



**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 REPUBLIC OF SOUTH AFRICA**

### **SUPPORT TO NEPAD–CAADP IMPLEMENTATION**

**TCP/SAF/3002 (I)  
(NEPAD Ref. 07/50 E)**

**Volume III of V**

### **BANKABLE INVESTMENT PROJECT PROFILE**

**Sustainable Natural Resources Management  
and Use Options to Improve Livelihoods**

*July 2007*

## **SOUTH AFRICA: Support to NEPAD–CAADP Implementation**

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

*Bankable Investment Project Profiles (BIPPs)*

**Volume II: Woodlands and Forest Resources for Improving Livelihoods and Income Generation**

**Volume III: Sustainable Natural Resources Management and Use Options to Improve Livelihoods**

**Volume IV: Biofuels (Bioethanol and Biodiesel) Crop Production: Technology Options for Increased Production, Commercialisation and Marketing**

**Volume V: Livestock Development: Increasing Productivity, Commercialisation and Marketing**

## NEPAD–CAADP Bankable Investment Project Profile

**Country:** South Africa

**Sector of Activities:** Agriculture and Natural Resources

**Proposed Project Name:** Sustainable Natural Resources Management and Use Options to Improve Livelihoods

**Project Area:** National

**Duration of Project:** 2 years

**Estimated Cost:** US\$456.3 million

**Suggested Financing:**

<i>Source</i>	<i>US\$ million</i>	<i>% of total</i>
<i>Government</i>	456.3	100
<i>Financing institution(s)</i>	—	—
<i>Private sector</i>	—	—
<i>Beneficiaries</i>	—	—
<i>Total</i>	<i>456.3</i>	<i>100</i>

**SOUTH AFRICA:**  
**NEPAD–CAADP Bankable Investment Project Profile**  
*“Sustainable Natural Resources Management  
and Use Options to Improve Livelihoods”*

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### **Currency Equivalents**

(September 2006)

Local Currency	=	ZAR (Rand)
US\$1.00	=	R7.48
R1.00	=	US\$0.13

### **Abbreviations**

DWAF	Department of Water Affairs and Forestry
DoA	Department of Agriculture
DAC	Department of Arts and Culture
CAADP	Comprehensive Africa Agriculture Development Programme
DEAT	Department of Environment and Tourism
EPWP	Expanded public work Programme
MTEF	Medium Term Expenditure Framework
NEPAD	New Partnership for Africa’s Development
SLM	Sustainable Land Management

## **I. PROJECT BACKGROUND**

### **A. Project Origin**

I.1. The project on Natural Resources Management and Sustainable Livelihood is a project component of the environmental and cultural sector of the nationwide' Expanded Public Works Programme (EPWP) that has been initiated by the Government of South Africa in 2000. The EPWP aims to draw large numbers of unemployed into the labour sector of the economy, gaining skills while they work and increasing their capacity to earn income. The objectives of the EPWP programs within this environmental and cultural sector are to achieve the immediate social benefits of the overall EPWP, while at the same time generating outputs in the fields of environment, heritage, biodiversity and land care. The Department of Environmental Affairs and Tourism (DEAT) has been nominated to lead the environmental and cultural sector.

I.2. The sector consists of the following departments:

- Department of Environmental Affairs and Tourism (DEAT);
- Department of Water Affairs and Forestry (DWAF);
- Department of Arts and Culture (DAC); and
- Department of Agriculture and Land Affairs (DoA).

I.3. The programmes of these departments collectively support the creation of land-based livelihoods and community-based natural resource management. The overall objective of the environmental and cultural sector is to build South Africa's natural and cultural heritage, and in utilizing this heritage, to create both immediate and long-term jobs and social benefits. The departments aim to achieve this objective by working with communities, building on their historical custodianship of these resources and locating projects within a broader sustainable development strategy.

### **B. General Information**

I.4. Most rural households in South Africa are subsistence farmers living in poor agricultural land and they are reliant on natural resources for survival. These rural households generally have small landholdings, insecure tenure, little or no financial capital and poor access to markets, infrastructure (e.g. roads, health services) and employment opportunities. These suggest that for many people living in rural areas, natural resources are their most accessible source of food, water, energy, shelter and income and, if they are not sustainably managed, the food security and nutritional status of the majority of the rural poor are at risk. This is mainly because the productive capacity of the resource base will decline in both quality and quantity. In this context, they would no longer provide enough food, clean drinking water or a source of income for them.

I.5. A number of factors, among which is, population pressure, deforestation, reduced fallows, overgrazing and climatic stress contribute to processes of resource degradation. Women and indigenous people are particularly affected because they may be landless and rely on common property resources or may not have secure rights, limiting their access to and control over productive resources. Situations of scarcity, declining livelihood security and limited ownership and access also, in some cases, contribute to conflict over natural resources thus further exacerbating problems of degradation. In most cases, poverty, food insecurity and natural resource degradation are closely linked and interdependent. The connecting elements common to all the three problem areas are people.

People have knowledge of sustainable resource management practices, including techniques to preserve soil and diverse varieties of local plants to minimize their risks. It is important to note that individual and community participation of these communities is thus crucial to solving problems of resource degradation.

I.6. Severe drought in South Africa has affected the macro-economic growth by decreasing the agricultural output as well as the livelihoods of especially the poorer sections of the population living in rural areas. The human, economic and environmental costs caused by disasters however, have not been estimated due to the complexity of the problem. Disasters such as veld fires, seasonal flooding and accidents are mainly localized. The White Paper on Disaster Management for South Africa envisages that disasters that are predicted in the future relate to current trends of rapid urbanization. The risk factors underlying a disaster occurrence have become increasingly inter-linked. For instance, declining livelihood opportunities in rural areas are associated with urban migration. The result is rapid growth of under-serviced settlements close to industrial or manufacturing areas, which increases the potential for human death and injury in the event of an industrial accident. The disaster "trigger" may be the industrial accident, but the overcrowding and poor living conditions in the settlement nearby place many more at risk, and may result in a much bigger and more serious disaster. There are also several factors related to development such as population growth which may increase the pressure for residential, agricultural, commercial and industrial development are also likely to increase the risk of future disaster occurrences. Consequently, marginal or "at risk" areas such as arid zones and flood plains may end up being occupied. It is important to emphasize that degraded natural resources increase a community's vulnerability to the effects of a natural hazard. The degree to which drought, flooding and landslides affect communities greatly depends on the state of the land.

I.7. The challenge for the government is therefore to minimize the risk to these environmentally vulnerable areas. The immediate national objective of poverty reduction, land reform, housing, employment creation and service expansion offer cost-effective opportunities to integrate risk reduction with development initiatives. South Africa has developed a two-pronged approach to manage disasters:

- A significantly strengthened capacity to track, collate, monitor and disseminate information on phenomena and activities known to trigger disaster events, such as droughts, floods, epidemics and fire. This needs to be supported by institutional emergency preparedness and response capacity primarily by the government at local, provincial and national levels.
- An increased commitment to prevention and mitigation actions that will reduce the probability and severity of disaster events. These actions should be incorporated into existing and future policies, plans and projects of national, provincial and local government, as well as policies and practices of the private sector.

I.8. NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) document argues that nutrient depletion is common in Africa and represents a significant loss of natural capital valued at an estimated US\$1 to 3 billion per year. It further states that if most of the 70 million smallholder families in Sub-Saharan Africa fail to adopt sustainable integrated soil fertility and land and water management practices on their farms within the next decade, they will seriously jeopardize their long-term food security, productivity and incomes while environmental degradation will increase. South Africa recognizes that there is a need to invest in sustainable natural resource management and livelihood, if it is to succeed in eradicating poverty and addressing problems of the second economy.

I.9. The environmental and cultural sector programmes reflect the commonalities of the mandates of the departments, NEPAD’s CAADP, the Constitution of South Africa and the general objectives of chapter 10 of the United Nations’ Sustainable Development Agenda, entitled Integrated Approach to the Planning and Management of Land Resources which provides a framework for sustainable utilization and management of natural resources. The programmes of the four departments go a step further to provide a framework for the integrated approach to achieving job creation, community participation, indigenous knowledge utilization and sustainable natural resource management. The four government departments that have been involved, to a greater or lesser extent, in programmes that collectively support the creation of land-based livelihoods and community-based natural resource management have the following functions:

- Department of Environmental Affairs and Tourism (DEAT) deals with tourism infrastructure and product development, environmental conservation, waste management and coast care;
- Department of Water Affairs and Forestry (DWAf) with the following programmes working for water, working on fire and working for wetlands deals with functions such as removal of invasive alien plants, rehabilitation of wetlands and veld and forest fire management;
- Department of Arts and Culture (DAC) has the following functions craft production, community arts and music, cultural infrastructure and tourism and heritage development; and
- Department of Agriculture (DoA), which has the following departmental functions through the Landcare Programme and the special programme for food security, deals issues of addressing the degradation of natural resources and improving the socio-economic status of rural communities and addressing household food security.

I.10. The expenditure for the Departments in the Environmental & Cultural Sector is as follows over the MTEF cycle i.e. 2004/5 to 2006/7:

Years	NDA	DEAT	DWAf	DAC	Total
2004/5	R 60 m	R 350.5 m	R 370 m	R 75 m	R 855.5
2005/6	R 64 m	R 369.1 m	R 391 m	R 83 m	R 907.1
2006/7	R 68 m	R 388.6 m	R 413 m	R 91 m	R 960.6

Source: Environment and culture sector plan.

I.11. The breakdown of the projected expenditure, employment and training figures over the 3-year period is as follows:

Programmes	Allocation	Jobs	Person-Years	Training Days
Sustainable Land Based Livelihoods	R1,649.5m	145,252	72,626	1,597,768
Working for the Coast	R119.2m	17,740	8,870	195,136
People and Parks	R254.1m	9,391	4,696	103,303
Working for Tourism	R627.5m	20,452	10,226	224,968
Working on Waste	R72.9m	8,869	4,435	97,651
<b>Total</b>	<b>R2,723.2m</b>	<b>201,703</b>	<b>100,852</b>	<b>2,218,735</b>

Source: Environment and culture sector plan.



## II. PROJECT AREA

II.1. Most of South Africa receives an irregular rainfall and a relatively dry climate. Much of the cropland and grazing land has deteriorated as a result of the influences of soil erosion, overgrazing, salinity, bush encroachment, alien plants and the prevailing socio-economic issues. This problem affects many households through the economy; through the environment; through poverty in South African communities and eventually it affect the quality of life of many households. The Department of Agriculture, since 1998, is promoting sustainable land management practices that would reverse natural resource degradation in the country's nine provinces. The Programme follows an integrated ecosystems approach including water harvesting and Veldcare. These projects are multi-disciplinary with partners drawn from the community itself, lead farmers, agricultural extensions and researchers, economists, engineers; marketing and financial services; and the private, mechanization and manufacturing sectors. The success of these projects, dictated by the adoption of best practice technologies and project ownership by the communities, are firmly seated in a participatory approach.

II.2. The project will identify within each province, areas which have the greatest potential to increase the productive potential of natural resources and ecosystem integrity as well as provide economic returns to land users through review of agro ecological conditions taking into account plausible scenarios of climate change, institutional capacity, market conditions and competing land use options including alternative livelihoods. The area that will be targeted will have the following conditions.

II.3. **Land degradation:** Land is a principal livelihood asset and the principal form of natural capital from which people maintain a living and produce food. Overexploitation of natural resources and the application of inadequate practices (mainly inappropriate soil tillage and preparation) for the management of soils cause a rapid physical, chemical and biological deterioration of the soils, with detrimental effects on both food production and the environment.

II.4. **Water scarcity:** Insufficient water and poor soil quality are key constraints to production in marginal areas. Where irrigation is not available, agriculture depends on rainfall (rain fed agriculture) and is therefore susceptible to variations in rainfall.

II.5. **Forests:** Generally it is the poorest and most disempowered members of a community, with the least agricultural land, livestock and labour, who derive the greater share of their overall needs from forest products and related activities. Yet, the woodlands resources are disappearing at an unknown rate. Population growth, deforestation and overgrazing are amongst others, the major threats to these resources.

II.6. **Poor quality species:** Farmers on marginal lands are often unable to invest in higher-yielding species and are compelled to use sub-optimal varieties. Attempts at introducing improved varieties have not always been successful because increased production is equated with increased income. However, the income effect of increased production may be dampened when (i) access to markets is limited; or (ii) increased production is not matched by an equal increase in demand. This can lead to a decrease in price and thereby income.

II.7. **Inefficient crop management:** Crop management practices are often inefficient, requiring high levels of labour input for low outputs. As a result, production is insufficient to meet people's needs and farmers have little time for other productive activities. Attempts at increasing agricultural productivity have often focused on innovations for large-scale agriculture (e.g. tractorization) and therefore have not been appropriate to the smaller-scale farmers in marginal areas. Lack of access to

information, technologies and financial resources, or inability to take risks associated with adopting new practices also restricts adoption.

II.8. ***Access to and control over natural resources and heavy workloads for women:*** Women in rural areas rely heavily on natural resources such as land, water and forests to meet their daily household needs such as food, water, fuel and medicinal plants. In some cases they are disadvantaged because their access to these resources is limited. Added to this, HIV/AIDS has an impact on families particularly with respect loss of income. Resource management practices that rely on strong property rights are severely strained in areas affected by HIV/AIDS, often leaving women with reduced abilities to farm lands that have in the past been under their management. In some cases women lose all access to their productive base

II.9. ***Loss of biodiversity:*** The loss of biodiversity undermines people’s livelihoods by decreasing supply of products from local varieties (reducing cropping options) and causing a loss of local knowledge and increased risk to natural and human-induced disasters.

II.10. ***Effects of natural hazards:*** Marginal, low-potential areas are more vulnerable to the long-term effects of natural disasters lands because they are fragile, degraded and have poor infrastructure. Unsustainable natural resource management practices increases vulnerability and significantly affects the magnitude of a disaster. In rural areas, natural hazards almost always result in the immediate loss of assets i.e. agricultural production, animal life and stored seeds, and in the increased degradation of agricultural and pastoral land, in addition to human illness, injury and loss of life. This project recognize that degraded natural resources exacerbate the impacts of natural hazards on communities; at the same time, natural hazards degrade natural resources. The project calls for strategies that advocate sound natural resource management practices and mitigating measures. Natural Resource Management practices that may mitigate the effects of natural hazards are:

- Prevention of soil erosion through the preservation of agricultural lands (e.g. water diversion measures, increasing soil fertility);
- Diversification of planting techniques and patterns to increase vegetative cover
- (e.g. intercropping, crop rotation);
- Implementation of water conservation measures (e.g. water storage structures,
- Reforestation of catchment areas); and
- Construction of water control structures (e.g. irrigation systems, embankments).

### III. PROJECT RATIONALE

III.1. Unfavourable agro-ecological conditions, poor quality seeds and inefficient natural resource management practices constrain production in rural areas of South Africa. The low agricultural production levels with high cost of labour and fertilizer inputs, shortage of fuelwood and other non-wood forest products on which many rural households depend on for their survival and over reliance on high-inputs species poses major challenges to the economy. The majority of South African lives in rural areas and are dependent on natural resources for their livelihoods however land degradation is costing millions of Rand each year in lost production alone. If treatment of degraded land and nutrient loss, research and other costs related to pollution and the silting of our waterways are included, the costs add up to several billion Rand a year. Inefficient agricultural practices also mean that agricultural production absorbs an important proportion of labour time, thus leaving little opportunity for

livelihood diversification. By increasing the productivity and/or efficiency of natural resource management, staple and cash crop production can be increased and the livelihoods, including food security of the rural poor, can be improved.

III.2. The project fits within pillar 1, 3 and 5 of CAADP and covers important components of the GEF strategic Investment Programme for Sustainable Land Management (SIP).

#### IV. PROJECT OBJECTIVES

IV.1. The overall objective of the project is conservation of the natural resources (soil, water and vegetation) through sustainable utilization and the creation of a conservation ethic through education and awareness while at the same time seeking to address rural poverty by means of sustainable job creation. Specific objectives are:

- To strengthen the livelihoods of people dependent on degraded natural resources by introducing more sustainable natural resource management practices and/or help them diversify into other activities.
- To create and diversify sources of income for the poorest.
- To help people who live in areas prone to natural disasters (e.g. floods and droughts) plan, respond to and mitigate the impacts of natural disasters.
- To form self-sufficient and income generating programs (such as SMMEs)

#### V. PROJECT DESCRIPTION

V.1. The project will run for two years and would comprise five components, as follows:

Main component	Activity
<b>1. Strengthening livelihoods by increasing the productivity of natural resource management</b>	
1.1 Water conservation measures	<ul style="list-style-type: none"> <li>• Water harvesting/ storage.</li> <li>• Irrigation systems. Through the construction of appropriate dikes, gabions or embankments, water can be channelled to agricultural lands.</li> <li>• Reforestation of catchment areas. Increased vegetation in water catchment areas increases the water absorption in times of rain</li> <li>• Maintenance of stream flow and reduction of flow variability;</li> <li>• Conservation and sustainable management of wetlands, lakes and river valleys, including investment in forestry to protect and improve forest cover whilst creating associated revenue stream for local people</li> </ul>
1.2 Improving management practices	<ul style="list-style-type: none"> <li>• Integrated pest management reduces pest-induced losses and increases the sustainability of farming systems. It relies primarily on environmentally benign processes and thus increases ecological sustainability</li> <li>• More efficient production practices where simple machinery can reduce labour time required for certain tasks is needed. Similarly, practices such as conservation tillage reduce labour time required for soil preparation.</li> </ul>
1.3 Improving species	<ul style="list-style-type: none"> <li>• Planting fast-growing and resistant species. Yields can be increased through introduction of locally appropriate fast-growing species that are resistant to pests and droughts.</li> <li>• Advocating for research on improved species of staple crops</li> </ul>

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Main component	Activity
<b>2.Supporting on the ground activities for scaling up sustainable land management</b>	
2.1. Identification of best entry points for scaling up SLM to achieve ecosystem integrity	<ul style="list-style-type: none"> <li>• Identify geographical areas which have the greatest potential for swift and effective up-scaling of sustainable land management to increase ecosystem integrity and provide sustainable economic returns to land users, through a review of agro-ecological conditions taking into account plausible scenarios of climate change, institutional capacity, market conditions and competing land use options alternative livelihood.</li> <li>• Assess existing and potential new technologies to identify those which should be promoted for scaling up in specific agro-ecological and socio-economic settings considering financial returns to land users as well as economic value of ecosystem services provided by the SLM practice in various geographic zones.</li> <li>• Explore options to promote complementary alternative non –natural resource based livelihood strategies in areas where land pressure or other ecological constraints hinder SLM adoption.</li> </ul>
2.2. Capacity building for farmers, forest users rural community members to support integrated approaches to natural resource management	<ul style="list-style-type: none"> <li>• Development skills to promote farmer driven innovation and adoption, including provision of a set of SLM technologies and practices (including those based on traditional best practices and knowledge) that farmers can test as individuals or groups, generating and managing (adapting) knowledge, while at the same address long-term issues of soil erosion and soil fertility and generate global environment benefits within the context of sustainable development.</li> <li>• Support for increased community awareness of land degradation and desertification issues and of the cost effective mitigation measure that they can undertake to address these issues, while creating associated revenue stream for local people.</li> <li>• Training in other methodologies (such as farmer field school) that support SLM through farmer-driven innovation experimentation and adoption;</li> <li>• Expert services and training of farmers to support on farm trials and participatory SLM technology development;</li> <li>• Promoting gender sensitization and training in gender oriented field methodologies in the implementation of SLM projects;</li> <li>• Strengthening the capacity of farming communities (including youth and women) for building and bridging social capital and implementing CDD activities while participating in ecosystem /natural resource planning (and leading to increased community capacity to negotiate access to basic social services and education;</li> <li>• Work with commercial farmers and out grower schemes to identify barriers to SLM and build capacity to overcome these.</li> <li>• Capacity building on land management and land use (for production).</li> </ul>
2.3 Soil conservation measures	<ul style="list-style-type: none"> <li>• Terracing Creation of flat –land steps on hillsides to prevent erosion of fertile soil and retain water.</li> <li>• Land levelling of slightly to moderately hilly agricultural areas. This decreases the effort required for ploughing, increases the area potentially viable for agriculture, prevents soil erosion and retains water.</li> <li>• Reforestation with regionally appropriate tree species. Planting of locally adapted tree species contributes to maintaining and restoring soil fertility and increasing water absorption.</li> <li>• Green manure and composting. Layering of non-decomposed vegetative material on topsoil increases soil fertility. Composting involves mixing a variety of organic materials away from the planting land, with the idea of future incorporation.</li> <li>• Locally adapted ploughing techniques. Depending on the climatic zone and land contour, flat-land ploughing, contour ploughing or other techniques may be appropriate.</li> <li>• Intercropping. Through planting complementary crops in one field, the productivity increases along with the soil fertility. Examples are beans and maize, tomatoes and some squash varieties.</li> <li>• Live-barrier creation. The planting of tall trees around agricultural land can decrease the damage from high winds. Also, planting of some varieties of flowers and plants can decrease attacks from ground-vector insects</li> </ul>

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Main component	Activity
2.3 Soil conservation measures <i>(cont.)</i>	<ul style="list-style-type: none"> <li>• Agro-forestry. Cultivation of trees is a low-cost means of protecting land and increasing its productivity. Trees require lower labour inputs than other crops and provide benefits including shade for crops and animals, protection from wind and water erosion and enriched soil through leaf manure and nitrogen fixation.</li> <li>• Conservation tillage. Involves minimizing soil tillage and leaving crop residues on the surface. Reduces soil erosion and increases water infiltration.</li> </ul>
<b>3. Improving women's access to and control over natural resources and activity benefits</b>	
3.1 Introduce labour-saving technologies for women	<ul style="list-style-type: none"> <li>• Promote labour-saving technologies for agricultural production, e.g. crop diversification techniques, no tillage cropping, etc.).</li> <li>• Promote labour-saving technologies regarding women's natural resource management responsibilities, e.g. structures to increase access to water, fuel-efficient stoves to reduce use of wood, technologies for transportation of forest products (wheelbarrows, pull-carts).</li> <li>• Promote food processing implements (e.g. simple hand grinders, fast dryers).</li> <li>• Introduce wells, cisterns and pumps for water collection and storage; establish fuelwood plantations or plant woodlots and trees for fuelwood close to women's homes.</li> </ul>
3.2 Institute training programmes for women	<ul style="list-style-type: none"> <li>• Support training for women to upgrade skills, literacy, leadership and self-confidence.</li> <li>• Support training to increase skills for men on gender awareness.</li> </ul>
3.3 Capacity-building for counterparts (government and NGOs)	<ul style="list-style-type: none"> <li>• Conduct training workshops with counterparts to introduce gender perspective in natural resource management and livelihood activities</li> <li>• Promote female extension staff in counterpart organizations.</li> </ul>
3.4 Advocacy	<ul style="list-style-type: none"> <li>• Promote the review of national and local policies related to women's land ownership with the participation of government, United Nations, NGOs, community-based organizations, women's groups and associations, etc.</li> <li>• Advocacy with counterparts to increase women's ownership, access to and control of assets created and to ensure equity in project's benefits.</li> </ul>
<b>4. Strengthening livelihoods through the conservation of biological diversity</b>	
4.1 Promote techniques and technologies to enable communities to protect local biodiversity	<ul style="list-style-type: none"> <li>• Establish fruit-tree or agro-forestry tree nurseries to grow threatened species.</li> <li>• Introduce <i>in situ</i> conservation of species, by provision of food to allow allocation of portion of land for the preservation of local varieties.</li> <li>• Adopt closure for natural regeneration techniques when feasible, including promotion of fences and live fences to allow natural regeneration.</li> <li>• Introduce seed multiplication programmes to increase local seed supplies and multiply selected varieties.</li> <li>• Maintain seed supplies through the construction of local seed stores, seed banks, grain banks or warehouses.</li> </ul>
4.2 Provide incentives and other measures to promote the cultivation of local varieties and minor crops	<ul style="list-style-type: none"> <li>• Promote traditional, low-input agricultural technologies.</li> <li>• Preserve natural habitat along streams, steep slopes and ecologically sensitive areas.</li> <li>• Support restocking and replanting of forest areas with indigenous species.</li> <li>• Promote farm trees for fuel consumption, home gardens etc. to avoid over-cutting and a reduction in biodiversity.</li> </ul>
4.3 Promote the use of alternatives to pesticides and fertilizers	<ul style="list-style-type: none"> <li>• Support integrated pest management.</li> </ul>
<b>5. Strengthening livelihoods by mitigating the effects of natural hazards</b>	
5.1 Prevent soil erosion and landslides	<ul style="list-style-type: none"> <li>• Slope terracing to trap fertile soils for crop production</li> <li>• Flat-land soil stabilization and land contouring</li> </ul>
5.2 Increase vegetative cover	<ul style="list-style-type: none"> <li>• Reforestation of ravines and mountainsides</li> <li>• Implementation of sustainable grazing techniques</li> <li>• Implementation of agro-forestry techniques</li> </ul>
5.3 Water conservation and drought mitigation	<ul style="list-style-type: none"> <li>• Construction of water storage structures, usable for irrigation</li> <li>• Reforestation of water catchments areas</li> <li>• Well digging and construction</li> <li>• Recharge of the groundwater to be used by wells through soil and water conservation</li> </ul>
5.4 Water control measures and flood mitigation	<ul style="list-style-type: none"> <li>• Construction of water diversion structures (gabions, dikes, embankments, etc.)</li> </ul>

## VI. INDICATIVE COSTS

VI.1. The proposed project falls within the mandate of the environment and cultural sector component of the EPWP. Therefore the budget for the Natural Resources Management and Livelihoods will be sourced from the sustainable land base livelihoods programme element. Budget allocation by department and programme element is as follows:

Budget from Poverty Relief Fund for Sustainable Land Based Livelihoods						
Year	Total	DEAT	DEAT	NDA	DWAF	DWAF
		Working for land	Working for wetlands	National land care	Working for water	Working on fire
2004/5	R553.5m	R51.5m	R40m	R60m	R370m	R32m
2005/6	R584.5m	R51.5m	R43m	R64m	R391m	R35m
2006/7	R616.5m	R51.5m	R46m	R68m	R413m	R38m
<b>Total</b>	<b>R1,754.5m</b>	<b>R154.5m</b>	<b>R129m</b>	<b>R192m</b>	<b>R1,174m</b>	<b>R105m</b>

VI.2. For practical reason and ease of implementation and funding, each programme component of the project has been designed to fit in within a particular programme entity of the environmental and culture sector. For example:

Project Element	Funding Mechanism under environment and culture programme element of:	Implementing Institution
Strengthening livelihoods of communities by increasing the productivity of natural resource management.	Promoting community-based natural resource management	DEAT and DWAF
Increasing livelihood by scaling up sustainable land management.	Creating land-based livelihoods	DoA
Strengthening livelihoods by mitigating the effects of natural hazards and conservation of biodiversity	Rehabilitation of natural resources and protection of biodiversity	DoA

VI.3. Strengthening livelihoods through the conservation of biological diversity and improving women’s access to and control over natural resources and activity benefits are cross cutting issues that should be addressed in all the project components. Given that most of the programme elements are being addressed in most provinces. It is proposed that 1 percent of the budget of each programme element be allocated to issues from this bankable investment programme that are still outstanding and need to be piloted in remote rural areas of South Africa. The budget proposed is as:

Project component	Budget	
	Financial year 05/06 (Rand million)	Financial year 06/07 (Rand million with 10% increase)
Increasing the efficiency or and productivity of natural resource management	5.8	6.4
Scaling up sustainable land management activities;	5.8	6.4
Access to and control over natural resources and activity benefits by women;	5.8	6.4
Strengthening Livelihoods through the conservation of Biological Diversity	5.8	6.4
Strengthening livelihoods by mitigating the effects of natural hazards	5.8	6.4
<b>Total Budget</b>	<b>29.0</b>	<b>32.0</b>

## **VII. PROPOSED SOURCES OF FINANCING**

VII.1. The environmental sector indicates that “the EPWP has a focus on using government expenditure to provide employment opportunities and training to the unemployed. To achieve its goal, the sector departments should look beyond the MTEF poverty relief allocation and seek to find additional programmes and projects that lend themselves to EPWP principles. This, together with a coordinated approach to the implementation of the sector programmes will determine the extent to which the funding base and resultant scope can be broadened”.

## **VIII. PROJECTS BENEFITS**

VIII.1. Expected benefits would be as follows:

- Income generated from the natural resources will be maximized;
- Areas subject to natural phenomena such as landslides or severe wind erosion would be selected to plant trees planted to prevent landslides on steep slopes or to create windbreaks;
- Livelihood security will be improved by planting species high in nutritional value in a tree/crop planting arrangement (agro-forestry). For example, trees would be selected to provide shade, reduce soil erosion, increase water retention and provide nutritious products;
- Capacity building for implementers of natural resource management (e.g. farmers, women, municipalities, rural community members);
- Reduced effects of natural disasters as a result of an increase in vegetative cover in vulnerable areas; and
- A decrease in the vulnerability of households to natural hazards, allowing them to improve their food production.

## **IX. IMPLEMENTATION ARRANGEMENTS**

IX.1. The project will fall under natural resource management and land care programme in the Department of Agriculture. To avoid creating too many implementing institutions, the same implementation organization that is used under the land care programme will be followed:

- The Directorate for Agricultural Resource Conservation of the National Department of Agriculture will coordinate the projects in collaboration with DEAT, DWAF and the Department of public work and land care co-coordinators.
- A task team to oversee implementation of the project will be drawn from each of the various programme elements from each department to avoid duplication and ensure smooth running of the project.
- The responsibility for undertaking community motivation and education, and achieving effective community participation will be vested in extension workers, resource conservation officers/inspectors and NGOs in the field.

- The field staff will become involved in major works for natural resource management and poverty-relief public works at the earliest stage of project development in collaboration with Land Care coordinators and the task team.
- Supportive education materials on natural resource management will be designed and produced with the assistance of all stakeholders for use in communities.
- Where possible and appropriate, the NGOs and Community Based Organizations working with the province/local government will assist with organization and participation of communities.
- Natural Resource Management education materials will be produced by the Directorate Agricultural Resource Conservation in collaboration with other stakeholders.
- The project manager of this project will sit in the land care working group

## **X. TECHNICAL ASSISTANCE REQUIREMENTS**

X.1. Technical assistance will be required from FAO, CIFOR, WFP and the private sector and NGOs and GTZ and other donors.

## **XI. ISSUES AND PROPOSED ACTIONS**

XI.1. ***Multisectoral implementation.*** There are four main departments which have a role to play in implementing this project. Rural communities, NGO and the private sector need to be involved to ensure diversity and the success of the project.

XI.2. ***Participatory approach.*** Lessons have been learnt about poverty throughout the world. It is generally recognized that sustainable natural resource management can only be achieved if indigenous natural resource management practices are taken into account during project implementation. To the extent possible, this project will use a participatory approach in the design and implementation of activities to ensure that beneficiaries’ realities are taken into account.

XI.3. ***Sustainability.*** Sustainability of the project will be ensured through provision of services to those who are willing to participate, contribute and have determination to maintain their interest in programme related activities. These beneficiaries, women, rural communities, farmers where applicable, NGOs will be provided with resources and training to empower themselves and ultimately manage their own natural resources. Adequate provision will be made in the project to effectively supervise the activities and provide incentives to the beneficiaries so as to ensure their participation even after project implementation.

XI.4. ***Partnership with the private sector.*** The private sector involvement particularly with respect to training rural people in the business of business management is very critical to the success of job creation and exit strategy for the department.



## **XII. POSSIBLE RISKS**

XII.1. There are very few risks as most of the component of the project is being implemented under the various programme element of the environment and culture sector. As it is proposed, this project is to be extended to rural areas which are prone to natural disasters, HIV/AIDS, land degradation and food insecurity; the following risk may affect the project:

- **Poor infrastructure:** It may be possible that communicating with rural household in these places become very difficult due to lack of communication networks, poor roads and inability of these communities to organize themselves;
- **Delay in implementation:** Getting the environment sector to commit to prioritize extending services to these areas may take time as few people may be affected;
- **Lack of participation by the beneficiaries:** The targeted community may not see the benefit of the project in the short term.

### **Annex: List of References**

1. **Department of Agriculture:** White Paper on Disaster Management for South Africa. Pretoria.
2. **Department of Environment and Tourism 2004.** Environment and culture sector: Sector plan. Pretoria.
3. **Department of Agriculture 1999.** Implementation framework for the land care programme. Discussion document. Land Care South Africa. Pretoria.
4. **TERRAFRICA. 2006.** Second TerrAfrica regional preparation workshop for the GEF strategic Investment Programme for Sustainable Land Management (SIP). NEPAD. Midrand.
5. **World Food Programme.** Programming Guidance. Natural Resource Management and Livelihoods: From Policy to Practice. [www.landcoalition.org/pdf/wfpnrm.pdf](http://www.landcoalition.org/pdf/wfpnrm.pdf)