ANNEX G PROJECT CYCLE MANAGEMENT

(PCM)

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G.1 PCM Workshop

The PCM workshop was held at Kibaha by inviting major DOs. The workshop was directed to concentrate on the problem analysis aiming at verifying logical interrelationship of causes of existing problems pertaining ultimately to lower farm income (core problem) of small farmers in Coast Region (target group of the Project). The analytical results were compiled into the form of problem tree. Through the discussion at PCM workshop, insufficient logistic supports were recognized as underlying causes of slow progress in agricultural and rural development. In order to obtain more information, the PCM workshop was again held with the front-line officers, i.e. WEOs and VEOs, who work on interface between the government and the rural communities.

The farm interview survey obtained 500 respondents from representative 25 villages. The survey results revealed the constraints facing the horticultural farming in Coast Region.

The development constraints and needs were identified taking all the results mentioned above into consideration. In order to facilitate the relevant discussion, the development constraints are analyzed on the basis of the cause-effect relationship on the problem tree prepared at the PCM workshop with DOs. The analytical results are spelled out below.

G.2 Problem Trees

The PCM workshop was held by DOs on 25th and 26th November 1999 at Kibaha. RALDO was appointed to be the moderator of the workshop. The list of attendants is presented in Table G.2.1. In order to obtain the most essential information for the project formulation, the workshop was directed to concentrate on problem analysis and selection of development approaches required for the small-scale horticultural development aiming at poverty alleviation.

The problem tree is illustrated in Fig. G.2.1 and summarized below. The attendants identified four (4) direct causes of the core problem. They consist of (i) limited crop production, (ii) low selling prices, (iii) high production cost and (iv) less functioning agricultural projects and social constraints.



The problem tree shows rather general constraints encountered not only in horticultural crop production but also in other cash crop production. Although magnitude of impact to the core problem can not be quantified, the problem tree clearly shows nearly all the problems.

As seen, most of problems are derived from underlying socio-economic causes including unorganized marketing in community and institutional weakness rather than physical factors. Therefore, the following study was directed to reveal the background behind the causes so as to identify solutions more appropriately. The analytical results are mentioned below.

G.3 Low Crop Production

The agronomic constraints facing the farmers in Coast Region are seen in the first branch as presented below.



The first reason of low crop yield is lack of suitable farming technique. Although the training and visit (T&V) extension system is currently carried out under the nation-wide programme, i.e. NAEP II, horticultural crops are less concerned. The number of existing WEOs and VEOs in Coast Region is limited only to 157, which are 33% of their requirement designed under NEAP II. Moreover only five officers are qualified with diploma for horticulture. WEOs and VEOs individually face various technical and institutional problems. In order to identify problems facing WEOs and VEOs, another PCM workshop was held with them. The problem tree prepared with WEOs and VEOs is presented in Fig G.3.1. The majority of the extension

workers pointed out the necessity of skill training for hrticulture. Lack of transportation facility is another constraint to perform the T&V programme. Although they were provided bicycles under NAEP II, most of them are grounded. Further observations will be required to identify the current problems of the extension workers in order to employ their knowledge and experiences effectively for the horticultural development project.

Lack of farm inputs is the biggest agricultural problem identified in the farm interview survey. However, it is not appropriate to exaggerate this constraint as a direct cause of low crop production. Farmers broadly accept application of organic manure such as cow dung and poultry manure although actual application amounts are less than requirement. In Kisarawe, some farmers use bat manure for vegetables. On the other hand, chemical fertilizers are selectively used. Farmers apply them mainly for intensive vegetable production from which high return is expected. On the riverbank of the Ruvu River covered by fertile sediments, vegetables are planted without fertilizers. Farmers carefully use expensive farm inputs taking into account cost implication and expected return from crop production. The agro-ecological conditions in the Region are widely ranged. The constraint in this context is not "lack of farm inputs" but "no standard in farm input application optimizing a cost & revenue balance under each agro-ecological condition".

Limited water resources must be the most crucial constraints in the Region. Vegetables are generally produced on the flat valley bottom with relatively high groundwater table. Farmers obtain water from shallow pits of 1.5 to 2 m deep, which are dug within a short distance from their farm plots, e.g. less than 50 m. Watering directly influences labour consumption depending upon distance and topographic positions of shallow pits. It should be mentioned that over 60% of the total labour inputs for vegetable crop production are allocated to watering. To meet labour shortage, therefore, farmers often hire casual labour.

Farm labour shortage is next crucial issue for the farmers. Women, who provide main manpower for agriculture, are not allowed to concentrate on farming practices due to hard domestic work. Women devote three hours a day for fetching water according to the Farm Interview Survey. Hired labour is also less available in the Region since landless farmers tend to seek job opportunities in Dar es Salaam. Coast Region is located immediately adjacent to Dar es Salaam. Movement of labour power from Coast Region to Dar es Salaam is very common. In general, young people acquire farmland mainly through inheritance. This results in difficulties in mobilizing their life in the rural community until they obtain the land. It is noted that such underlying socio-economic and cultural conditions including gender gaps often hinder their appropriate involvement in agricultural societies for women and youth people. Shortage of farmland was pointed out as one of causes of low crop production. It must be true as far as the crop yield is low. The land rent cost is repayable by a little yield improvement. For instance in Kibaha, the rental fee of lease farmland is about from TShs. 20,000 to TShs. 40,000 per acre per crop season. This means that the land rent cost can be recovered by 250 kg to 500 kg of tomatoes, which are less than 10% of gross revenue per acre of tomatoes. Irresponsible expansion and poor management of farmplots will easily cause soil degradation and erosion even on slight slopes. In this regard, the master plan will pay a special attention to proper soil management and conservation measures for sustainable development.

Post harvest losses are not always observed but occasionally quite significant especially at peak harvesting period. This issue is directly linked with the marketing system rather than crop husbandry system. Therefore, it is discussed in the following section.

G.4 Unorganized Marketing



The 2^{nd} branch on marketing problems is presented below.

The marketing issue is the keenest for farmers. Profitability of horticultural crops is obviously high, but farmers always take risk in marketing due to natures of horticultural crops, especially for perishable and leafy vegetables. The marketing system in the Region has been incidentally developed under the demand-supply balance in the Region. Most of vegetables produced in the Region are domestically consumed. Only the limited surpluses are traded to Dar es Salaam. Moreover, some vegetables consumed in the Region are traded into from Dar es Salaam and Morogoro.

Low selling prices are caused directly by (i) weak bargaining power of farmers, (ii) low quality and (iii) no high value crops. Quality improvement and crop diversification would not be urgent countermeasures and need a long term research programme linked with the extension activities. More efforts are urgently required to improve bargaining power of farmers by any of possible measures. As for vegetables, current production amount in the Region is not competitive to keep a regular trading business with registered middlemen from the public markets in Dar es Salaam. Traders in Dar es Salaam put a priority to large producers in Tanga, Iringa, Morogoro and Arusha. It is highly difficult to squeeze limited amounts of vegetables from the Region to the public markets. As a result of individual trading, farmers face difficulties in price negotiation with middlemen. Since the government marketing policy promotes more liberalization in crop marketing without involvement of the government agencies, current marketing and price mechanism will be continued. The constraints in horticultural marketing in Coast Region are summarized below.

- 1) Vegetable production is at its peak in the dry season throughout the country including Coast Region. Farmers' marketing activities directly encounter low demand and low price setting.
- Farmers have no transportation facilities to ship their produce. Consignment is too limited to hire rent-a-car by individuals. They have to wait for middlemen to come. Bargaining power of farmers is weak under such a situation.
- 3) Purchasing power of street vendors and local traders is too low to absorb all the surplus of vegetables locally produced. There are few processors as well.
- 4) Poor rural road conditions result in limited access to middlemen and crop damages during transport.
- 5) Packing materials are too poor to maintain quality of perishable crops during transporting and loading.

Apart from the local market conditions, the constraints in the public markets in Dar es Salaam should also be taken into consideration. There are 64 public markets under Dar es Salaam City Commissioner (DCC), of which Kariakoo public market is the main purchaser of vegetables and fruits produced in Coast Region. The main problems of Kariakoo and other public markets are summarized below.

- 1) Sever traffic congestion around the markets does not allow smooth flow and reception of consignments.
- 2) Small retailing market spaces can not receive and evacuate produces from every corner of the country.
- Commission agents give more priority to regular customers from the major vegetable zones of the country than seasonal or temporary customers including middlemen and farmers in Coast Region.

G.5 High Production Cost

High production cost was pointed out as one of causes of low profitability. The 3rd branch of the problem tree is illustrated below.



Farm operation cost has to be discussed in comparison with anticipated revenue. Farmers select farm inputs taking into account expected return from crop production. For instance, chemical fertilizers are not used for vegetables produced on the riverbanks along the Ruvu river. Farmers are benefited with reasonable return, i.e. low yield but less expenditure.

Instead of saying "Farm inputs are costly", farmers may face lack of "seed money" to procure farm inputs. If return is high enough, farmers prefer to afford expensive farm inputs. Some NGOs, i.e. Swissaid and CBI, introduced the micro-credit schemes to the selected villages of the Region. The loans are provided also to horticulture farmers, who obtained farm inputs with them. The loan repayment of over 90% proves financial viability in vegetable production.

The constraints are derived also from lack of well-scheduled farming plan optimized through crop budget analysis. Several agro-ecological conditions are recognized within the Region. It is required to reveal the optimum target of horticultural farming suited to the relevant agroecology and assist farmers to set up their optimum farming plan.

G.6 Institutional and Social Constraints

The 4th branch of the problem tree contains various cause-effect relationships as presented below.



The performances of the past agricultural projects in Coast Region have to be carefully assessed with sufficient data and information concerned. Insufficient data and information will lead policy makers and donor agents to wrong conclusions. In case of poor performance, reasons have to be searched and studied in order to mitigate and eliminate the causes and avoid same experience in future projects. Development projects often encounter unforeseeable problems. This is why the project benefit monitoring and evaluation (PBME) is applied to many projects over the world. The PBME is a tool not only for donors but also for project executing bodies. The master plan will recommend the district offices to embark on organizational set up for PBME as one of activities of the Project.

It should be mentioned that the present study faces lack of data and information to grasp the present agricultural conditions and to verify the development constraints and potentials in the

Region. Few data on crop production is available at the district offices. One of DEDs strongly requested the study team to introduce a proper yield survey methodology for crop inspection and statistical analysis. Without the baseline data of current crop production, benefits of any agricultural projects can not be properly evaluated. It is an urgent issue to establish the monitoring and evaluation system of agricultural activities within the district offices. Needless to say, necessary budgetary arrangement is its essential condition.

The problems raised in the workshop imply necessity of further study on organization and management system for development project at all the stage of the project cycle. Although the present study does not aim at assessing the performance of the past and on-going projects, some observations are made on them in order to learn the lessons in these projects and reflect them to the master plan study. For instance, the feeder road maintenance is utmost important in connection with marketing activities of horticultural crops under the Project. The maintenance of feeder roads is currently to be implemented by participation of communities. The system seems less functioning.

The social constraints will be discussed as far as they will adversely affect the Project. Gender imbalance is clear in educational status and allocation of domestic work according to the Farm Interview Survey. Lack of group leaders is also the existing constraints when the group formation will be planned under the Project.

G.7 Region-Specific Constraints

It is important to clarify why the vegetable farming has not been developed in Coast Region even though the Region is located immediately adjacent the large consumer, i.e. Dar es Salaam. Through the PCM workshop and other studies, the following region-specific reasons are identified.

- 1) Hot and humid climate restricts suitable vegetable species
- 2) Low soil fertility apart from the riverbanks, which are seasonally flooded
- 3) Sporadic vegetable production which does not allow to keep regular market business
- 4) Relatively high opportunities for alternative businesses

In this connection, some constraints against community based development are also identified. Swissaid introduced the group formation in two (2) villages in Coast Region. They are Mwendapole in Kibaha and Kisarawe. The performance in Mwendapole is conspicuously good, while one in Kisarawe is still under their expectation. According to their experience in Kisarawe, family-based groups were not stable and collapsed. In addition, the activities easily end if one or two group members have other income sources. In contrast, the groups in Mwendapole are organized under the strict management by the Umbrella leaders.

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Name	Position	Region & District	
Tanzania Side			
A.H. Mwenkalley*	RALDO	Coast Region	
A.B.Mwakalinga	DSMS-Nutrition	Rufiji	
Moshi J.I.	DSMS-Irrigation	Rufiji	
Luaga J.M.	DSMS-Crop	Mkuranga	
Moshy D.P.K.	DALDO	Mkuranga	
D.S. Ndesaiya	DSMS-Crop	Mkuranga	
AS. Losindilo	DSMS-Horticulture	Mkuranga	
A.I. Kassim	Acting DEO	Kisarawe	
A.A. Kaisi	DEO	Rufiji	
H. Mkinga	DSMS-Crop	Rufiji	
W.A. Nguzo	DSMS-Crop	Kisarawe	
Njau Jmu	DSMS-Irrigation	Kisarawe	
S.M. Chambi	DSMS-Crop	Kibaha	
Farida Saleh	DSMS-Irrigation	Kibaha	
E.S. Mwasha	DEO	Kibaha	
JICA Study Team (Observer)			
S. Hirata	Team Leader		
T. Yamazaki	Agricultural Economy/Marketing/Processing		
S. Matushima	Agricultural & Rural Infrastructure		
M.Kouyama**	Extension/Agricultural Support		
M. Nishiya	Farming & Cropping System		
Masaamba Gueye	Environment		
J. Totsukawa	Coodinator		

Table G.2.1	List of Attendants	of PCM	Workshop
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Remarks ; * moderator, ** co-moderator

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Fig. G.2.1 Problem Tree by District Officers (25th and 26th November 1999)



ree Prepared in the PCM Workshop of Extension Officers (1st December 1999)