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資料 1. 要請書

THE TECHNICAL COOPERATION

BY

THE GOVERNMENT OF JAPAN

APPLICATION

BY

THE GOVERNMENT OF THE REPUBLIC OF KENYA

FOR A DEVELOPMENT STUDY

ON

“INTEGRATED RURAL DEVELOPMENT PROJECT IN
BARINGO ASAL AREA”

TO THE GOVERNMENT OF JAPAN

PROJECT DIGEST

A. PROJECT TITLE

INTEGRATED RURAL DEVELOPMENT PROJECT IN BARINGO ASAL
AREA

B. LOCATION

BOTTOM AREA OF THE RIFT VALLEY IN BARINGO DISTRICT, RIFT
VALLEY PROVINCE, THE REPUBLIC OF KENYA

C. EXECUTING AGENCY

i) COORDINATING ORGANIZATIONS:

(i) Rural Planning Department (RPD) of Ministry of Planning and National
Development (MPND) at National level

- (ii) District Planning Unit (DPU)/DDC at District and implementational level
- ii) COLLABORATING ORGANIZATIONS
 - (i) Ministry of Agriculture, Livestock Development and Marketing (MOALD&M);
 - (ii) Ministry of Land Reclamation, Regional and Water Development (MOLRRWD);
 - (iii) Ministry of Public Works and Housing (MOPWH);
 - (iv) Ministry of Research, Technical Training and Technology (MORTTT);
 - (v) Kenya Wildlife Service (KWS); and
 - (vi) NGOs like Care Kenya, Action Aid, Kenya Water for Health Organization, Canadian Hunger Foundation etc.

D BACKGROUND OF THE PROJECT

(1) SECTORAL BACKGROUND

The Arid and Semi-arid Lands (ASAL) of Kenya comprise about 80% of the country's total land surface and carries over 30% of the total human population and more than 50% of livestock. Among 46 districts of the country as of 1992, 24 are classified as ASAL. By definition, the ASAL are hot and dry, having an evapotranspiration (ET) rate which is more than twice the available rainfall. The typical picture is rainfall ranging from 250-1,000 mm and ET of 1,500-2,500 mm per year. The rains mostly concentrate in a short duration with high intensities which result in less infiltration and more run-off.

The ASAL districts in Kenya are classified into four (4) categories depending on the extent of aridity, namely (A) 100% ASAL, (B) 85-100% ASAL, (C) 50-85% ASAL and (D) 30-50% ASAL. Category A districts lie over the northern part of the country and mainly border Somalia, Ethiopia and Sudan. Category B comprises Samburu district and districts in south-eastern part of Kenya. Category C and D districts surround the central/south-west wetter lands and/or face Indian Ocean.

Among the four (4) categories, the category C districts including Baringo, have higher potential for development, carrying over more than 62% of total ASAL population, formulating a transitional area between wetter lands and northern arid areas and having huge markets for their products in urban centres such as Nairobi, Mombasa, Nakuru and Kisumu. → ?

There is a need to improve living conditions of most of the people living in these areas, through increased productivity and creation of employment opportunities. In addition, the increasing problem of soil erosion and environmental degradation, the threat of desertification, and negative consequences of such phenomena are to be addressed. Despite the Government's efforts made to develop the ASAL areas through various activities of the ASAL development in 1980's, numerous constraints still exist. The main constraints to development of ASAL are:

- (a) environmental constraints, resulting from low, erratic and unevenly distributed rainfall, poor soil fertility, pests and diseases;
- (b) resources scarcity as evidenced by low fertility and limited water availability;
- (c) unsuitable technology to exploit ASAL areas, which were developed for wetter areas;
- (d) poorly developed public infrastructure which prevents delivery of output-increasing inputs and marketing of produce; and
- (e) the least developed human resources due to the poor educational services in the ASAL areas.

On the basis of the experiences in ASAL development in the 80's which are called "First Generation", "Second Generation" strategies for ASAL development were spelt out in Sessional Paper No.1 of 1986 and amplified in the 6th National Development Plan (1989-1993) and also in the current National Development Plan (1994-1996). The main objective of the Second Generation ASAL Programme are as follows:

- (a) to develop national capacity for extracting the substantial production potential of ASAL areas, thereby contributing significantly to the national goals of income generation, employment creation and the attainment of food security;
- (b) to reclaim (where damaged) and to protect (where unscathed) the diverse, valuable and yet frequently fragile ecology located in the ASAL areas;
- (c) to create a productive environment with opportunities for improving the quality of life for the present and future generations of ASAL inhabitants on a sustainable basis for both the immediate and distant future.

The Second Generation Strategy and Policy for ASAL programme development places a high priority on environmental rehabilitation and improvement in areas where past development had led to environmental deterioration and where environmental conditions have not been tampered with. In order to implement the stated policies, the major technical components of the strategy would include livestock development (including wildlife), water development, infrastructure, crop development, natural resources reclamation, off-farm employment, enterprise development and health and social services.

ii) THE AREA

Baringo District, is one of the districts in the Rift Valley Province which lies in North Central Kenya, covering an area of about 40,949 sq. km. out of which about 165 sq. km. is surface water. The district's total population is projected at 358,706 by 1996 with an average growth of about 3.1% and an average family size of about five persons. Given the population projection figures for 1996, the density of the district's population is estimated at 45 persons per sq. km. Baringo District has recently been divided into Baringo and Koibatek Districts.

(a) LAND AND SOILS

Baringo District is one of the arid and semi-arid districts in Kenya. It is also important to note that about 45% of the district is either too steep (Tugen Hills) or too dry (eastern parts around Lake Baringo and the north eastern parts (i.e. Nginyang, Northern Kabartonjo) for crop production. The district has different agro-ecological zones - the highlands and the lowlands. The highlands zone is endowed with soils that are generally well drained and

fertile containing the high potential area for agricultural and improved livestock development. Agricultural activities in this zone are combined with elaborate soil conservation measures. The lowlands are in a semi-arid zone with complex soils containing various textures and drainage conditions which have developed alluvial deposits. Some of these are saline. A large area is characterized by shallow stony soils with rock outcrops and lava boulders. This zone is essentially rangeland and apart from scattered isolated pockets of dry subsistence agriculture and small-scale irrigation farming around Marigat, the major socio-economic activities centre around livestock.

Whereas on the highlands many areas can be developed by the introduction of effective and efficient methods of soil conservation and land management, the lowlands lack adequate moisture for crop growth, therefore the development of irrigated cultivation utilizing haphazard rainfalls and introduction of drought resistant crops are the only options for agricultural production.

The ^{dryland} rangelands form 66.8% of the district land mass which is 742,150 hectares. This calls for the need to put scarce water resources under better management and conservation, and efforts should be made to assist individual farmers' groups to make use of their naturally occurring small rainfalls and streams to their productive and domestic uses. Controlled and planned grazing is crucial for the rangeland and introduction of small scale irrigation is an important alternative to rainfed crop production.

(b) WATER RESOURCES

The need for proper water utilization and conservation in Baringo District can not be overemphasized. Baringo being an ASAL district, has the provision of water for human, livestock and even for irrigation ranking very high as a necessary requirement for the general development of the district.

Water resources in the district include Lake Baringo, rivers Kerio, Perkerra and Molo. Water from these sources can be used for irrigation. There is also ample potential of developing surface water for domestic use and livestock watering. This could include development of river run-off intakes and weir dams in the perennial rivers and small streams respectively. While in the seasonal rivers, sub-surface dams and sand filled dams built in the beds may provide the required storage capacity.

Another limited source of water in the district includes ground water, which in most cases has a high fluoride concentration. Despite the fact that the foregoing water sources exist in the district, water shortage is prevalent throughout the district. The most affected areas are the rangelands where families travel long distances in small groups in search of water. The sources of water, as already indicated, are not adequate and there is need to preserve and conserve water sources and catchment areas. Lack of adequate water in the marginal and dry areas, especially during prolonged dry spells, has accelerated loss of livestock in those areas. Most of the water sources in the district are maintained either by Government of Kenya, Community, County Council or NGOs. The utilization of the existing water facilities is very high with a correspondingly high demand, justifying the provision in areas where shortage is most acute.

(c) ECONOMIC ACTIVITIES

Under these physical conditions, the major economic activities pursued in Baringo District are small scale farming, livestock production and pastoralism. Mixed farming, where both livestock keeping and small scale agricultural farming are practiced, is found in the high and medium potential areas of the district in parts of Kabartonjo, Kabarnet and Tenges

Divisions and most of Eldama Ravine Division. In the remaining parts of the district, which are semi-arid especially Nginyang, Tangelbei, Marigat and Mogotio Divisions, pastoralism predominates.

Major crop production output and trends in livestock population in recent years are shown below:

Cash Crop and Food Crops Production Trends 1989, 1990 & 1992

Crop	1989			1991			1992		
	Target (Ha)	Planted (Tons)	Yields (Tons)	Target (Ha)	Planted (Tons)	Yields (Tons)	Target (Ha)	Planted (Ha)	Yield (Tons)
Coffee	7,500	7,773	5,597.0	10,040	5,890	4,066.0	8,575	7,913	4,273.0
Pyrethrum	300	360	205.9	450	-	-	650	500	239.5
Cotton	546	378	506.7	886	768	896.0	1,700	1,010	808.0
Wheat	1,600	1,575	3,695	2,000	559	504.0	610	118	245.1
Maize	17,000	15,290	44,049.0	20,608	134,443	22,764.0	19,300	15,024	29,747.5
Beans	7,500	7,773	5,597.0	10,040	5,890	4,466.0	8,575	7,913	4,273.0
F. Millet	2,000	1,740	1,566.0	2,736	1,585	1,887.0	3,050	2,736	1,220.0
Cassava	217	78	1,000.0	157	108	1,500.0	200	191	2,470.0
I. Potatoes	546	354	3,538.0	886	519	5,989.0	-	-	-

Source: District Agricultural Office Baringo, 1993.

Trends in Livestock Population

Livestock Category	1989	1993
Dairy cattle	81,709	103,660
Beef cattle	202,000	246,100
Goats	700,400	827,900
Sheep	220,000	266,500
Poultry (Exotic)	33,900	27,150
Poultry (Indigenous)	266,100	266,650
Beehives	37,002	63,050
Camels	5,800	8,296
Donkeys	4,300	4,532
Pigs	257	32
Rabbits	700	305

Source: Department of Livestock Production, 1993.

iii) LESSONS LEARNT FROM PAST DEVELOPMENT EFFORTS

The Government of Kenya has made substantial efforts in ASAL development in Baringo district since the "First Generation" stage. During a period from 1978/79 to 1987/88, the Government engaged Baringo Pilot Semi-arid Area Project with IDA assistance (BPSAAP, known as Baringo I), putting an emphasis on establishment of replicable model for ASAL development through a field-tested approach to the rehabilitation and development of the ASAL. After Baringo I, the Government executed the Baringo Semi-arid and Arid Areas Project (BSAAP, known as Baringo II) in a period from 1989/90 to 1993/94, also with IDA's financial assistance. The Baringo II was to overcome the weaknesses of its predecessor project and to extend the field-tested experience and results of Baringo I into a larger scale exercise of development programme.

These projects saw a certain level of achievement and it was learned that through the evaluation of these projects, attention has to be paid to the following points:

- (a) The development of arid and semi-arid areas is a long-term process, which even on a pilot basis, cannot be adequately tackled in a single project intervention. Also, the experiences and knowledge gained from these previous interventions may not be readily replicable to other arid and semi-arid areas of Kenya as the project intended. This is because, often, areas with marginal natural conditions tend to require more location-specific solutions suitable to their own peculiar circumstances.
- (b) It is necessary to appreciate and address the social and cultural implications of a project intervention in order to attract maximum local participation and commitment to the project.
- (c) Including too many components in a single project without a hierarchy of priorities, complicates the organization and implementation of a project.
- (d) For successful implementation, project staff, particularly those in managerial positions, should appreciate the objective of the project and identify themselves with it.
- (e) The Design of the project should recognize the considerable financial constraint faced by most of Kenyan Government organizations and avoid including activities that will for a long time require financial resources from the Government. If such activities must of necessity be included in the project, then an element of cost recovery from the beneficiaries must be included.

E. PROJECT RATIONALE

Based on the past experience discussed in the sections foregoing, it has been fully taken by the Government of Kenya that the development of ASAL areas is a long-term process which requires the integration and coordination of multi-sectoral activities to the ASAL area specific conditions as well as the adaptation of new technologies, bringing together water, livestock, crops, forestry and environmental conservation activities. Before this can be achieved, the institutions involved in ASAL development must be strengthened so as to make them more responsive to the technical and social needs of the inhabitants of these arid lands. Furthermore, this should be accompanied by group development and extension designed to achieve greater participation by the beneficiaries, a closer identification of the needs of target groups and a more effective means of providing an integrated and appropriate range of extension assistance.

For the development of new technology the project recognizes the importance of adaptive research closely linked with demonstrations under an area specific ASAL conditions. It also recognizes that producers' participation is fundamental if the technology so developed is to gain their acceptance, and that not only must producers take part in its design and implementation, but they must also provide regular feedback on its acceptance in the field. By demonstration and subsequent extension the project seeks to integrate a wide range of individual developments.

F. TARGET GROUPS

The Project target group is defined as smallholder farmers operating mainly crop production and mixed farming combining mostly subsistence crop production and livestock production. Special attention shall be paid to improving social and economic status of rural women in the target household. Pastoralists are targeted only where practical arrangements regarding resource utilization and management are gained with target group farmers.

i) INCOMES

The ways in which people earn their living are directly related to the land potential zones and accessibility to income generating opportunities, i.e. land, location of commerce and industry, the development of infrastructure and provision of services.

Although the incomes in the non-agriculture wage sector have been constantly rising since 1990, income for the agriculture and livestock sectors still account for the largest part of the district's total income. These also include earnings from the co-operative sector whose major activities involve marketing of agricultural and livestock produce.

Agricultural activities in the district are generally for subsistence, especially in the marginal dry areas which occupy the largest part of the district. A large share of incomes from this sector is derived from food crops, particularly maize which accounts for over 80% of the total income, as well as cash crops. Consequently, distribution of income is biased towards the high and medium potential areas which are suitable for agricultural activities. These include Tugen Hills, the south western corner of the district and parts of the upper Kerio Valley.

In Nginyang, Tangulbei and in parts of Marigat Division which constitute larger portions of the Project area, the sole source of livelihood for the nomadic people is their livestock and as a result, the incomes from the livestock sector are generally very low in these areas.

ii) WOMEN'S DEVELOPMENT

The principal components of the project are directed to improvements in those aspects of rural life for which women have most, if not exclusive responsibility; the care of health of the family, particularly young children; provision of water for the household; and the production of enough food for the family's subsistence. Unless the resources of women of the community can be harnessed and development channeled through them, project investments will offer a temporary palliative rather than sustainable development. Accordingly, project group promotion, particularly in the areas of village water supply, small-scale irrigation and in economic activities, would primarily be focused on village women's groups.

In Baringo District, women have less access to certain services and resources than men, who are also heads of households. Equitable access to resources and income generating opportunities by women is a necessary condition that must prevail for women to realize their full potential. Although they have some access to informal credit, this is typically restricted to small amounts. Moreover, because of difficulties in obtaining credit from the formal sector, female heads of households in the district are often unable to make use of improved inputs which would enhance productivity. Even in cases where women are aware of the benefits of modern agricultural methods, they may be unable to exploit them.

Women groups in the district have been engaged in development activities right down to the village level. Typical activities include farming, milling maize, processing honey, keeping livestock, making handicrafts, providing water and maintaining rental properties.

Most women groups receive assistance from NGO's, development agencies and voluntary organizations. This assistance is in terms of cash, equipment, training, supplies and technical assistance, but most of the women groups embark on income-generating activities without adequate training, credit facilities, technology or extension services, which leads to their demise.

Women groups in Baringo District experience management problems in running their affairs. These range from lack of trained personnel, transport and storage, to lack of funds, inefficient and ineffective leadership and lack of good marketing outlets.

G. OBJECTIVES OF THE PROJECT

The main objective is to increase the production of improved crops (including forestry) and livestock in the project areas, leading to improved family incomes, better standards of health and nutrition and increased food security for target groups. Through practical trials and demonstrations and a more effective approach to beneficiary involvement, the project aims to improve techniques for water and environmental conservation. It is expected that demonstration farm may also provide an opportunity for self-sustaining input supply, credit and marketing mechanisms in ASAL areas.

In order to achieve the above objectives, the project would specifically focus on the following:

- (a) improving the supply of water in the project area for people, livestock and crops by providing further water points and improving existing methods of water harvesting and conservation,
- (b) supporting and strengthening the adaptive research demonstration and extension of existing and appropriate techniques of water harvesting, crop production, soil, water and environmental conservation and afforestation.
- (c) introducing an effective means of identifying target group needs as a basis for training staff and beneficiaries and encouraging community participation in the development process and fostering community members' social capacity building as well as improving local administration's capacity to identify target groups needs and to deliver goods and services to the target group.

H. PROJECT COMPONENTS

i) Adaptive Research

The project will support a converted adaptive research programme covering crop husbandry, inter-cropping and the inter-relationship of cropping with livestock, soil and water conservation and forestry in ASAL areas. Drought tolerant crops (maize, sorghum, millet) and fodder crops including drought tolerant grasses and trees would be tried. Soil and water conservation methods including traditional methods would also be researched. Research will be orientated towards the principal production systems in the area - hinterland mixed farming, riverine cultivation, rainfed cultivation. Adaptive research will be carried out on existing research stations and sub-stations under Kenya Agricultural Research Institute (KARI) in true ASAL environments.

It is also envisaged to establish and operate Farmers Service Centers annexed to adaptive research stations. This center would consist of a small office and store, and would provide a base for farm, livestock, forestry, water development inputs to be supplied on a commercial basis by a group of farmers identified as interested in this operation, and the income thus generated is expected to support the operating budget resources of adaptive research stations. The center could also act as an assembly point for the marketing of produce or livestock from local groups.

ii) Small-scale Irrigation, Water Harvesting, Flood Recession Irrigation and Soil and Water Conservation:

Improved techniques of water utilization for crop production will be supplied in the project area by means of small-scale irrigation, water harvesting and flood irrigation schemes. The applications will include techniques for improvement of crop, pasture and tree production and these will be demonstrated and extended to farmers through the MOALD&M extension services and group development activities.

In both the small scale irrigation development and soil and water conservation, the beneficiaries would fully participate and aim at building organizational capacity of users for proper management of facilities. The guidelines for such development already established by Irrigation and Drainage Branch (IDB) of MOALD&M would be followed. The guidelines are summarized below.

- (a) Farmers participation: involvement is required during all stages of project development from initiation and planning to implementation so that farmers consider operation and maintenance as their own affair and responsibility. An effective farmers' organization and members' participation are preconditions to the commencement or extension of the irrigation works. Farmers contribute to excavation works of main and secondary canals and drains. A minimum of 40 mandays per beneficiary is usual, based on 1.5 cubic meters volume of earth movement per day. If the required excavation is less than 40 days, the labour is contributed to other works.
- (b) Need for self-reliance: selection of water distribution systems must be based on ease of management of operation and on low maintenance costs. Farmers must contribute to the rehabilitation, extension of schemes in cash for the structures or lining of canals in addition to the excavation of all canals and drains required. In all schemes: farmers must prepare according

to irrigation staff advice, group feeders and their plots for irrigation (basin feeders, basins and all leveling required). Farmers must provide watchmen when required and storage facilities as their basic contribution in the contract between the Water Users Association and MOALD&M.

- (c) A low-key and open-ended approach: learning-by-doing or a phased development approach means that initial targets of a smallholder irrigation project must be modest and in relation to the existing organization and infrastructure.
- (d) Legal provisions: matters to be resolved before starting the implementation of any scheme include land rights (including rights of easement), land use, water distribution, water permits and Water Users Association formation.

Soil and Water conservation activities are required to interact and coordinate with National Water and Soil Conservation Programme operated under MOALD&M

iii) Environmental Conservation (Forestry)

Forestry extension services will be strengthened in the project area with the objective of providing training opportunities to forestry extension officers and increasing contact with and participation of target group communities. Demonstrations of agro-forestry and silvipasture will be integrated with water harvesting methods at the adaptive research station. Assistance will be provided for forestry extension training of district staff, group leaders and individual farmers and for the integration of forestry extension systems within other water harvesting, livestock and crop production messages developed within the project. Support will include specific environmental education programmes for schools, Kenya Wildlife Clubs, youth, women's and other groups in the project area.

iv) Rural Infrastructure

This component includes access improvements and the supply of rural water. The project will support maintenance capacity of MOPWH District Office. Local communities will contribute the labour required for spot improvements and subsequent maintenance. Possible integration into Road 2000 Programme of MOPWH must be looked at.

Rural water will be supplied in the project area both for domestic (drinking water) and livestock use. Water for domestic use will be provided by means of water harvesting techniques and by development of shallow groundwater sources where available.

Support will be provided under the project for the implementation of the water development programme and for mobilization and training of water users groups. It is proposed to support the involvement of local NGOs, with experience of similar water development works in the project area, to mobilize village water committees, involve them in construction of wells and water sources and train users in a range of health and hygiene aspects and operation/maintenance.

I EXPECTED PROJECT BENEFITS

- i) Development promoted under the project would result in additional crop and livestock production from improved crop husbandry, an expanded area of irrigated lands, proper water utilization and conservation and improved water supply. The project would also have a positive environmental impact through strengthening of forestry extension and adaptive research and extension of soil and water conservation technologies. Accessibility to better water supplies is also likely to improve the health status not only of the human population but also of livestock.
- ii) The project is also likely to strengthen the institutional structure of organizations involved in development activities, both formal government institutions and beneficiary/community organizations. At the district and project area level, the project is focused on promoting of group development of beneficiaries and improving local administrations capacity to deliver goods and services to the target groups. Support to participating ministries and agencies (DPU, MPND, MOALD&M, MOLRRWD, MOPWH and NGOs) would ensure that adequate field services would be available for specific target group development. By providing for the participation of headquarters departments in the technical direction, monitoring and support of project initiatives, the project would strengthen the whole DFRD (District Focus on Rural Development) process. In this respect, it would make a significant contribution to the long term national development effort targeted to the poor families and provide a practical and well tested administration mechanism for country-wide application. The community/self-help groups in the project area would be strengthened through training and effective promotion of their participation in all the stages of development. The greatest institutional benefit would be the establishment of a sustainable system with the human resources capable of carrying on targeted development after the project period.

The project as already indicated would pay particular attention to the needs of the women in the project area and specifically to the small farm households headed by women. Women in the project area also likely to benefit from the improved domestic water supplies, the time saved in carrying water and improvements to family health care which may be anticipated from the components would contribute substantially to improving the quality of their lives.

TERMS OF REFERENCE OF THE PROPOSED STUDY

A. RATIONALE OF THE STUDY

As discussed earlier, the envisaged project calls for an integrated approach, bringing together water, livestock, crops, forestry and environmental conservation activities. The project also aims at strengthening of organizations and institutions involved in ASAL development, both in terms of beneficiary group development and improving needs identification and service delivery capacity of formal institutions.

In order for the implementing agency to avail maximum concerted efforts of line ministries and other collaborating organizations, a well thought-out action plan for project implementation must be drafted at the beginning with full participation of beneficiaries and implementors.

B. OBJECTIVE OF THE STUDY

The objective of the study is to formulate a detailed work plan for the implementation of "the Integrated Rural Development Project in Baringo ASAL Area" for RPD of MPND and DPU/DDC Baringo.

It is to be noted that the project components that would be proposed as a result of the study is to be formulated in line with the following considerations:

i) Socio-Economic Development

In view of the Government of Kenya policies which aim at improving the welfare and standard of living of the rural Kenyan through district based development, the project needs to be designed to improve support for on-farm development and for income-generating activities to improve family food security, nutrition and income.

In addressing the parallel problems of poverty, subsistence level farming and lack of safe and adequate water supplies, the project is expected to demonstrate that improved institutional services and additional resources could be targeted to poor people through the District Focus Strategy for Rural Development.

ii) Institutional Development

The project intervention should be designed primarily in such a way as only to support and expand service delivery capacity of relevant institutions more effectively and efficiently on target groups. Where implementation mechanism is already in place and where project components are already within the regular recurrent programmes of the line ministries, the project should as much as possible;

- (a) provide technical and budgetary support to those activities which have clear and specific target group focus, but under severe budgetary constraints; and
- (b) maintain any incremental recurrent expenditure for an activity within an acceptable and sustainable level of the related government offices even at post-project period.

iii) Social Capacity Development

The project, as well as the Study should be designed and implemented in such a way as to encourage group development and participation of beneficiaries, and to pay careful attention to the customary practices and social structure of the community within which the groups are developed. It is expected that through the experience of their participation in the Study and project implementation processes, beneficiaries would be adequately motivated and organized to enable their acceptance and ownership of project activities. This would not only facilitate project sustainability at the community level, but also lend itself a great deal in strengthening beneficiaries' social capacity to manage and exploit their physical and social environment.

iv) Women's Development

As a majority of the workforce in the study area, comprise of women, the project and the study should be designed so as to direct a substantial part of the activities to the improvement of the social and economic status of rural women.

C. STUDY AREA

The study area falls entirely within the semi-arid areas and lies in the low lying Rift Valley approximately below 5,000 feet above sea level, with its western side bordered by Tugen and Ilkarnasha Hills and on the eastern side by Laikipia escarpment and adjoining hills up to the northern district boundary. The southern side is bordered by the catchment boundary of the Lake Baringo.

The project area expressed in terms of agro-ecological zone is indicated in the attached map and geographically it comprises a major part of Mogotio, Marigat, Nginyang and Tangulbei divisions and covers approximately 6,200sq. km. or 59% of the district.

The major urban center is Marigat town with an approximate population of 3,000 (1994).

The Study area is divided into two (2) agro-ecological zones: (a) ranching zone in the central flat plain and (b) livestock and millet zone surrounding the ranching zone and is covered by alluvial valley soil. In the livestock and millet zone, production of livestock, sorghum and millet are dominant. Cultivation of maize, sunflower and marginal cotton is partly found in this agro-ecological zone.

The largest water resource in the Project area is found in Lake Baringo. But due to its special importance, in terms of its environmental and touristic value, substantial attention has to be paid before use for any productive activity is conceived including environmental impact on the lake itself. Other major water resources in the project area are the Perkerra river and the Molo river. The Perkerra river fed by many tributaries flows perennially east-northward from the Lambus forest highland into Lake Baringo. The Molo river is also perennial and drains from the Mau Hill to the Lake. Other rivers are seasonal and flow with great force down the slopes only during the rainy seasons.

Rainfall varies from 500 mm to 700 mm a year. While this level of precipitation is fairly low and can vary considerably from month to month and area to area, total annual rainfall is relatively reliable in comparison with similar areas in other parts of Africa. The constraints on agriculture is less the amount of rainfall than the fact that so little is retained by the degraded range.

D. SCOPE OF THE STUDY

The details of the study items and procedures are described as follows. It is requested that local expertise including NGOs will be utilized as much as possible wherever appropriate and the study shall encourage participation of beneficiary farmers as well as active participation of the government officers.

i) Baseline Survey

Conduct a baseline survey and an analysis of potential and constraints on development with regard to the following items, bearing in mind that the survey should cover both national and study area settings, with particular attention to the latter. These include:

- (a) economic structure and social indexes;
- (b) national development plan and district development plan;
- (c) water resources development and agriculture sector policy framework;
- (d) recent economic performance of agricultural production, including crop production, livestock production and marketing of produce;
- (e) prominent patterns of social organization existing in the rural communities according to the modes of production, typical modes of social and economic hierarchy regulating power over resource and information distribution within communities, important social norms that affect social modes of resource management and utilization;
- (f) natural conditions including meteorology, surface water hydrology, geology and groundwater, topography, soils, land use;
- (g) organizational structure, functions and number and types of personnel of various institutions involved in water resources development and agricultural development, together with budgetary allocations of these organizations in terms of recurrent and development funding and administrative procedures in place for disbursing and implementing routine and developmental activities;
- (h) agricultural institutions including customary and statutory land tenure system, status of land registration and grassland use arrangements related with livestock keeping;
- (i) modes of agricultural production including major crops and their output, representative cropping patterns, cultivation methods practiced;
- (j) modes of livestock production including types and production volume of livestock, animal husbandry, mode of grassland utilization, livestock breeding and sanitation;
- (k) representative farm economy and farm management patterns for different modes of production including those engaged in crop production (rainfed and irrigated), livestock production, combination of both and pastoral mode of livestock production;
- (l) official agriculture support services available (extension, research), availability and utilization of various farm inputs and credit facilities;
- (m) modes, actors and facilities involved in processing of agricultural produce;
- (n) marketing situation of agricultural produce including pricing, collection, transportation, sales system and related facilities;
- (o) environmental situation including land use, water quality, wildlife, deforestation and natural resources management and environmental conservation activities including watershed management, social forestry and afforestation, soil and water conservation;
- (p) farmers' organizations in place including their types, number, functions, modes of operation;
- (q) inventory and institutions involved in management of agriculture related infrastructure in place including public/smallholder irrigation, water harvesting, livestock facilities like water points, dips etc.;

- (r) inventory and institutions involved in management of rural social infrastructure including rural water supply, feeder roads, electrification, telecommunication;
- (s) activity of NGOs in such fields as development of water resources, agriculture and rural community and environment conservation.

The above information should primarily be collected from existing secondary materials, including past study reports, statistics, literature in the related sectors, interviews with key informants at national, provincial and district government levels and donors as well as representatives of private firms and NGOs operating in and around the study area and leaders of farmers' and women's organizations. The study team is expected to conduct an extensive literature survey of the past study and project reports related with ASAL development stored in the Ministry of Land Reclamation, Regional and Water Development.

The above exercise is expected to give evaluation of general potentials and constraints to the development of water resources and smallholder agriculture in the study area and provide further background information on project justification and formulation.

ii) Social Analysis through Participatory Rural Appraisal of Communities

There is need to select the appropriate number of communities representing different modes of production in place in the study area and conduct social analysis of these communities through Participatory Rural Appraisal. The survey is, among others: i) an initial exercise to encourage farmers' participation and involvement in the project planning and implementation process; and ii) intended to obtain detailed and first-hand information and insights on economic status, social organization and norms, physical situations, agricultural exercises practiced in the study area, felt-needs of farmers, physical and human resources available in the communities, constraints to development and readiness of farmers for participation in the development process, all based on information viewed from community members' perspective. Major issues to be covered are as follows:

- (a) physical settings and physical resources available;
- (b) social and institutional arrangements and organizational resources exploitable;
- (c) economic settings and structure (vertical, horizontal and gender-wise);
- (d) agricultural practices exercised on the ground both at household and community level, including role delineation between genders;
- (e) developmental issues in communities and possible measures to address these issues;
- (f) readiness of farmers for participation in the development process.

The survey will be assisted by literature survey to be conducted as part of item i) indicated above, in order to obtain sociological inputs from the anthropological/sociological studies done in the past.

iii) Project Design Workshop

With all the insights obtained through the foregoing analysis and evaluation practices, the study team is to hold a "Project Design Workshop". The Workshop will discuss and identify development issues in the study area, obtain additional information and define goals and objectives, formulate strategies and necessary measures of intervention to address issues brought forward. The workshop is expected to be held first at community, the district and finally national levels.

vi) Production of Project Design Matrix

Considering outputs of the survey and those from the workshops, the study will clarify technical, institutional, organizational and financial requirements and possible input necessary for development of water resources and smallholder agriculture in Baringo ASAL area.

Major fields of intervention may include:

- (a) adaptive research on crop husbandry, soil and water conservation and forestry in ASAL specific conditions;
- (b) small-scale irrigation, water harvesting and flood recession irrigation and soil and water conservation development;
- (c) strengthening of forestry extension services;
- (d) rural infrastructure development including rural access roads and rural water supply both for domestic and livestock purposes;

Considerable attention shall be directed to organizational capacity building of user beneficiaries through effective participation, involvement and training of beneficiary farmers.

The output of analysis will be compiled in the form of a "Project Design Matrix (PDM)" comprising project goals, objectives, expected outputs, necessary activities and inputs each to be verified in the course of monitoring and evaluation by objective indicators with means of verification. PDM will also show pre-conditions, assumptions employed and possible risks expected.

v) Project Design Report

Following the production of PDM, elaborate on organizational arrangements necessary for project implementation, define project benefits and beneficiaries and carry out economic impact analysis of the project.

The final Project Design Report will include the following information:

- (a) project background;
- (b) past and on-going related projects and lessons that can be drawn from them;
- (c) functions and responsibilities of project related institutions;
- (d) project details (rationale, goals, target group, project components, activities and necessary inputs i.e. necessary environmental consideration, project cost and possible financing arrangement);
- (e) project organization and implementing schedule and arrangements including reporting procedures, monitoring and evaluation methodology;
- (f) expected benefits and beneficiaries and projected economic impact at farm household level together with risks reserved; and
- (g) recommendations for implementation.

E. STUDY IMPLEMENTATION SCHEDULE AND REPORTING

The Study is expected to be carried out in eleven (11) months in total, with the following reporting output:

i) Inception Report:

After one (1) month of commencement of the study in the field with detailed study items, methodology, schedule of the study. The report will also describe study teams understanding of the project and to the study area as well as initial findings obtained through baseline survey.

ii) PRA Report:

The report, which will be produced at the end of month three (3) will describe detailed proceedings, results and insights obtained through execution of PRA of communities.

iii) Project Design Workshop Report:

The report contains study findings up to the completion of Project Design workshop in the field. This report will be produced at the end of month six (6).

iv) Project Design Report:

The study team first prepares Project Design Report (Draft), presents it to the Kenyan side for detailed discussion and receive comments on it for finalization. The final Project Design Report will be presented to Government of Kenya at the end of eleven (11) months.

F. PROJECT EXPERTISE INPUT

The following expertise will be required to fulfill the tasks described above. It is suggested to seek as much local expertise as possible where appropriate.

- Team Leader/Institution Analyst/Programme Planner
- Rural Sociologist
- Agronomist
- Hydrologist/Water Resource Assessment Specialist
- ASAL area Irrigation and Water Conservation Specialist
- Rural Infrastructure Engineer (road)
- Rural Infrastructure Engineer (rural water supply/water quality)
- ASAL area Livestock Development Specialist
- Natural Resources Management Specialist (forestry/soil conservation)

Participatory rural appraisal exercises and management of project design workshops could be seconded to local consulting resources under supervision of the study team and with Government of Kenya assistance.

UNDERTAKINGS OF THE GOVERNMENT OF THE REPUBLIC OF KENYA

In order to facilitate a smooth and efficient conduct of the study, the Government of the Republic of Kenya shall take necessary measures:

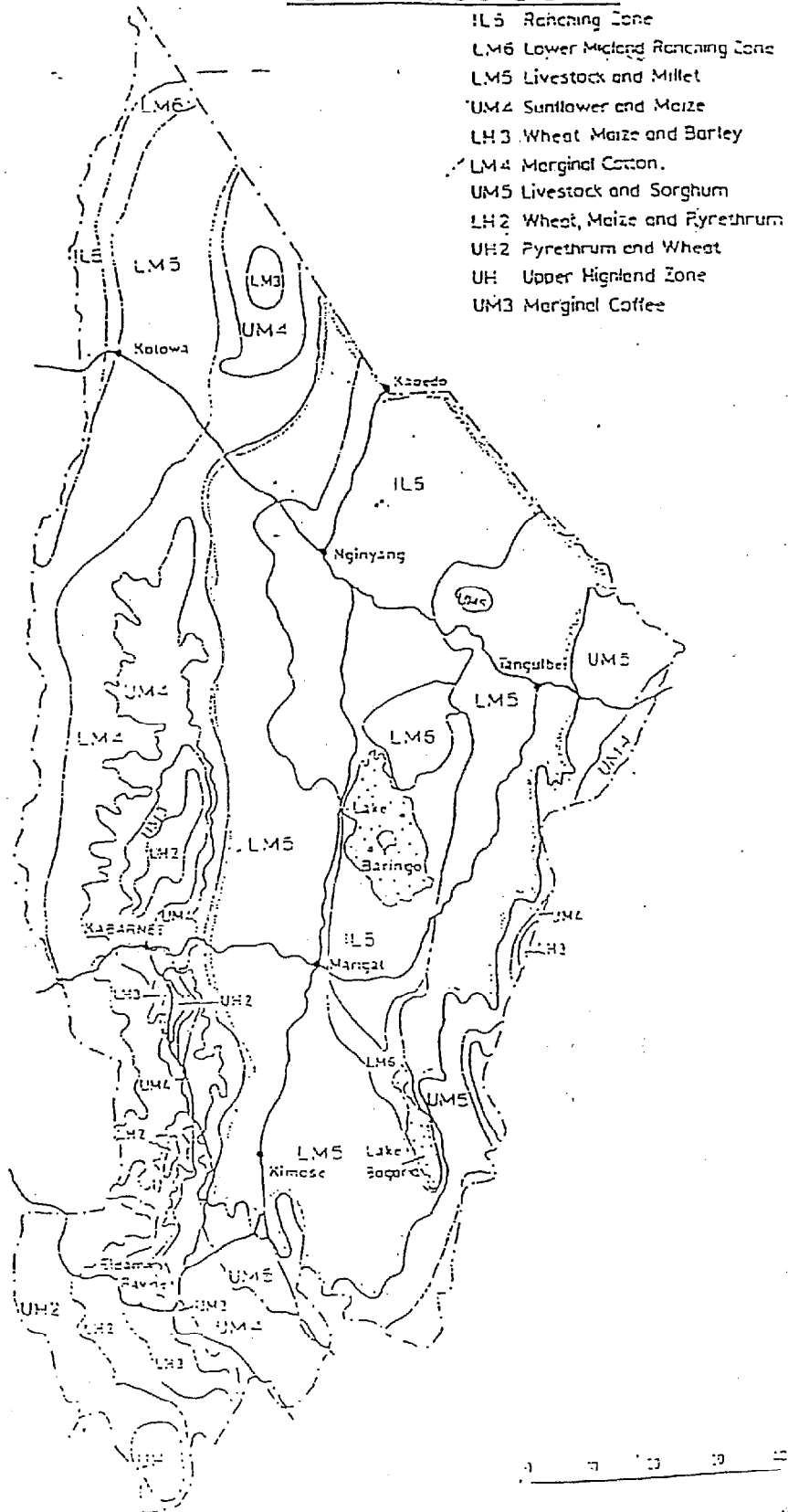
- (a) to secure the safety of the study team.
- (b) to permit the members of the study team to enter, leave and stay in Kenya in connection with their assignment therein and exempt them from foreign registration requirements and consular fees.
- (c) to exempt the study team from taxes, duties and any other charges on equipment, machinery and other materials brought into and out of Kenya for the conduct of the Study.
- (d) to exempt the study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the study team for their services in connection with the implementation of the study.
- (e) to provide the necessary facilities to the study team for remittance as well as utilization of the funds introduced in Kenya from Japan in connection with the implementation of the study.
- (f) to secure permission for entry for the study team into private properties or restricted areas to conduct the study.
- (g) to secure permission for the study team to take all data, documents and necessary materials related to the study out of Kenya to Japan.
- (h) to provide medical services as needed, expenses will be charged to members of the study team.

The Government of the Republic of Kenya shall bear claims, if any arising against a member(s) of the Japanese study team resulting from, occurring in the course of or otherwise connected with the discharge of their duties in the implementation of the study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the study team.

Rural Planning Department, Ministry of Planning and National Development shall act as a counterpart agency to the Japanese study team and also as a coordinating body in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the study.

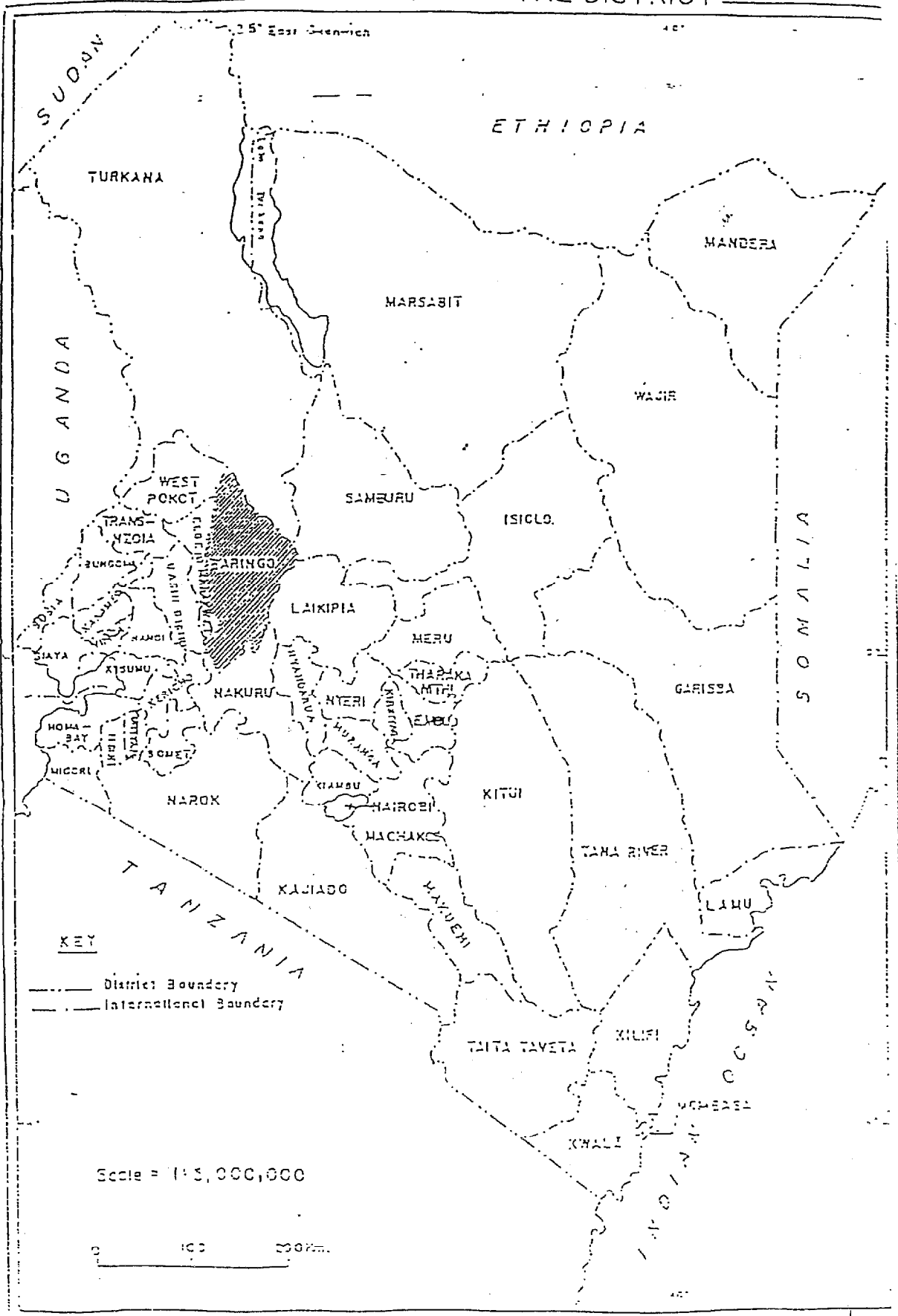
The Government of the Republic of Kenya will ensure that matters referred to in this form will be carried out for the smooth conduct of the Development Study by the Japanese study team.

BARINGO DISTRICT AGRO ECOLOGICAL ZONES



PROJECT AREA : SURROUNDED BY

LOCATION OF THE DISTRICT



PROPOSED STUDY IMPLEMENTATION SCHEDULE

MONTH ITEM	1	2	3	4	5	6	7	8	9	10	11	12
FIELD WORK IN KENYA												
HOME OFFICE WORK												
REPORTING	Inception Report		PRA Report			Project Design Workshop Report			Project Design Report (Draft)			Project Design Report (Final)