateque. The term of the committee member will be one year. Supervisory Committee members should not serve more than three terms consecutively, in order to avoid the personal favoritism and corruption.

Supervisory Committee meets when necessary in order to:

- screen the credit application and decide whether the application will be accepted or not,
- supervise the functions of Fund Management Committee, and
- make necessary recommendation for Fund Management Committee when it is not working properly.

#### **iii) External Auditors**

Auditors (one from Munguine, one from Pateque, one from Maluana, and one or two external auditors) will be assigned to review the use of the Fund semi-annually (twice a year). The auditors will have the right to review all the documents and accounting books and interview the Fund Management Committee members and borrowers in order to make sure the correct use of the Fund. NGO or experts from the donor can be asked to serve as external auditors. If any misuse or corruption related with the use of the Fund is found, the auditors can dismiss the responsible Fund Management Committee member and give appropriate penalty to him as well as the borrowers.

#### **(4) Idea for the Target Groups**

Target groups for the Fund are the poor and the disadvantaged villagers in Munguine, Pateque and Maluana such as widows, single mothers, female-heads of the household, etc. The criteria for selecting the borrowers and definition of the poor and the disadvantaged villagers must be discussed and proposed by the Fund Management Committee and agreed by the majority of community members.

#### **(5) Draft Application Form**

The applicant for the micro credit must submit the written Application Form which includes the following information:

- Name of the applicant
- Address of the applicant
- Need of the credit (Purpose to use the credit money)
- Requested amount of the credit
- Planned usage of the credit money (breakdown of the cost for the income generation project)
- Plan (schedule) of the future income and repayment to the Fund

- Past experiences in similar income generation projects
- Way to repay the credit, if the income generation project fails (the form of collateral: guarantee from the relative or the group, or fixed asset such as furniture, etc.)

**(6) Draft Criteria for Screening the Credit Applications**

- *Technical Feasibility:* Is the proposed small-scale self-reliant project using “appropriate technology” which the applicant already knows and affords to use?
- *Financial Feasibility:* Is the short-term financial benefit expected within 6 months? Is the income generation and repayment schedule realistic?
- *Managerial Feasibility:* the managerial capacity of the applicant (applicant’s trustworthiness in the community, the past experiences in similar projects – at least 6-month experience is needed)
- *Long-term Sustainability*
- *Need for Assistance and Expected Impacts:* Is the applicant among the target groups (the poor, women, etc.)? How big are the positive impacts in the applicant’s family as well as the whole community, which will be expected by implementing the proposed income generation project?
- Applicant’s eagerness and commitment to work hard and seriousness to repay the credit
- Viability of the way to repay the credit, if the income generation project fails (the viability of the collateral)

**(7) Draft Terms of Condition for the Credit**

Amount of the credit:	max. 1 million MT per person (for the first timer) (only for the working capital) max. 5 million MT per person (for the non-first timer) (for not only for the working capital, but also for the fixed capital)
Duration of the credit:	max. 6 months (for the first timer) max. 1 year (for the non-first timer)
Suggested interest rate:	commercial interest rate (to cover the administrative cost such as small honorarium for Committee members for responsibility and sustainability)
Possible collateral:	guarantee from five people who can share the debt, if the borrower cannot return it; or some assets (livestock, furniture, etc.) which can be sold in case of default
Purpose of the credit:	The credit must be used for the productive purposes, which means for small-scale self-reliant income generation projects such as agriculture, livestock, food processing, commercial activities, etc. (Note: The credit cannot be used for the consumption purposes such as spending for funerals, ceremonies, buying consumables, etc.)

## 24.5 Internet Resources for Self-Reliant Village Development

The following manuals for participatory methodologies, sustainable agriculture technologies, and appropriate technologies for village development, which were developed by international organizations or NGOs and are available in the internet, were utilized as reference materials for the Study, so they are introduced in this section:

### Manuals for Participatory Tools and Methods for Community Development

(1) *An Introduction to Participatory Techniques* (by Rachel Hinton and David Young, VSO Agricultural and natural Resources Series No. 4)

Available at: <http://www.oneworld.org/vso/pubs/wpapers/prai/intro.htm>

A very simple and basic guide to Participatory Rural Appraisal (PRA) which is developed for British VSO volunteers.

(2) *Embracing Participation in Development: Wisdom from the Field* - Worldwide Experience from CARE's Reproductive Health Programs with a step-by-step field guide to participatory tools and techniques (edited by Meera Kaul Shah, Sarah Degnan Kambou and Barbara Monahan, CARE, Atlanta, USA, 1999)

Available at: <http://www.care.org/programs/health.reproductivehealth.asp>

This book includes a practical and informative section on "A Step-by-Step Guide to Popular PLA Tools and Techniques" by Meera Kaul Shah. All examples are taken from CARE's Reproductive Health programs.

(3) *Empowering Communities: Participatory Techniques for Community-Based Programme Development* (Volume 1: Trainer's Manual and Volume 2: Participant's Handbook) (by Berengere de Negri, Elizabeth Thomas, Aloys Ilinigumugabo, Ityai Muvandi, and Gary Lewis, Centre for African Family Studies, Nairobi, Kenya, 1998)

Available at: <http://pcs.aed.org/empowering.htm>

These two-volume manuals were developed for a two-week course aiming to encourage community participation in health or other related sectors, and include the explanation of participatory learning and action (PLA) tools.

(4) *The Community's Toolbox: The Idea, Methods and Tools for Participatory Assessment, Monitoring and Evaluation in Community Forestry* (by D'Arcy Davis Case, FAO Community Forestry Field Manual No. 2, Forests, FAO, Rome, Italy, 1990)

Available at: <http://www.fao.org/docrep/x5307e/x5307e00.htm>

This FAO's field manual introduces the manual of 23 participatory tools to assess, monitor and evaluate community forestry programs, ranging from group meetings to a participatory video evaluation.

(5) *Field Tools @ Participation Database* (by Informal Working Group on Participatory Approaches and Methods to Support Sustainable Livelihoods and Food Security (IWG-PA), FAO, Rome, Italy)

Available at: [http://www.fao.org/Participation/ft\\_find.jsp](http://www.fao.org/Participation/ft_find.jsp)

This is an internet database on participatory approaches, methods and tools coordinated by FAO, in which any one can contribute new entries. Each method or tool is presented with a description, information on application possibilities and contact links to experts and further information.

(6) *Targeting Tools* (by Client Targeting Centre in the Microfinance Gateway)

Available at: <http://www.microfinancegateway.org/poverty/target.htm>

This home page describes the four important targeting tools to identify the poor in microfinance programs: 1) The Housing Index, 2) Participatory wealth ranking (PWR), 3) The Means Test, and 4) Geographic Targeting. Poverty Assessment Tool is also introduced in this home page.

### **Resources for Appreciative Inquiry**

(7) *Locating the Energy for Change: An Introduction to Appreciative Inquiry* (by Charles Elliott. International Institute for Sustainable Development, Winnipeg, Canada, 1999)

Available at: <http://iisd.ca/ai/locating.htm>

(8) *The Positive Path: Using Appreciative Inquiry in Rural Indian Communities* (by Graham Ashford and Saleela Patkar, International Institute for Sustainable Development, Winnipeg, Canada, 2001)

Available at: <http://www.iisd.org/ai/myrada.htm>

The Study Team tried to emphasize vision planning rather than problem probing in PRA exercise in the Study Area, but due to the short time, it was not materialized well. Appreciative Inquiry introduced in these publications can be a good methodology to facilitate self-reliant community development, because it builds on local strengths, values and visions, rather than finding problems.

### **Resources for Sustainable Livelihoods Approach**

(9) *Sustainable Livelihoods Guidance Sheets* (Department for International Development (DFID), London, UK, 1999-2001)

Available at: [http://www.livelihoods.org/info/info\\_guidancesheets.html](http://www.livelihoods.org/info/info_guidancesheets.html)

Sustainable Livelihoods Approach is now widely used by the university researchers, UK DFID, UNDP and FAO as a comprehensive approach to understand the multi-faced situation of the poor in the broader context. There are numerous resources on Sustainable Livelihoods Approach available in the Livelihoods Connect home page (<http://www.livelihoods.org/>) which is developed and maintained by DFID and Institute of Development Studies (IDS) at University of Sussex, UK.

### **Manuals for Gender Analysis**

(10) *Field Handbook, Intermediate Level Handbook, Macro Level Handbook: Socioeconomic and Gender Analysis Programme, FAO* (Socioeconomic and Gender Analysis Programme (SAEGA), FAO, Rome, Italy, 1998)

Available at: <http://www.fao.org/sd/seaga/>

FAO's Socioeconomic and Gender Analysis Programme (SAEGA) developed three manuals: Field Level Handbook for field workers, Intermediate Handbook for intermediate institutions, and Macro Level Handbook for macro-level policy makers. They provide conceptual frameworks, methods and tools of participatory development planning with emphasis on gender analysis.

### **Manuals for Sustainable Agriculture and Indigenous Knowledge**

(11) *Sustainable Agriculture Extension Manual for Eastern and Southern Africa* (International Institute of Rural Reconstruction, Nairobi, Kenya, 1998)

Available at: <http://www.iirr-africa.org/book.htm>

This manual introduces many low-external-input techniques on agriculture and natural resource management for small farmers in Eastern and Southern Africa.

(12) *Intensifying Crop Production with Conservation Agriculture* (FAO, Rome, Italy)

Available at: [http://www.fao.org/ag/AGS/AGSE/agse\\_e/Main.htm](http://www.fao.org/ag/AGS/AGSE/agse_e/Main.htm)

(13) *Conservation Agriculture: Case studies in Latin America and Africa* (FAO, Rome, Italy, 2001)

Available at: <http://www.fao.org/DOCREP/003/Y1730E/Y1730E00.HTM>

These web sites introduce FAO-promoted Conservation Agriculture, which emphasizes the permanent or semi-permanent soil cover using a living crop or a dead mulch, inter-cropping, crop rotation, animal traction, zero or minimum tillage and direct seeding, most of which were actually introduced in the demonstration fields in the Study Area by the Study Team.

(14) *Recording and Using Indigenous Knowledge: A Manual* (International Institute of Rural Reconstruction (IIRR), Philippines, 1996)

Available at: <http://www.panasia.org.sg/iirr/ikmanual/>

The Study Team tried to revive the traditional knowledge and skills which older generation in the community has. One example is to revive the animal traction skills in the Study Area. This is an excellent manual developed by the Philippine NGO on how to collect, record and use indigenous knowledge which can be a valuable resource for self-reliant community development.

### **Manuals for Rural Water Supply and Sanitation**

(15) *DFID Guidance Manual on Water Supply and Sanitation Programmes* (Department for International Development (DFID), London, UK, 1999)

Available at: <http://www.lboro.ac.uk/orgs/well/resources/books-and-manuals/guidance-manual/guidance-manual.htm>

This is DFID's manual on how to plan, design, monitor and evaluate water supply and sanitation programs, which uses demand-responsive approach for water development.

(16) *Communication in Water Supply and Sanitation Resource Booklet* (by Eirah Gorre-Dale, Dick de Jong and Jack Ling, revised by Peter McIntyre, International Water and Sanitation Centre (IRC), The Netherlands, 1994)

Available at: <http://www.irc.nl/themes/communication/resbook/index.html>

This is a good resource book on hygiene education with emphasis on how to develop a communication strategy which aims at changing people's unhygienic behaviors.