New Partnership for Africa's Development (NEPAD)

Comprehensive Africa Agriculture Development Programme (CAADP)

Food and Agriculture Organization of the United Nations

Investment Centre Division

GOVERNMENT OF THE KINGDOM OF LESOTHO

SUPPORT TO NEPAD–CAADP IMPLEMENTATION

TCP/LES/2905 (I)

(NEPAD Ref. 05/18 E)

Volume III of V

BANKABLE INVESTMENT PROJECT PROFILE

Conservation and Land Improvement Project

February 2005

LESOTHO: Support to NEPAD–CAADP Implementation

Volume I: National Medium–Term Investment Programme (NMTIP)

Bankable Investment Project Profiles (BIPPs)

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NEPAD–CAADP BANKABLE INVESTMENT PROJECT PROFILE

Country: Lesotho

Sector of Activities: Soil and Water Conservation

Proposed Project Name: **Conservation and Land Improvement Project**

Project Area: National – 10 Districts: Mohalek's Hoek, Quthing, Mafateng, Qach's Nek, Batha–Bunthe, Mokhotlong, Leribe, Thaba–Teska, Berea and Maseru.

Duration of Project: 5 years

Estimated Cost: Foreign Exchange ..... US$23.5 million
Local Cost ..... US$15.2 million
Total ..... US$38.7 million

Suggested Financing:

Source	***US$ million***	***% of total***
Government	4.8	12.5
Financing institution(s)	31.0	80.0
Beneficiaries	2.9	7.5
Private sector	–	–
Total	***38.7***	***100.0***

LESOTHO:

NEPAD–CAADP Bankable Investment Project Profile

"Conservation and Land Improvement Project"

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Abbreviations

AEZ	Agro Ecological Zone
AgSeSt	Agriculture Sector Strategy
CAADP	Comprehensive Africa Agriculture Development Programme
CBO	Community Based Organisation
DFID	UK Department for International Development
FAO	Food and Agriculture Organization of the United Nations
GA	Grazing Associations
GIS	Geographic Information System
GPS	Global Positioning System
IFAD	International Fund for Agricultural Development
IMSC	Inter Ministerial Steering Committee
MAFS	Ministry of Agriculture and Food Security
M&E	Monitoring and Evaluation
MFLR	Ministry of Forestry and Land Reclamation
MoF	Ministry of Finance
MNR	Ministry of Natural Resources
NES	National Environmental Secretariat
NFAP	National Forestry Action Plan
NGO	Non–Governmental Organisation
PC	Project Coordinator
PCU	Project Coordination Unit
PMC	Project Management Committee
PRA	Participatory Rural Appraisal
RMA	Range Management Areas
SADPMA	Sustainable Agricultural Development Project in the Mountain Areas
SFR	State Forestry Reserve
SPFS	Sustainable Programme of Food Security
SWACAP	Soil and Water Conservation and Agro–forestry Project
TA	Technical Assistance/Assistant
UES	Unified Extension System
VGA	Village Grazing Areas
WAN	Wide Area Network

I. PROJECT BACKGROUND

A. Project Origin

I.1. Projects within the CAADP represent an extension of the *Agriculture Sector Development Programme.* They translate the priority objectives of the *Agriculture Sector Strategy* into activities suitable for financing by external as well as local development partners. The formulation of the strategy was completed in August 2003.

I.2. The present project is proposed in support of the capital investment programme of the *Ministry of Forestry and Land Reclamation* (MFLR) aimed at addressing the critical issue of soil and water conservation in Lesotho. Until late in 2003 the Ministry's mandate was a responsibility area of the *Department of Conservation* in the then *Ministry of Agriculture, Conservation and Land Reclamation*.

I.3. The project is a continuation of soil and water conservation projects being implemented with the capital budget of the ministry. It uses as experiences built up from recently completed projects in the sub–sector fills gaps identified and complements on–going projects carried over from the 1996–2005 *National Forestry Action Plan* (NFAP). It takes into consideration updates to the action plan, and on the policy and strategies being formulated in the area of range management.

I.4. A stakeholders' workshop held in May 2003 has validated the broad objectives of the CAADP projects, while the detailed implementation will commence with consultation at the local level in the form of participatory rural appraisals and socio–economic studies

B. General Information

I.5. Lesotho is a land locked state in Southern Africa and surrounded completely by the Republic of South Africa. It is situated approximately between 28°S and 31°S latitudes and longitude 27°E and 30°E. The land area is about 30,355 km^2. Vegetation is predominantly grassland with less than 1 percent forest cover. The arable land area is about 9 percent of the total area. However, the arable land is susceptible to severe soil erosion.

I.6. The country has over the years experienced severe deterioration of agricultural land due to a set of natural and manmade factors among which may be pointed out: heavy summer rainfalls usually on bare ground following the vegetation less winter months, overgrazing on steep slopes in the mountains and foothills. Soil loss through erosion is currently estimated at about 13.2 tonnes per hectare totalling 40,000 tonnes per annum. This loss of topsoil with its higher organic content is also accompanied by loss of nutrients leading to overall impoverishment of land and reduction in the soil horizon.

I.7. A mid 1980s study indicated that rangelands comprise about 60 percent of the land area. Increase in population and poor land husbandry, unsustainable grazing patterns combine with a communal land tenure system to aggravate the problem of soil erosion and loss of fertility. It is estimated that degraded grassland consists of 12 percent chrysoma and 5 percent shallow rock outcrops and that since the above study degradation is estimated to be increasing at about 2 percent per annum.

I.8. Lesotho is a virtually treeless country with less than 1 percent cover of indigenous forests consisting of patches of evergreen trees and shrubs. Firewood supplies over 64 percent of energy

demand in the rural household economy. The resulting shortage of firewood leads to a majority of the population resorting to the use of animal waste and plant residues as alternatives to fuel wood.

I.9. To date some 10,362 ha of forest — or "woodlots" — have been planted, of which by 1996 6,131 ha were still stocked with trees. The approach of state ownership of forestry is giving way to Social Forestry to permit a greater ownership by communities and to reach the MFLR's vision that ***"By 2020 the forestry sector would have covered 5 percent of the land with forests".***

II. PROJECT AREA

II.1. The project targets all ten districts with strategies suited to the conservation issues of each region. Soil and water conservation measures and range management prioritize the southern districts of Mafeteng, Mohale's Hoek and Quthing which are the driest in the country and have the greatest need for soil and water conservation.

II.2. Soil erosion is a major problem especially in the lowland zones. Lateral expansion of gullies reduces the area of cultivable land while sheet erosion reduced the productivity of land. It is estimates the percentage of arable land suffering from severe erosion varies from 17 percent in Quthing through 46 percent in Mafeteng, to 65 percent in Mohale's Hoek.

II.3. A typical watershed will cover land in the care and use of several villages under different village chiefs thereby presenting a challenge concerning cooperation and collaboration. These catchments have been selected because either they are already severely denudated or present a high risk of imminent degradation. The land and soil characteristics roughly follow the agro–climatic zone within which it falls:

II.4. Forestry components of the project prioritize districts with existing woodlots for rehabilitation and for increasing the area planted to more economically manageable sizes. Over half of the established areas are in Leribe and Maseru in the northern part of the country where for sylvicultural reasons eucalyptus is more predominant as against the pines in the southern districts and cypress in the highlands.

II.5. Gazetted woodlot area is some 12,988 ha out of which 10,362 ha had been established by 1994 some 4,231 ha requires replanting to re–establish the originally planted area.

II.6. ***Agro–ecological Conditions.*** Lesotho is divided into four main *Agro Ecological Zones* (AEZs) as follows: The Lowlands, the Foothills, the Senqu (Orange) Valley and the Mountains: ***The Lowlands*** cover the western part of the country and occupy about 5,200 km^2 which is 17 percent of the total surface area. This region is a narrow strip of land extending at some places just 10 km from the border to 60 km at some places and it which lies between 1,400 m and 1,800 m. The northern and central lowlands are characterized by large deposits of rich volcanic soils, while the southern or lowlands are characterized by poor soils and low rainfall. In general the lowland soils are the duplex type which are prone to erosion, and have poor moisture retention capacity. They are thus liable to rapid loss of fertility.

II.7. ***The Foothills***, on the other hand, consist of very fertile land that is associated with high agricultural productivity. The foothills are defined as the area between the lowlands and the highlands and occupy an estimated area of about 4,600 km^2 which lies between 1,800 m and 2,000 m above sea level and forms 15 percent of the total land area. The foothills enjoy cooler temperatures, making them

suitable for growing fruit trees. They also have a higher rainfall than the lowlands, and springs feed into perennial rivers giving opportunity for simple technologies for irrigation.

II.8. ***The Senqu River valley*** forms a narrow strip of land that flanks the banks of the Senqu River and penetrates deep into the highlands, reaching lower parts of the main tributaries of this river. This region covers 9 percent of the total surface area. The soils of the Senqu River valley vary from rich especially in the alluvial bottom zones, to very poor along the slopes of the valley. Being in the rain shadow of the Drakensberg makes this the most unproductive region in the country.

II.9. ***The Mountains*** constitute the largest ecological area which cover an area of 18,047 km^2. This region has been extensively dissected by the headwaters of the Senqu River and its tributaries which drain in a north–south direction, and, which together with an extensive network of mountain wetlands, today forms an important segment of the Southern African region's water resources. The drainage pattern of the highlands or Mountain region has produced deep river valleys, gorges, and gullies that, in general, make human very life difficult.

II.10. The region forms the main livestock grazing area in the country. Although the soils are much less susceptible to erosion compared with the low lands, inadequate cover teams up with the steep slopes, to create torrential rains that result in massive erosion in this zone. The importance of proper range management can therefore not be overstated.

II.11. ***Potentials and Constraints.*** While erosion is perpetual natural phenomenon that will continue whatever action is taken, its rate in Lesotho has been exacerbated by land pressures and reinforcing cycles of poverty. Past attempts have yielded little in terms of returns due probably to piecemeal approaches and ignoring the role of key stakeholders in practises that require behavioural change.

II.12. Current approaches in programmes being implemented emphasise the systems concept. The *Unified Extension Service* (UES) approach with its participatory learning cycle takes full cognisance of the role beneficiaries and multiple disciplines in problem solving. The policy evolution from the past State (owned) Forestry Resources to social forestry — indeed building in sufficient institutional incentives for communities to desire to undertake conservation services — all these offer an opportunity to counter act past failures associated with low profile given to undertaking these works.

II.13. ***Institutions.*** Soil and water conservation form the primary responsibility of the newly formed MFLR which has four main departments of Soil and Water Conservation, of Forestry, of Range Management and of National Parks. The Ministry works in close collaboration with the *Ministry of Agriculture and Food Security* (MAFS), which in addition to sharing responsibility of the broad agricultural sector, links most directly with crop production in the sense that this takes place in soils that need conservation, and to the livestock sub–sector since extensive production takes place in range lands. While the *Department of Energy* of the *Ministry of Natural Resources* (MNR) has overall responsibility for renewable energy, the sub–sector of bio–mass has been delegated directly to the *Forestry Department* of the ministry. Finally, since conservation works are useless without adequate land use planning, the ministry needs to maintain close liaison with the *Ministry of Local Government* and with the various levels of local government down to the villages.

II.14. A number of other government departments, NGOs and civil society take keen interest in conservation matters. Most importantly the communities that use conservation related resources, livestock owners in the extensive system, the rural households using bio–mass fuel resources, all constitute the primary stakeholders of the conservation sub–sector. Indeed with concerns for climate

changes and with greenhouses gases emission the concern for conservation extends beyond the borders of any one country.

II.15. Given this situation the need for close coordination can never be adequately emphasised.

III. PROJECT RATIONALE

III.1. The *Agricultural Sector Strategy* (AgSeSt) document identifies a major conservation problem as soil erosion in the form of donga formation and washing of top soil, and hence loss of fertility. Soil and water conservation in Lesotho is of primary importance given the highly erodible duplex type soils, the highly erosive rain, and hence the loss of productivity of land resulting from loss of fertile soil and poor moisture absorption and retention of soil with poor cover. The most direct solution to the problem is to construct appropriate structures to control run off and channel water flows to constructive uses, and to improve soil fertility.

III.2. Degradation in rangelands is primarily attributed to weak institutional arrangements and to poor grazing management practices. Addressing the institutional issues needs to be accompanied by the regeneration by means of fallowing, weed removal and in the extreme case re–seeding.

III.3. Tree planting is at once a soil conservation measure and at the same time of direct economic importance as a source of energy. Afforestation strategies include rehabilitation of existing woodlots, improving the institutional management primarily through the transfer of ownership from the state to the communities and finally through intensive education and mobilization of the communities. The NFAP facility will focus on the community mobilization and empowerment issues. The present programme will therefore focus on the rehabilitation and expansion of woodlots.

III.4. Since conservation protects loss of the patrimony of the rural population the project also addresses most directly the national goal of ***poverty reduction*** through maintenance of livelihood assets of these population, and through creation of additional natural resources in the form of recovered land and new forest resources. Most directly, the project addresses the third priority objective of national strategy, namely ***sustainable environmental management and conservation***.

IV. PROJECT OBJECTIVES

IV.1. The project's ***objectives*** are:

- To support sound management and regeneration of rangelands in the project area
- To improve the productivity of cropland and rangeland through rehabilitation and protection from further erosion using physical and biological means as part of the normal farming practice;
- To increase availability and sustainable production and harvesting of wood for fuel, poles and other uses as well as other forest resources, and to reduce use of animal waste as fuel; and
- To promote the development of fruit trees is accordance with the agro–ecological zones.

V. PROJECT DESCRIPTION

Component 1: Range Management

V.1. Out of the total land surface of the country rangelands and gullies occupy over two thirds. As much of soil erosion is caused by overgrazing range management is an important starting point to conservation management. The government's stated policy is to delegate management of grazing areas to communities. The desired outputs of the project under this component are as follows.

V.2. ***Output 1.1: Resource Inventories.*** The basis of adequate planning is up to date information on extent and condition of available resources. To that end the project will undertake the following activities

V.3. ***Activities:***

- Train staff of the Range Management Department and the Districts in the use of a *Geographic Information System* (GIS)
- Procure additional equipment for the GIS in the form of *Global Positioning System* (GPS) ground stations and hand held units as well as satellite imagery
- Undertake field surveys to establish the extent and nature of farmland, and the extent condition, and the productivity of range beginning in areas where *Range Management Areas* (RMAs) are being delineated

V.4. ***Output 1.2.: Range Management Area Delineations.*** In order to establish the rights and obligations of users minimize conflicts grazing rights and implement good grazing management plans, it is necessary to re–constitute the inventory of cattle posts and uses that was vandalized during the political disturbances of 1998.

V.5. ***Activities:***

- Carryout an inventory of cattle posts and users in the project area and input data into the computerised system
- Delineate boundaries of grazing areas
- Determine carrying capacities
- Prepare and in consultation with users and other stakeholders implement re–allocation plans.

V.6. ***Output 1.3.: Grazing Associations Empowered.*** In order to implement the government policy to delegate the management of natural resources to local communities, the project will assist in strengthening the capacity of *Grazing Associations* (GA) to enable them to draw up implement and monitor the grazing management plans:

V.7. ***Activities:***

- Review the legal status and authority of the GAs;
- Assist in installing the institutional infrastructure to enable sound functioning;
- Assist GAs to draw up sustainable grazing management plans for their RMAs;
- Train members of the GA, on running of the associations and livestock herders on management of the range resources.

V.8. ***Output 1.4.: Range Reseeding.*** Especially in the two southern districts of Mafeteng and Mohale's Hoek the rangelands are badly degraded and badly in need of reseeding to regain carrying capacity and improve water resource availability.

V.9. ***Activities.*** The project shall provide assistance to enable government to:

- Institute measures aimed at regeneration of degraded rangelands;
- Identify suitable grass species for re–seeding in the different AEZ in the area;
- Engage communities in the removal of toxic and noxious weeds and the re–seeding a total of 40,000 hectares of rangeland with appropriate drought resistant grasses; and
- Purchase of equipment for rangeland rehabilitation.

<u>Component 2:</u> Implementation of Conservation Measures

V.10. Given the national problem of soil erosion and land degradation land management with regard to overland run–off is of primordial import to agriculture in Lesotho. Most significant it is recognized that piecemeal and localized action to combat soil erosion is treating the symptom rather than the problem. Holistic solutions involve promotion of conservation agriculture and application of physical and biological measures.

V.11. ***Output 2.1.: Conservation Agriculture.*** The project will assist farmers to implement sub–soiling of compacted land, application of lime and manure and other appropriate farming practices, through one time provision of equipment such as chisel ploughs and rippers and earth–working machinery and through promotion of these practices in the form of demonstrations.

V.12. ***Activities:***

- Undertake deep tillage and establishment of rip–lines with application of lime to some 7,000 hectares for willing farmers under a five year credit scheme; and
- Use construction equipment to construct field water control structures and plant appropriate grasses on contour bunds on the fields of willing farmers.

V.13. ***Output 2.2.: Construction of Off–field Water Control Structures in Selected Catchments.*** Beginning in the headwaters of selected catchments the project will assist communities to build off field structures to control water runoff and soil erosion. The project will assist farmers in over 200 catchments of sizes ranging from 200 to 4,000 ha to rehabilitate gullies, degraded pastures and cropland, repair damaged structures, and construct contour bunds, cropping and grassing bunds and stabilized channels. Appendix 2 shows details of catchments in the first year of implementation.

V.14. ***Activities:***

- Collection of stones, and construction of stone lines, silt traps;
- Construction of gully head structures and diversions;
- Procurement of seeds and reseeding badly degraded areas;
- Pitting for and procurement of tree seedlings for tree planting; and
- Training for sustainable management of conservation structures.

<u>Component 3:</u> Development of Forest Resources

V.15. The afforestation component is intended to rectify the damage to existing woodlots caused by drought, fires inadequate management and illegal tree felling in the past, and to increase the planted areas to economically manageable sizes. The resulting resources will provide a livelihood resource and sources of income for the communities, contribute to the protection and rehabilitation of environmental resources of soil water and habitat, and provide an opportunity to establish small scale forest enterprises.

V.16. ***Output 3.1.: Tree Nurseries.*** The project will support the rehabilitation of existing and the establishment of additional tree nurseries in the hands of private owners as well the public ones in order to meet the expected demand during and after the project period. It will promote tree planting to conserve soil, provide firewood and poles and other raw materials for cottage industries outside the main areas of social forests described below

V.17. ***Activities:***

- Assist private nurseries through extension advise and provide market opportunity during the project period.
- Rehabilitate state nurseries to supplement production from the private nurseries.

V.18. ***Output 3.2.: Rehabilitation and Expansion of Woodlots.*** The project shall undertake the re–planting of some 4 231 ha of existing woodlots and enlarge approximately 300 reserves to viable sizes of over 240 ha. This translates to between 2.5 and 5 million seedlings per year to cover between 2,000 and 3,000 ha per annum.

V.19. ***Activities:***

- Procurement of seedlings from state and privately owned nurseries;
- Pitting and planting and replanting;
- Fencing;
- Tending of plantation including weeding protection against fires, thinning and pruning;
- Facilitate the acquisition of title to community and private owners.

V.20. ***Output 3.3.: Training, Research and Extension.*** The project will facilitate research into the growing of suitable new tree species including those suitable for use as fodder. Promote growing of herbs, seeding of indigenous vegetables and other botanical resources. The research will be participatory involving the communities from the on–set. In addition promotion for adoption of the suitable species will include training in sustainable harvesting of forest resources and use of forest in animal grazing. It will train communities and herd boys in sustainable exploitation of forest resources including avoidance of browsing and veldt burning and proper harvesting of wood resources.

V.21. The Extension sub–component will in addition assist farmers with information and skills for maintenance of personal and community forests and with acquisition of ownership rights.

V.22. ***Activities:***

- Undertake research into trees suitable for use as fodder;

- Promote the growing of suitable trees;
- Train extension staff; and
- Train farmers.

<u>Component 4:</u> Construction of Small and Medium Dams

V.23. Irrigable areas adjacent to perennial streams with reliable yields in excess of the irrigation water requirements do not require storage except in the form of night storage to optimise operation of pumps. In other cases however to meet the irrigation requirements during the dry winter season, and in drought years it is necessary to provide some form of water storage.

V.24. In the past government has constructed small and medium capacity reservoirs formed by earthen dams primarily as a means of soil conservation. These have rarely been used for irrigation but mainly for animal watering. Under the project plans for optimal use of these will be formulated and recommended to village of jurisdiction. In addition new dams will be built with the aim of providing for various needs including irrigation, animal watering and low quality domestic uses as appropriate. Thus two sub–components are indicated:

V.25. ***Output 4.1.: Optimisation of the Use of Existing Conservation Reservoirs.*** Villages wishing to use existing reservoirs will be given assistance to quantify the yield of this use, to plan their dry period use to allocate to animal watering, irrigation and other residual uses. Mechanisms for allocating use to single private irrigators should be decided – a national policy is necessary for this – and the community will have a role in administering the result agreement.

V.26. ***Activities:***

- Conduct PRAs in areas requiring resolution of the issues related to small dams; and
- Implement community decisions.

V.27. ***Output 4.2.: Design and Construction of New Dams.*** The project will also construct a number of small and medium dams in selected areas where there is opportunity for multi–purpose uses. These should be subject to detailed socio–economic and environmental evaluation prior to implementation. An estimate 12 such dams of capacity 50 000 cubic meters are to be built under the project in addition to those constructed purely for irrigation under the MAFS.

V.28. ***Activities:***

- Undertake site reconnaissance in collaboration with communities;
- Undertake site investigations and topographic surveys of sites;
- Undertake design and specification of dams and appurtenant works;
- Supervise construction by direct labour and by private contractors;
- Undertake participatory Monitoring and Evaluation of subprojects; and
- Commission and completion.

<u>Component 5:</u> Capacity Building, Research and Extension

V.29. ***Output 5.1.: Training of Sector Staff and Beneficiaries.*** MFLR will train sector staff in implementation of plans and through the unified extension system develop capacity of local population, communities and Community Based Organisations (CBOs) in the development and implementation of comprehensive plans.

V.30. ***Activities:***

- Identify staff training needs for plan implementation;
- Undertake staff training; and
- Undertake training of local communities.

V.31. ***Output 5.2.: Research into Appropriate Conservation Practices.*** Undertake participatory (on farm) research into appropriate conservation and promote recommended practises such as rotational grazing rip–line tillage technology through training.

V.32. ***Activities:***

- Identify conservation practices for more detailed trials; and
- Conduct research into the most appropriate practices including selection of grass and tree species.

V.33. ***Output 5.3.: Equipment and Logistics.*** Provide the districts with critical equipment and logistics to undertake conservation works. Such equipment may include grass seeding spreaders, small earth moving equipment to enhance productivity of labour construction works.

V.34. ***Activities:***

- Identify critical needs for equipment and logistics;
- Specify and procure equipment.

VI. ESTIMATED PROJECT COSTS

VI.1. The estimated cost of the project is given in Table 1 below (fore more detail see Appendix 3). The unit costs are those applied in on–going conservation works funded by the government's consolidated budget as well as cost of similar work in the country.

VI.2. Physical contingencies at this stage have been estimated at 10 percent across the board, while price escalation has been estimated at 3 percent for foreign as well as local costs as stated in US dollar amounts.

Table 1: Estimated Project Cost Summary (US$ million)				
Component	Local Currency	Foreign Currency	Total	% Foreign Currency
Range Management	1,668.6	6,674.3	8,342.9	80%
Conservation Measures	1,514.3	4,542.9	6,057.1	75%
Construction of Dams	432.0	648.0	1,080.0	60%
Forestry Development	8,626.3	5,750.9	14,377.1	40%
Capacity Building	835.7	2,507.1	3,342.9	75%
Total Base Cost	13,076.9	20,123.1	33,200.0	61%
Physical Contingencies	1,307.69	2,012.31	3,320.00	
Price Contingencies	863.07	1,328.13	2,191.20	
Total Project Cost	15,247.6	23,463.6	38,711.2	

VII. PROPOSED SOURCES OF FINANCING

VII.1. The indicative financing plan is shown on the information sheet at the front of this document. The ***Beneficiaries'*** contribution will be in form of labour in respect of in–field work such as planting and maintenance of trees in land with individual right. These costs are estimated at 5 percent of the total costs. As part of the incentive system, it is proposed that for work carried out away from the individual fields the project pay a token wages as is practice in on–going conservation works.

VII.2. ***Government*** will meet part of the local costs of project implementation. These costs will be in the form of overhead costs of staff on the project and those seconded to the project, as well as the running costs incurred in local currency. These costs are estimated at 10 percent of the total costs.

VII.3. The local ***private sector*** has no history of financing projects in the sector which has few tangible financial gains. However, in few cases local enterprises have sponsored youth in projects of tree planting therefore as an innovation especially in forestry, more enterprises will be encouraged to contribute as part of their social responsibility programme to operate twinning arrangement with communities to encourage tree planting. The extent of such contribution at this stage is difficult to estimate.

VII.4. The bulk of financing estimated at 85 percent of project costs will come from external financiers or ***donors***. Traditionally the IFAD among the multi–laterals has financed conservation components of agricultural of projects. Bi–lateral partners such as the UK's *Department for International Development* (DFID) have also financed programmes aimed at improving the sustainable livelihoods of rural populations. Finally, all donors who have contributed to the food–for–work programmes have also indirectly contributed to conservation works and merit consideration for funding related components of this project.

VII.5. The resulting planned sources of finance are as shown in Table 2 below:

Table 2: Sources of Financing		
Source	US$ million	% of total
Government	4.8	12.5
Financial Institutions	31.0	80.0
Beneficiaries	2.9	7.5
Private Sector	–	–
Total	38.7	100

VIII. PROJECT BENEFITS

VIII.1. The principal beneficiaries of the project fall into the following categories: ***Direct beneficiaries*** are those individuals who will receive assistance with the infield operations once–off deep tillage and liming as well as those to be assisted with individual reclamation sub–projects. The rest of residents of the selected catchments of the project area will benefit collectively and mostly indirectly. The ***indirect beneficiaries*** are first the rest of the 336,000 rural households who benefit primarily from improvements in the overall conservation infrastructure to be left by the project. An impersonal beneficiary is the environment due to improved overall management of natural resources!

VIII.2. ***Financial and Economic Benefits.*** Immediate private financial benefits will accrue to beneficiaries of the nursery as well as the fruit trees programmes from the income generated from the sale of tree seedlings and fruit respectively. In the medium and long term the resources of social forests will either substitute purchases of firewood and forest produce such as wood poles, or more directly allow income generation from the sale of these products to surrounding villages, growth centres and urban areas.

VIII.3. Programmes addressing soil fertility will improve land productivity and hence agricultural production in the form of higher yields of crops planted, and high productivity of livestock from the rangelands recovered. More directly conservation itself is **productive** since biological controls also create resources in their own right such as wood for poles and fuel, fodder from planting on grass, pastures when rehabilitated, and regeneration of bio–diversity in new forests.

VIII.4. With good concurrent extension services the beneficiaries could be gradually weaned from extensive production through encouragement of adoption of higher value crops, including fodder, over limited land and improved breeds of livestock for quality in stead of quantity.

VIII.5. ***Institutional Benefits.*** The project complements other interventions in the productive sub–sectors of crops and livestock, and prioritisation of sites and timing of activities should factor in the possible synergies with these projects. This should encourage cooperation of the sector institutions assisting the farmers to work cooperatively in the framework of the unified extension system

VIII.6. From an institutional point of view application of the participatory approach will have the added benefit to the communities in terms of high social capital from the knowledge and information acquired through the project and hopefully high community self esteem essential in dealing with the external world. Again appropriate extension should deliberately build on these resources to sustain the positive side of this social capital.

VIII.7. ***Social and Environmental Benefits.*** Benefits related to improved availability of fuel–wood will most especially benefit the women members of the community who traditionally collect shrub, cow dung and stubble for making fire. In general environmental resources benefit more than the directly involved communities since improved soil fertility should result in general increase in domestic food production. Regeneration of rangelands and creation of new forests will contribute to a large extent in the preservation and increase in bio–diversity. Finally and not insignificantly, increase in the forest population while increasing availability of carbon burnt for fire–making also provide a desirable sink for green–house gases.

IX. IMPLEMENTATION ARRANGEMENTS

IX.1. The implementing agency of the project will be the MFLR. The ministry will implement the project through its normal structures at the headquarters in Maseru, and in the districts down to the resource centres.

IX.2. The primary responsibility for implementation rests with the Principal Secretary MFLR who shall chair an ***Inter–Ministerial Steering Committee*** IMSC composed of representatives of the *Ministry of Finance* (MoF), MAFS, *Ministry of Natural Resources* (MNR) and the *National Environmental Secretariat* (NES). The IMSC shall meet at least once a year to review and approve the Annual Work Plan and Budget and the Audited Accounts and Progress Reports. It shall also convene as required to consider emergent cross–sectoral and policy issues.

IX.3. The *Deputy Principal Secretary* (DPS) shall chair a ***Project Management Committee*** (PMC) consisting of departmental directors of the ministry and District Agricultural Officers of the project areas. The management committee shall meet quarterly to consider the quarterly financial and physical progress report.

IX.4. A core team of three persons at the Headquarters will constitute a ***Project Coordination Unit*** (PCU) in order to assure coordination within the ministry and with agencies outside the Ministry. This will be the *Project Coordinator* (PC), Project Accountant and a *Monitoring and Evaluation* (M&E) Officer. The PC shall liaise with the three departments to ensure the project works are incorporated in the annual work programmes of the departments in the annual planning and budgeting process, in a manner that will permit the targeted rate of execution and funds disbursement. The PCU shall process procurement of goods and services at the national level including recruitment of short and long term Technical Assistance as well as payment and disbursement applications.

IX.5. Day to day implementation shall be the responsibility of the *District Agricultural Officers* in accordance with the UES. The communities and farmer groups in the targeted areas will indicate their requirements for assistance in the framework of the UES, and begin negotiations for funding from the project.

IX.6. When agreement is reached on the scope of work mode of implementation work shall begin. The farmer groups will provide the first line of action in monitoring and evaluation which will be reinforced and consolidated at the resource centre, the district office and finally presented to the ministry.

IX.7. Other stakeholders to be involved in the project will include interested NGOs and CBOs as well a provide consultants and contractors who will be invited to submit bids to execute some of the project activities.

X. TECHNICAL ASSISTANCE (TA) REQUIREMENTS

X.1. The project will require local and foreign technical assistance in the form of individual and firms of consultants, and more importantly local NGOs and community based organizations. Some of the indicative areas are:

X.2. ***External TA.*** According to the AgSeSt, the areas in need of external TA are few since local expertise in these areas is superior. For range management the need has been expressed with regard to

training resources. For forestry, the area of research in appropriate tree species as well as adoption of techniques and practices developed in other countries. Finally for land reclamation training resources and technology transfer concerning techniques with proven success in other countries have been suggested.

X.3. Within the project such TA can be provided in the form of funding of research and training, including study tours to relevant locations, and through short TCDC type assistance of various during to be identified during the final design of the project.

X.4. ***Local TA.*** Local TA will best be provided through out–sourcing research and planning and implementation activities to local service providers in appropriate activities. This will be in the form of short term contracts.

XI. ISSUES AND PROPOSED ACTIONS

XI.1. ***Level of Preparation.*** The principal issue at the present stage is the level of preparation of the project. More detailed work is required to define the scope of work in terms of priority locations from which applications for assistance will be invited. With this definition project costs will be refined.

XI.2. ***Prioritisation and Access Criteria.*** Following this a more refined definition of the project will be possible but may need an injection of funds to facilitate the MFLR to complete project preparation.

XI.3. ***Other Technical Issues.*** At the time of preparation of the present profile, the NFAP was under review, the current version being in its ninth and final year. The project should maintain sufficient flexibility to accommodate areas of concern that may arise out of the updating of the NFAP.

XI.4. ***Financial and Economic Issues.*** In general returns to conservation efforts are not immediately available to farmers. In addition the benefits often accrue well beyond the point where efforts are applied. As a result past projects have indicated that poor farmers have little motivation to invest their time and other resources to these undertakings.

XI.5. There is therefore a strong case for providing incentives for undertaking this work. In the case of social forestry it is imperative that assistance is provided to individuals and communities to acquire ownership rights. This applies equally to title to reclaimed land. At another level it is advisable to provide some form of payment for labour input into land reclamation work in the form of food for work or as determined through participatory appraisal.

XI.6. The use of subsidies as incentives is often controversial. The Focused Evaluation Mission report on the *Soil and Water Conservation and Agro–forestry Project* (SWACAP) is at pains to point that the two are not synonymous and that subsidies are only sustainable implementation of incentives *"if production increases from conservation are delayed for some time, due to the nature of the activity, and farmers have no means to bear the loss incurred over this period. In such a case, the subsidy should be categorically related to losses incurred and phased out over time in proportion to production increase/decrease in losses".*

XI.7. At another level the lessons from this project suggest the need to carry out financial analysis of various interventions pointing out that had this been done the gully rehabilitation would not have been carried out in the form that it was carried out.

XI.8. ***Institutional Issues.*** The successful operation of the various conservation measures is premised on the local governments taking full charge of these. The present preparation of the project is taking place ahead of the proposed Local Government election due to take place before the end of 2004. The need to incorporate the local structure in the implementation of the project implies the necessity for flexibility first, to give the new structures a proper orientation in due time and secondly, to facilitate these to play their part in the implementation and subsequent operation of the project.

XI.9. In transferring control to the communities there is often a tendency to completely forget the role of legacy central government institutions, which hold the collective memory of operations and can often make useful constructive suggestions to improve implementation. It is imperative therefore that the transfer of responsibilities should be a well negotiated process.

XI.10. ***Gender and HIV/AIDS Mainstreaming.*** While Lesotho has a well established tradition of women taking part and often leading implementation of conservation works, care should be taken to incorporate the concerns of women and children in these works which require human muscle power often in unfavourable terrain.

XI.11. In addition, local HIV/AIDS support groups should be actively involved in all participatory planning exercises in order to incorporate the needs of the affected families the infected persons, as well as to incorporate means of reducing the spread of the pandemic through social contacts facilitated by the implementation of project works.

XII. POSSIBLE RISKS

XII.1. ***Planning function at MFLR.*** Since separating from MAFS, MFLR does not have a department dedicated to planning and project implementation. Thus these functions continue to be executed within the technical departments concerned. This situation could delay completion of project preparation and if continued also delay implementation.

XII.2. ***Lessons from completed and on–going projects.*** Lessons from completed and on–going projects provide indications as to which areas need careful focus. Probably the largest on–going project in the agricultural sector is the *Sustainable Agricultural Development Project in the Mountain Areas* (SADPMA). It has been characterised by slow implementation and latest missions show that major implementation constraints exist. A detailed *Risk Analysis and Mitigation Plan* should be undertaken prior to finalization of project preparation.

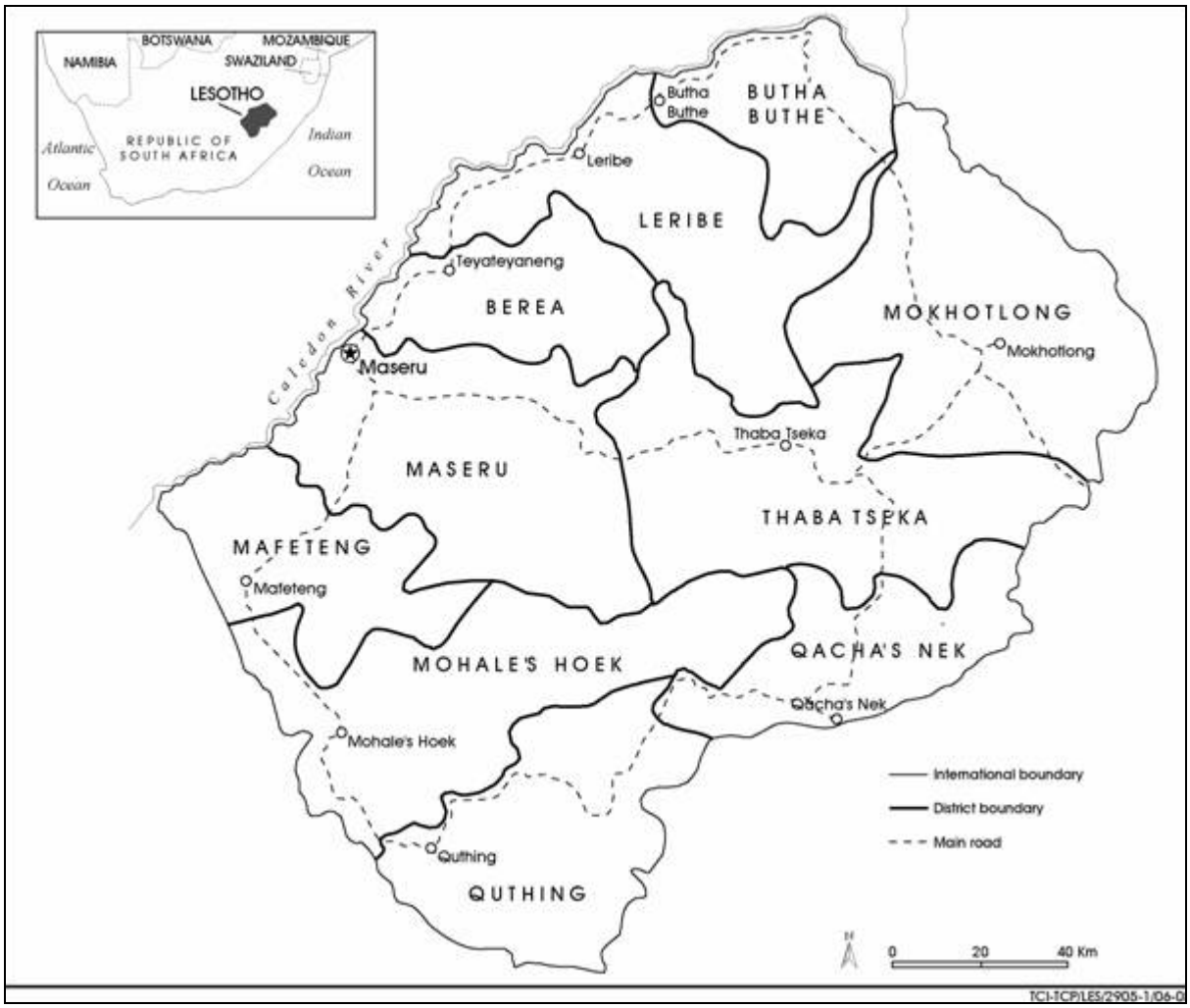
XII.3. SWACAP also elaborated on such major constraints during its implementation as less than ideal cooperation between the parent agency and donors poor reporting poor farmer adoption of rip–line technologies, to mention but a few. Lessons from this project need to be built into the implementation design. Some of these lessons are:

- ***Client demand–based strategies often run a risk of turning out to be supply driven.*** The FEM points that resource poor farmers are less likely to visit resource centres to identify suitable technologies than their progressive counter parts. Consequently extension staff needs to continue to initiate contact with farmers with the purpose to stimulate demand

for recommended packages and technology. The implementing agencies should seek to understand the real needs of the beneficiaries.

- ***There is a need for systematic tripartite consultation between donors, the implementing agencies and the beneficiaries.*** Pressure from donors and government for accelerated implementation should be balance by diagnostic studies of real client needs and demands. During implementation that should be continuous feedback from the beneficiaries.

Appendix 1: Map of Lesotho



Appendix 2: List of Catchments in the First Year of the Programme (2006/2007)

District	Catchment	Constituency	Estimated Cost (Maloti)	Area (ha)
MOHALE'S HOEK	Thaba–Tsqeke	Mpharane	353,867	4,375
	Khomong	Hloahloeng	114,508	1,446
QUTHING	Qomo–Qomong	Moyeni	553,226	2,577
	Pontseng	Sebapala	376,936	1,000
MAFETENG	Ha–Majake	Kolo	239,801	2,254
	Tajane	Maliepetsane	426,253	4,136
	Lengolo	Thabana–Morena	277,743	1,914
QACH'S NEK	Tebellong	Lebakeng	676,707	2,903
BUTHA–BUTHE	Moteng	Motete	317,918	938
	Hololo	Hololo	908,130	2,500
MOKHOTLONG	Libibing	Bobatsi	318,647	3,125
LERIBE	Mathokoane	Tsikoane	415,927	3,125
	Mohobollo	Mohobollo	602,771	2,188
THABA–TSEKA	Methalaneng	Semena	349,393	5,408
BEREA	Maqotoane	Mosalemane	233,762	550
	Tsimatsi/Malimong	Mahlatsa	664,198	2,201
MASERU	Matukeng	Qeme	385,887	3,438
	Rankhelpe	Rothe	446,724	3,656
	Kena	Makhaleng	256,751	2,391
	Ha–Khoabane	Thaba–Bosiu	189,034	1,491
Total			8,108,183	51,616

Dam Name and Location	District	Estimated Capacity (m^3)
Basieng (Qomoqomong)	QUTHING	10,000
Mekaling (Nkhetheleng)	MOHAL'S HOEK	20,000
Lits'oeneng	MAFETENG	20,000
Maboeane	BEREA	10,000
Pilot Area	BEREA	30,000
Lesala	MASERU	20,000
Chopho	MOKHOTLONG	30,000
Likhutlong	BOTHA–BOTHE	50,000
Mamohau Missionary	LERIBE	50,000

Appendix 3: Detailed Project Cost Estimate

Output/Input and Activity	Quantity	Unit	Unit Cost	Total (Maloti)	US$'000
Range Management				58,400,000	8,342.9
Range Resources Inventories		*LS*		*8,400,000*	*1,200.0*
GIS Training					
GPS Equipment					
Field Surveys					
RMA Delineations		*LS*		*12,600,000*	*1,800.0*
Review of legal status of Gas					
Demarcation of RMAs and registration of societies					
Grazing Management plans					
Training					
Range Re-seeding				*37,400,000*	*5,342.9*
Identify areas for re-seeding					
Procure seeds and fertilizer	40,000	ha	935	37,400,000	
Removal of weeds and reseeding					
Equipment					
Conservation Measures				42,400,000	6,057.1
Conservation Farming				*7,400,000*	*1,057.1*
On farm research and soil testing		LS		50,000	
Hire of chisel ploughs, rippers etc	7,000	ha	800	5,600,000	
Organic fertilizers etc.	7,000	ha	250	1,750,000	
Infield water control structures					
Contour rehabilitation and grassing					
Off farm structures					
Stone lines	*100*	*site*	*350,000*	*35,000,000*	*5,000.0*
Silt traps					
Tree pitting and planting					
Range re-seeding					
Construction of Dams				7,560,000	1,080.0
Optimization of Existing Reservoirs		*LS*		*1,260,000*	*180.0*
Earth Dams Construction: 12 x 50,000 m^3	*600,000*	*m^3*	*10.5*	*6,300,000*	*900.0*
Forestry Development				100,640,000	14,377.1
Nursery Establishment				*25,200,000*	*3,600.0*
Promotion of Social Forestry	*15,000*	*ha*		*40,030,000*	*5,718.6*
Fruit Trees				*31,910,000*	*4,558.6*
Forestry Research		*LS*		*3,500,000*	*500.0*
Capacity Building				23,400,000	3,342.9
Training of Staff and Farmers		*LS*		*10,000,000*	*1,428.6*
Research into Appropriate Conservation Practice		*LS*		*1,400,000*	*200.0*
Coordination and Logistics		*LS*		*12,000,000*	*1,714.3*
Total Base Cost				232,400,000	33,200.0

Exchange rate: 1 US$ = 7 Lesotho Maloti.