

Government of Trinidad and Tobago



**United Nations Development Programme
and
The Global Environment Facility**

PIMS 3418 – Atlas Project ID 00049943

**CAPACITY BUILDING AND MAINSTREAMING OF SUSTAINABLE
LAND MANAGEMENT IN TRINIDAD & TOBAGO**

Brief description

Trinidad and Tobago is a twin-island Republic situated in the Caribbean Sea. The islands' terrain is a mixture of mountains and plains. The country suffers the impacts of land degradation through deforestation, soil and coastal erosion with declining soil fertility, flooding, pollution and land salinisation. This reduces the actual and productive potential of land resources and vegetative cover, and adversely affects soils, water quality and quantity, biodiversity and the integrity of coastal and marine environments. Trinidad and Tobago has ratified the UNCCD and as such is committed to promoting sustainable land management (SLM) practices. This project forms part of the Global Portfolio Project and seeks to address SLM through mainstreaming into development policy and action plans, capacity building, and knowledge management. It is expected that fulfillment of the objectives of this project would strengthen interaction of all agencies that are involved in SLM and increase local capacity, knowledge and awareness of SLM practices. The principal objective of the project is to mitigate land degradation trends by establishing an enabling environment to combat land degradation through a participatory process, capacity building, mainstreaming of SLM into national development strategies processes and resource allocation for SLM. The project will be financed by a GEF grant of US \$475,000 with co-financing from the government of Trinidad and Tobago.



GEF

**Expedited Medium Size Project proposal
Under the
LDC-SIDS Portfolio Project for Sustainable Land Management
REQUEST FOR GEF FUNDING**

AGENCY'S PROJECT ID: 3418 (Atlas Project ID 00049943)
GEFSEC PROJECT ID: 3509
COUNTRY: Trinidad and Tobago
PROJECT TITLE: Capacity building and Mainstreaming for Sustainable Land Management in Trinidad & Tobago
GEF AGENCY: UNDP
OTHER EXECUTING AGENCY(IES): MPHE
DURATION: 2 years
GEF FOCAL AREA: Land Degradation
GEF OPERATIONAL PROGRAM: OP 15
GEF STRATEGIC PRIORITY: SP 1
ESTIMATED STARTING DATE: May 2010

FINANCING PLAN (US\$)	
GEF PROJECT/COMPONENT	
Project	475,000
PDF A	25,000
<i>Sub-Total GEF</i>	500,000
Co-financing	
Government	1,337,400
Bilateral (Private Sector)	
NGOs	
<i>Sub-Total Co-financing:</i>	1,337,400
<i>Total Project Financing:</i>	1,837,400
FINANCING FOR ASSOCIATED ACTIVITY IF ANY:	

Country Eligibility: Trinidad and Tobago ratified the United Nations Convention to Combat Desertification on September 06, 2000 and is eligible for funding under paragraph 9(b) of the GEF Instrument

CONTRIBUTION TO KEY INDICATORS OF THE BUSINESS PLAN: The project will build capacities for sustainable land management in Trinidad and Tobago, with environmental benefits accruing to a land surface area estimated at 50,000 ha.

RECORD OF ENDORSEMENT ON BEHALF OF THE GOVERNMENT:

(Enter Name, Position, Ministry)

Date: (Month, day, year)

GEF Operational Focal Point Endorsement:
Dr. John Singh, Managing Director/Chief
Executive Officer, Environmental Management
Authority

12 April 2010

This proposal has been prepared in accordance with GEF policies and procedures and meets the standards of the GEF Project Review Criteria for a Medium-sized Project under the LDC-SIDS Targeted Portfolio Project for Sustainable Land Management.

John Hough
UNDP-GEF Deputy Executive Coordinator

Paula Caballero
Project Contact Person

TABLE OF CONTENTS

SECTION I: ELABORATION OF THE NARRATIVE.....	6
PART I: SITUATION ANALYSIS	6
ENVIRONMENTAL CONTEXT	6
Socio-economic context	8
Policy, institutional and legal context	10
Causes of land degradation.....	14
Capacity Building.....	15
Mainstreaming and Harmonization of Policies	16
Finance	17
PART II: PROJECT STRATEGY	17
PROJECT DESCRIPTION.....	17
Baseline course of action.....	17
Capacity and Mainstreaming Needs for SLM.....	20
Project Rationale and Objective	22
Expected Project Outcomes and Outputs	22
Risks and Assumptions	23
Global and Local Benefits.....	24
Linkages to IA activities and programs.....	25
Stakeholder Involvement Plan.....	25
FINANCIAL PLAN.....	26
Streamlined Incremental Costs Assessment.....	26
Project Budget	27
PART III: MANAGEMENT ARRANGEMENTS	29
PROJECT IMPLEMENTATION PROCESS	29
Institutional framework and project implementation arrangements.....	29
PART IV: MONITORING AND EVALUATION	31
Monitoring and Evaluation Plan.....	31
Annual Project Report (APR) and Project Implementation Review (PIR)	33
Mid Term and Final Evaluation	33
SECTION II: STRATGIC RESULTS FRAMEWORK	38
Annex A: LAND DEGRADATION ROOT CAUSE MATRIX.....	50
Annex B - Total Budget and Work Plan	55
Matrix.....	58
Annex D - Terms of Reference	61
SECTION III: ADDITIONAL INFORMATION	63
PART I: GEF Operational focal point endorsement letter	63
PART II: CO-FINANCING LETTERS	64
SIGNATURE PAGE	65

LIST OF ACRONYMS

ASIP	-	Agricultural Sector Investment Programme
ASRP	-	Agricultural Sector Reform Programme
CABI	-	Commonwealth Agricultural Bureau, International
CARDI	-	Caribbean Agricultural Research and Development Institute
CBO(s)	-	Community-based Organisation(s)
CCCs	-	Community Co-ordinating Committees
CECs	-	Certificates of Environmental Clearance
CEEP	-	Community-based Environmental Education Programme
CEII	-	Community-based Environmental Improvement Initiative
CEP	-	Caribbean Environment Programme
CEPEP	-	Community Environmental Protection and Enhancement Programme
CEPNET	-	Information Systems for the Management of Marine and Coastal Resources (CEPNET)
CIP	-	Community Initiatives Partnership
CNIRD	-	Caribbean Network for Integrated Rural Development
COPE	-	Council of Presidents of the Environment
COSTAATT	-	College of Science, Technology and Applied Arts of Trinidad and Tobago
CSO	-	Central Statistical Office
EEZ	-	Exclusive Economic Zone
EIA	-	Environmental Impact Assessment
EMA	-	Environmental Management Authority
ENGO	-	Environmental Non Governmental Organizations
EC	-	Environmental Commission
EMBD	-	Estate Management and Business Development Company Limited
ESA(s)	-	Environmentally Sensitive Areas
ESS	-	Environmentally Sensitive
EVI	-	Environmental Vulnerability Indices
FAO	-	Food and Agriculture Organisation
FD	-	Forestry Division
GEF	-	Global Environment Facility
GIS	-	Global Information Systems
GORTT	-	Government of the Republic of Trinidad and Tobago
HDC	-	Housing Development Corporation
IDB	-	Inter-American Development Bank
IMA	-	Institute of Marine Affairs
INPPC	-	Interim National Physical Planning Commission
IPM/ICM	-	Integrated Pest/Crop Management
IS	-	Information System
ITCZ	-	Inter-tropical Convergence Zone
ITTO	-	International Tropical Timber Organisation
LAD	-	Land Administration Division
LARP	-	Land Adjudication and Registration Project
LEAP	-	Land-related Education and Awareness Programme
LMCC	-	Land Management Coordinating Committee
LNG	-	Liquefied Natural Gas
LSA	-	Land Settlement Agency
LSD	-	Land and Surveys Division
MDGs	-	Millennium Development Goals
MALMR	-	Ministry of Agriculture, Land and Marine Resources

MCCs	-	Municipal Co-ordinating Committees
MCDCGA	-	Ministry of Community Development, Culture and Gender Affairs
MEI	-	Ministry of Energy and Energy Industries
MF	-	Ministry of Finance
MLG	-	Ministry of Local Government
MOUs	-	Memoranda of Understanding
MPP	-	Ministry of Planning and Development
MPHE	-	Ministry of Planning, Housing and the Environment
MPU	-	Ministry of Public Utilities
MPUE	-	Ministry of Public Utilities and the Environment
MWT	-	Ministry of Works and Transport
MSTTE	-	Ministry of Science, Technology and Tertiary Education
NAP	-	National Action Programme to Combat Land Degradation in Trinidad and Tobago
NCC	-	National Co-ordinating Committee
NEP	-	National Environmental Policy
NFP	-	National Focal Point
NGO(s)	-	Non-governmental Organisation(s)
NIHERST	-	National Institute of Higher Education, Research, Science and Technology
NOSCP	-	National Oil Spill Contingency Plan
NPDP	-	National Physical Development Plan
NRWRP	-	National Reforestation and Watershed Rehabilitation Programme
NSSDP	-	National Strategic Sustainable Development Plan
NWRMP	-	National Water Resources Management Policy
ODPM	-	Office of Disaster Preparedness and Management
PPV	-	Plasma Pyrolysis Vitrification
PTSC	-	Public Transport Service Corporation
RIOD	-	Reseau International des ONGS pour la Desertification International Network of NGOS for Desertification
SLM	-	Sustainable Land Management
SWMCOE	-	Solid Waste Management Company Limited
TCPD	-	Town and Country Planning Division
THA	-	Tobago House of Assembly
TT	-	Trinidad and Tobago
UNCBD	-	United Nations Convention on Biological Diversity
UNCCD	-	United Nations Convention to Combat Desertification
UNDP	-	United Nations Development Programme
UNEP	-	United Nations Environmental Programme
UNFCCC	-	United Nations Framework Convention on Climate Change
UTT	-	University of Trinidad and Tobago
UWI	-	The University of the West Indies
WASA	-	Water and Sewerage Authority
WRA	-	Water Resources Agency
WRMA	-	Water Resources Management Authority

SECTION I: ELABORATION OF THE NARRATIVE

PART I: SITUATION ANALYSIS

Environmental Context

1. The Republic of Trinidad and Tobago is an archipelagic state consisting of two main islands and 21 smaller islands, situated 11 km (7 miles) off the coast of Venezuela, between latitude 10° 2' and 11°12'N and longitude 60°30' and 61°56' W. The average length of Trinidad is 80 km (50 miles) and its average width is 59 km (37 miles). Tobago is 41 km (25½ miles) long and 12 km (7½ miles) at its greatest width. The total land area of Trinidad and Tobago is 5,128 square kilometres and the estimated population (June 2005) is 1,294,494. The country comprises five physiographic regions – the Northern, Central and Southern Mountain Ranges with two intervening lowland areas, namely the Northern and Southern Basins. The country has a humid, tropical marine climate with an average rainfall of between 3,800 to 1,400 mm/yr. There are two seasons annually: the dry season for the first six months of the year, and the wet season in the second half of the year, which is also the hurricane season. Within the wet season, two marked rainfall peaks are usually observed in the months of June or July and November. There is also a period, locally termed the “Petit Careme,” within the wet season, during which there is an observed dry period, usually occurring near the end of September to the beginning of October. Winds are predominantly from the northeast and are dominated by the Northeast Trade Winds.

2. Due to its proximity and geological relationship to the South American mainland, the islands have inherited a rich biological diversity comprising sixteen main indigenous types of forests, approximately 175 families and 2,500 species of plants, 400 species of birds, 96 species of mammals, 93 species of reptiles, 30 species of amphibians and numerous species of insects and butterflies. Natural forest cover is about 248,000 hectares and the total arable land area of 75,000 hectares with an additional 47,000 hectares under permanent crops while 11,000 hectares are under permanent pasture. The country is rich in hydrocarbon resources. Deposits of sands and gravels can be found in Trinidad’s northern basin, clays in Central Trinidad, porcellanite and tar/oil sands in southwest Trinidad and andesite in Tobago. There also exists a large network of rivers with the largest hydrometric area being the Caroni basin, which produces a significant proportion of the national potable water supply. North and Central Trinidad are also endowed with aquifers which provide a large proportion of the country’s ground water. However, land degradation in Trinidad and Tobago lowers the actual and productive potential of the land resources, reduces vegetative cover and adversely affects soil, water availability, biodiversity and the coastal and marine environments.

3. Forests are critical support systems for the country’s biodiversity, providing valuable habitat for wildlife and are also a cultural resource. They play an important role in watershed protection, soil and water conservation, and the recharge of aquifers. Many forest products are of economic value as a source of food, timber, medicinal plants, and for making traditional handicraft. However, according to the United Nations Food and Agriculture Organization (FAO), during the period 1995 to 2000 the percentage decrease in forest cover in Trinidad and Tobago was 4% which represents an annual loss of 0.8%. The loss of natural vegetative cover and/or its transformation to artificial grasslands has been as a result of a multiplicity of factors, the major ones including forest fires, agricultural malpractices and the clearing of land for quarrying, housing and industrial infrastructure. Watersheds in the Northern Range have become increasingly degraded resulting in the disruption of hydrological processes and negative impacts on the health of the aquatic ecosystems. Inland soil erosion is widespread in northwest Trinidad, in the rolling hills of Central Trinidad, and in the Courland watershed in Tobago. A study by the University of the West Indies has revealed soil loss of 68 tons/ha from the Maracas/Matelot watershed over two rainy

seasons and up to 55 tons/ha in a three month period. In Tobago, another study on soil in Concordia showed extremely high losses from bare soil of between 100 and 150 tons/ha per annum.

4. Coastal erosion along the north and northeast coasts has been quite noticeable and is accepted by residents as being associated with long term natural processes. On the south and west coasts erosion is perceived however, as a consequence of the activities of gas and oil companies. From Manzanilla to the south-east coast of Moruga, there has been continued erosion with acceleration over the last 20-30 years – headlands have been eroded and individual and family property has been lost in some places at the rate of roughly one metre per year. The backshore land in much of the southwest comprises soft soil material and is located on steep cliffs. The land collapses periodically and this is principally responsible for the erosion that, over time, alters the coast line.

5. Pollution as a result of agricultural, domestic and industrial activities is evident in the country's river systems. Areas affected include the Caroni and Ciperó rivers, coastal mangroves and the nearshore environment. On the west coast of Trinidad, surface sediments indicate high levels of contamination with hydrocarbons, possibly due to contaminants from land-based operations transported via the Guapo, Nancee, Oropuche and Guaracara rivers. A 31 day study of the pollutant load for the Caroni River at the Caroni Water Treatment plant in 1997 estimated 5,713 tons with a daily average of 184 tons. Most of the pollutants were derived from high sediment loads, while organic matter and organic contaminants each accounted for five per cent. Evidence of soil salinity can be found in Felicity in Central Trinidad and South Oropuche in South Trinidad. Low-lying coastal areas are also threatened by sea-level rise and salt water intrusion with the consequent destruction of mangroves through the negative impacts on their hydrological functions and biodiversity.

6. If left unchecked, land degradation can lead to irreversible loss of the land resources on which socio-economic development of the country depends. This situation increases poverty levels and reduces the potential of the population to achieve sustainable livelihoods. Annual flooding for example, has resulted in loss of livestock and crops of resource poor farmers and also loss of lives and the destruction of household, commercial and industrial assets. As a small island developing state (SID), land degradation further increases environmental vulnerability of Trinidad and Tobago and can reverse any positive socio-economic development trends experienced in the medium to long term. The 2001 and 2002 State of the Environment Report by the EMA provides estimates of the Environmental Vulnerability Indices (EVI) for Trinidad and Tobago which suggest that land degradation is indeed a major development issue for the country. It is estimated that 82 to 123 hectares of forest burn annually with larger acreage lost during severe dry seasons. The removal of forest cover increases vulnerability to soil erosion and natural disasters and has the additional impact of increasing greenhouse gas emissions and thereby contributing to global warming. Deforestation, interpreted as the conversion of forestland to other uses and decreased forest quality, results in the loss of these qualities and benefits. It generally increases rates of soil erosion, by increasing rates of runoff and reducing the protection of the soil provided by tree litter. Deforestation significantly lowers water table and causes siltation in watercourses, increased flooding and reduced perennial stream flow, and reduces available habitat and threatens forest dependant flora and fauna. The 2001-2002 Report on the State of the Environment showed that Trinidad and Tobago is highly vulnerable to loss of its naturally vegetated areas and has a high incidence of land and habitat fragmentation. There has been extensive deforestation in critical watersheds, due to annual forest fires, logging, the practice of slash and burn agriculture, construction (site clearance and preparation), squatting, quarrying, gas and oil exploitation. Recent rapid urbanization and industrial development suggests that the rate of deforestation may have increased within the last five years.

Socio-economic context

7. The economic development of Trinidad and Tobago depends primarily on its natural resource base, including its petroleum, natural gas, sand, gravel and limestone deposits. The main contributors to the improvement of the livelihoods of the population have therefore been the petroleum, petrochemical, construction and manufacturing industries and the agricultural sector. The economy of Trinidad and Tobago remains strong after twelve years of real growth and a fifth year of exceptional growth driven in part by Liquefied Natural Gas (LNG) expansion. Over the period 2000 to 2004 the GDP increased by an average of 7.5 percent per annum. Development has however been at the expense of sustainable land management and has given way to indiscriminate land use practices which result in severe land degradation.

8. The major industries in Trinidad are oil and gas, petrochemicals, construction, fertilizer, light manufacturing and food processing, all of which have created increased pressures on the environment, and especially on coastal areas. While some industrial development has taken place on the south coast, most of the industrial activity over the last twenty years has been located on the west coast, and current industrial development plans suggest that the west coast will continue to be the main recipient of most of this type of physical development. The northwest coast was historically the section of the coast where development took place and generally involved single family detached housing, light industry such as sales and services with respect to boat engines, pirogues, speed boats and fishing gear. Within the last two decades however construction of housing, especially high rise structures and commercial complexes, port expansion and coastal highway development have accelerated with the consequential destruction of mangroves. In the case of the south-west coast, industrial activity has been most pervasive. Thus, the construction of a larger port and LNG plants at Point Fortin, as well as a port and industrial estate at La Brea together have transformed a significant area of the coastal zone in this south-western part of the island. Other developments along that coast include a commercial and industrial and residential complex and the redevelopment of public transportation facilities. In Point Fortin, approximately eight hectares were silted when the retaining bund wall failed while updating the construction of the LNG plant. This resulted in significant change in the coastline which migrated outward by 200 to 300 meters. Additionally construction of a pipeline along the coast has been responsible for the loss of beach facilities and dredging operations for accelerated erosion.

9. In the southeast and south west there exist old oil fields and pipelines systems which were developed in times when pollution and environmental management were not considered important issues. The location of these old pipelines is not known and occasionally these old pipelines burst creating significant human health hazards and polluting surrounding lands. In the case of the community of Guayaguare there is the perception among the residents that the pipelines, which come ashore, have breached the coastal reefs that protected the coastline resulting in the advance of the sea. Homes have been threatened to the extent that several residents have had to relocate their houses at least once in order to avoid the advancing sea. Such erosion has prompted construction of coastal protection measures but these have been constrained by limited funding.

10. Timber harvesting is prevalent in the lower, more accessible and westernmost regions of the Northern Range, and in the forests of the south-eastern and central part of the island of Trinidad. The Forestry Division reports that timber is no longer harvested from natural forests in Forest Reserves of the Northern Range because over exploitation has resulted in depleted reserves. In the southern and central forest reserves, harvesting continues from the natural forests under a management regime known as the periodic block system. Timber harvesting also occurs in the sizable teak and pine plantations currently managed by the Forestry Division. In recent years however, there has been a trend of old family-owned estates being sold and commercial timber being consequently removed and there is evidence that timber is still illegally

harvested despite provisions requiring licenses for such movements of timber under the Sawmills Act of 1999.

11. Although Trinidad's three corridors of mountains place restriction on agricultural activity, the plains between the ranges are generally fertile. According to the most recent agricultural census from the early 1970s, there were over 35,000 farms on Trinidad and Tobago, occupying nearly 130,000 hectares. The average farm had 6 hectares, but the 40 largest farms were extremely large, all over 400 hectares. Based on this agricultural census, landholdings were usually of two kinds – numerous small farms which used traditional methods, and produced primarily food crops for the domestic market, and larger farms which were generally more capital and input intensive and produced cash crops for export. Agriculture is practiced both on flat and steeply sloping lands, and both subsistence farmers and commercial producers are guilty of illegally occupying and clearing State land for agriculture. This is reported to be one of the main causes of deforestation in Trinidad. Slash and burn agriculture, limited or no soil conservation practices, and inappropriate use of pesticides and fertilizers are also major contributors to land degradation. Slash and burn is a common method of land clearance but a lack of fire control typically results in the burning of a much larger area of land than can be cultivated by the farmers involved in this activity. Shifting cultivation is still practiced by farmers who illegally operate on State or private lands. The current land tenure arrangement, which does not afford legal title to farmers, does not provide appropriate incentives for this group of farmers to abandon the practice of shifting cultivation and adopt soil conservation measures. This practice leaves the land exposed to the erosive power of rainfall before the crop is fully established. A socio-economic survey of vegetable farmers' practices in Trinidad carried out by CAB International and the Ministry of Agriculture, Land and Marine Resources in 1995 reported excessive and unwarranted pesticide applications. This scenario persists and pesticide run off has had negative effects on freshwater sources and the coastal environment. Some pesticides are known to persist in the soil, reaching toxic levels, which can limit soil productivity and fertility, and have potentially harmful human health and ecological consequences. Livestock activity is not as developed as other areas of agriculture and is not considered a major contributor to land degradation in Trinidad and Tobago.

12. Growth and development of the energy industry and the construction industry are highly correlated. The current growth in the energy sector had resulted in a boom in the construction industry and this growth is expected to continue with projected increases in oil and gas prices. Mining and quarrying activities, which provide much of the base resources for the construction industry have in turn greatly accelerated with the most recent economic boom, and have negatively affected the land resources of Trinidad and Tobago. Quarrying occurs in various locations in the Northern Range, Northern Basin, Central Range and Southern Basin. The majority of the country's quarry resources are on State lands with a significant percentage of the quarrying operations being illegal. In 2002, half of the total 4.5 million cubic yards of sand and gravel material was produced illegally. Many quarries operate in a haphazard and unsustainable manner which leads to a myriad of land degradation challenges. There is limited control over the manner in which materials are extracted and what is quarried. Operators are known to quarry entire parcels of land sometimes extending into private property without restoration, pollution control measures, and adequate disposal of solid waste from the mining site or appropriate treatment of streams to remove sediment loads which arise from quarrying activities. The impact of this unsustainable activity is particularly evident in the Valencia region of northern foothills of Trinidad.

13. Poverty levels in Trinidad and Tobago represent a major development challenge. An IDB sponsored study in 2004 estimated poverty levels at 24 per cent of the total population and 18.4 percent of the total number of households. Approximately 8.3 percent of the population was extremely poor or indigent, not being able to afford the cost of a minimum low cost food basket, consistent with the achievement of a balanced diet. In the current environment of significant economic growth, disparity in income distribution is increasing and unemployment rates continue to be high, 10.4 percent in 2002 and 10.5 percent in 2003. Many people are therefore driven to seek free living space and livelihood opportunities through squatting,

and subsistence hunting of wildlife within hillside forests on the fringes of urban centers. Such unauthorized settlement (squatting) has become widespread particularly on the hillsides of the Northern Range and is generally associated with poverty, overcrowding, poor infrastructure and sanitary conditions, deforestation with limited conservation measures.

14. During the last twenty years there has been a discernible increase in the expansion of urban settlements, the intensification of development within the urban centres, both residential and industrial, the expansion of satellite communities and the conversion of agricultural land to housing. Hillside slopes are also very attractive for housing. Many of these hillside settlements have led to land degradation due to construction on inappropriate sites with inappropriate techniques and manipulation to the point where the original landscape is destroyed. Planned residential development on steep land and seafront properties have encouraged the bulldozing of slopes to create flat building sites as well as the removal of mangroves and filling of swampy areas. Current construction techniques which include removal of all vegetation and the opening of trenches for the preparation of foundations expose soil that often remain unprotected for long periods which results in wind driven pollution, increased risk of landslides, and flooding.

Policy, institutional and legal context

15. **Policy and legal context.** The existing policy framework for land management is highly fragmented. There are a number of pieces of legislation, policies, plans, programmes and projects which directly and indirectly address land degradation and promote sustainable land management and which are compatible with the aims and objectives of the UNCCD. These are listed in Table 1 below. The highly sectoral organisation of the public administration system, in which responsibilities that have implications for land management are distributed among many government departments and statutory authorities, inhibits systemic application of official policies. For example, this is exemplified by the fact that Municipal Corporations have responsibility for the execution of local infrastructural work and local solid and sewage waste management, while the Drainage Division of the Ministry of Works and Transport has responsibility for planning, design, construction and maintenance of drainage, flood control measures, coastal protection works and irrigation systems. The Institute of Marine Affairs is responsible for collection, analysis and dissemination of data relating to the economic, technological, environmental, social and legal developments in marine affairs. On the island of Tobago, The Tobago House of Assembly (THA) is responsible for all local governance issues affecting land degradation.

Table 1: Policies, Legislation, Plans Relevant to Sustainable Land Management

Policy/Legislation	Date/Status	Institution Responsible	Relevance to Sustainable Land Management
Vision 2020	Ongoing Exercise	Ministry of Planning Housing and the Environment	A national macro-planning process, the rationale of which is to advance towards sustainable development
National Physical Development Plan	1984 Approved by Parliament in 1984 under Town and Country Planning Act 1968	Ministry of Planning, Housing and the Environment	Provides for formulation of land policies, provision of social and physical infrastructure, integration of urban and local plans, a framework for regional and local plans and integration of spatial planning and sectoral policy.
National Conceptual Development Plan	1999 Draft	Ministry of Planning, Housing and the Environment	Provides a framework for future planning and development which includes a national land-use strategy for the next twenty years.

National Environmental Policy	1998 Revised 2005	Ministry of Planning, Housing and the Environment	Basic principles which govern the Policy include conserving the vitality and diversity of the natural environment and empowering communities to care for their own environment. Objectives include the control of pollution, conservation of biological diversity and the analysis and evaluation of past development decisions with the aim of correcting any decisions that may be inimical to environmental health. The Policy seeks to maintain the total land area zoned for Forest Reserves and prevents conversion to other land use including quarrying and also provides for rehabilitation programmes for mining sites.
Environmental Management Act	Act 3 of 2000	Ministry of Planning, Housing and the Environment	Provides an environmental management framework which includes the establishment of the Environmental Management Authority, the Environmental Commission, Implementation of National Environmental Policy, Certificate of Environmental Clearance and Compliance and Enforcement of Rules
Environmentally Sensitive Areas Rules	2001 November 2004, Matura National Park (9,000ha) declared the first ESA of Trinidad and Tobago	Ministry of Planning, Housing and the Environment Environmental Management Authority	Criteria for designation include conservation of natural resources and protection of the environment
Shelter Policy	2002	Ministry of Planning, Housing and the Environment	Objectives include the streamlining and improvement of the institutional functions for land identification, land assembly, release, vesting, registration and development approval.
National Water Resources Policy	2002	Ministry of Public Utilities Water Resources Management Unit	Establishes a framework for integrated water resource management. Issues encompass land use planning, flooding, watershed management and coastal zone management.
Waterworks and Water Conservation Act	1980	Ministry of Public Utilities	Provides for the control of natural water courses and outfalls and of the removal of natural vegetation
Minerals Act	2000/ Act has been passed but not proclaimed	Ministry of Energy and Energy Industries Quarries Unit	It attempts to manage the mining activities of common and special minerals and regulate the environmental impact of the exploration, mining and processing operations and encourage land rehabilitation after abandonment.
Forest Policy of Trinidad and Tobago	A draft National Forest Policy (2008) is currently before the Cabinet and	Ministry of Agriculture, Land and Marine Resources	Result of a comprehensive stakeholder consultation process and re-visioning of forest management since the passage of the 1942 Forest Policy. Outlines policy

	expected to be finalized in the final quarter of 2008	Forestry Division	strategies for land use planning, legislation, forest management, forest production, biodiversity conservation, stakeholder participation in forest management, watershed management, training and human resource development
Agricultural Fires Act	Act 20 of 1965	Ministry of Agriculture, Land and Marine Resources Forestry Division	Provides mechanisms and conditions for the regulation of the agricultural fire season
Food and Agricultural Policy	1994	Ministry of Agriculture Land and Marine Resources	Identifies strategies which deal with the sustainable use and management of agricultural land, wetlands, forest and fisheries resources as the natural resource base for food production.
Pesticides and Toxic Chemicals Act	Act 42 of 1979	Ministry of Health	Defines the responsibilities of the Pesticides and Toxic Chemicals Control Board.
Master Tourism Plan	1996	Tourism Development Company	A tourism land use plan, which identifies areas of tourism potential, determine and preserve their character/appeal and carrying capacity and promotes the adherence to development guidelines
Environmental Education Policy for Trinidad and Tobago	1999 Draft	Ministry of Education	Aims to promote environmental sensitivity
National Biodiversity Strategy and Action Plan (Commitment to United Nations Convention on Biological Diversity- ratified 1996)	2001	Environmental Management Authority	Aims to integrate biodiversity objectives into sectoral policies, institutionalize public participation in developing biodiversity conservation and management
National Action Programme to Combat Land Degradation in Trinidad and Tobago	2006	Ministry of Planning, Housing and the Environment	Identifies critical issues and problems associated with land degradation and sets out the programme of action for correcting, mitigating and preventing land degradation

16. There is also a plethora of institutional responsibilities which has resulted in a lack of an effective coordinating mechanism to facilitate synergies and manage tradeoffs among the various State entities. Thus, while the Forestry Division is responsible for forest management within most State lands, there is policy overlap between this institution and the Ministry of Planning, Housing and the Environment's Town and Country Planning, Division and its Environmental Policy Division as well as the Environmental Management Authority. Table 2 illustrates some of the fragmented areas of responsibility under the current institutional framework for land management. This often results in overlap of responsibilities and in many cases no agency accepting responsibility for specific land management activities. Collaboration among agencies needs to be strengthened considerably to affect the kind of coordination required for the sustainable management of the country's land resources.

Table 2: Institutional Fragmentation in SLM in Trinidad and Tobago

Institutions	Areas of intervention and relevant issues
Ministry of Planning, Housing and the Environment; Town & Country Planning Division; EMA	Planning & policy issues associated with national land use priorities
Forestry Division; Min. of Local Government; Private Forest Owners; EMA	Restoration of degraded forest, management of natural terrestrial habitats owned by the State, and forestry extension services to private land owners
MALMR; Agricultural Research Extension Unit;	Degraded agricultural lands and improvement in soil fertility
Ministry of Planning, Housing and the Environment; IMA; THA; Ministry of Tourism; Min. of Local Government; MALMR; EMA	Coastal Zone management and land use planning
WASA; Ministry of Public Utilities; Ministry of Local Government;	Dams, rivers, canals, and other waterways.
ODPM; Meteorological Services; Prime Minister's Office; EMA	Early Warning System & Disaster Preparedness
SWMCOI; EMA; Ministry of Local Government; Ministry of Public Utilities	Waste Management and regulation (including solid, liquid and gaseous wastes)
Min. of Education; Ministry of Planning, Housing & the Environment; and EMA	Awareness Campaign
University of the West Indies; UTT; University of the Southern Caribbean	Research on areas affected by land degradation
Ministry of Planning, Housing and Environment, Ministry of Agriculture, Land and Marine Resources	Mapping of sensitive areas
Office of Attorney General	Legislative matters associated with promulgation of new legislation regulating land use, ownership and zoning, and State prosecution legislative violations.

17. There also exists a range of other international treaties, laws and agreements to which Trinidad and Tobago is signatory and which have implications for sustainable land management and sustainable development. These include the Convention on Biological Diversity and its Protocol on Biosafety, the United Nations Convention to Combat Desertification, the United Nations Framework Convention on Climate Change and its Kyoto Protocol, the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), the Basel Convention on the Control of Transboundary Movement of Hazardous Waste, the Stockholm Convention on Persistent Organic Pollutants,

the Cartagena Convention on the Protection of the Marine Environment of the Wider Caribbean and its Protocols concerning Specially Protected Areas and Wildlife and Marine Pollution from Land-based Sources and Activities, Agenda 21 (Johannesburg Programme of Action), the Barbados Programme of Action (the Mauritius Strategy)

18. There are also current programmes which are compatible with the aims and objectives of sustainable land management. The National Reforestation and Watershed Rehabilitation Programme (NRWRP) initiated in September 2003 aims to rehabilitate over 33,000 acres of forest over a 10 year period. The programme involves community based groups in the co management and protection of forest resources and includes strengthening community capacity to take action. It also adopts an income generation approach to the reforestation/rehabilitation process. This programme is administered by the Ministry of Agriculture, Land and Marine Resources. The Community Environmental Protection and Enhancement Programme (CEPEP) attempts to enhance the overall environment of Trinidad and Tobago. Like the NRWRP, CEPEP is a vehicle for community residents to share responsibility with the State for the management of the country's natural resources. Both programmes also provide opportunity for skills development, empowerment and income generation within communities and the achievement of environmental, social and economic transformation.

19. Non-government, community based and private sector organizations are gradually emerging as significant entities in championing, promoting and fostering sound environmental management at the local, national and regional levels. There is a current trend towards the formation of partnerships across government, private sector, non government and community based organizations to address environmental issues and in the implementation of natural resources co management projects. As regards the implementation of the UNCCD and the development of the NAP, the Ministry of Planning, Housing and the Environment has worked closely with the Caribbean Network for Integrated Rural Development (CNIRD) in keeping with the spirit and letter of the Convention. CNIRD leads the local chapter of the International Network of NGOs for Desertification, (Reseau International de ONGs Pour La Desertification), RIOD and plays a critical role in raising awareness of the UNCCD and the issues of land degradation in Trinidad and Tobago and the Caribbean. CNIRD, the local RIOD, and many of the relevant non government and community based organizations are constrained in their efforts mainly due to inadequate financial and human resources and institutional capacity. *(For additional information on NAP implementation, see section on Baseline course of action.)*

20. The Green Fund established in 2000, to *encourage communities and organizations to undertake remediation, reforestation and beautification projects*, is supported by the compulsory contribution from business enterprises and is intended as an important source of funding for community based initiatives. The fund will also have an institutional building and strengthening component allowing resources to be allocated to the target groups to ensure that training and other resources are provided so that they can efficiently and effectively manage the work of their organizations. During the seven years of its establishment the Fund has acquired significant resources but to date no grants have been disbursed. At present, the MPHE is undertaking the operationalisation of the Fund, which is in the process of having its management staff recruited.

Causes of land degradation and Barriers to SLM

21. Trinidad and Tobago as a Small Island Developing State in the Caribbean is characterised by certain vulnerabilities and challenges, related to its size, which limits the area available for urban settlement, housing, energy, manufacture, construction, agriculture, mining, commercial forestry, tourism and other infrastructure. This has resulted in intense competition among the various sectors, leading to indiscriminate and incompatible land use and by extension to land degradation. Activities which contribute to land degradation include unplanned infrastructure development, indiscriminate logging,

mining and quarrying, inappropriate agricultural practices, inadequate waste management, formal and informal human settlements, and oil and gas exploration. These actions in turn make the land resources more vulnerable to damage from forest fires, climate variability, flooding, sea level rise and salt water intrusion.

22. The effective implementation of the range of relevant policies, acts and legislation which have been developed, remain constrained in large part, due to capacity constraints at individual, institutional and systemic levels. Trinidad and Tobago's National Capacity Self Assessment Project is being undertaken. The project is intended to identify, through a country-driven consultative process, the priorities and needs for capacity building to protect the global environment which can work effectively within the existing political, administrative and cultural systems of the country. The NCSA process would also explore linkages among GEF focal areas and with wider environmental concerns and sustainable development at national level. This capacity building initiative is intended to deliver significant results that would improve the country's record in the discharge of its obligations under selected Multilateral Environment Agreements (MEAs), including the United Nations Convention to Combat Desertification. Activities prescribed in the MEAs are not yet perceived as a national priority, especially since they are not mainstreamed into daily operations and are often not included in the work plans of agencies.

23. Two national consultations conducted as part of the development of the NCSA project resulted in the following being identified as the major issues which contribute to the inadequate capacity of the country to discharge its obligations under the MEA's, including the UNCCD and environmental management in general.

- Low budgetary commitment to the environment and conservation in comparison to the competing socio-economic needs associated with the developmental agenda
- Generally poor collaboration among agencies, especially in discharging the government's obligations under the various multilateral environmental agreements conflicts among other policies; lack of mechanism to resolve policy conflicts; policy documents often do not articulate implementation mechanisms; lack of awareness or adoption by many senior decision makers of policies drafted by other agencies
- Insufficient or lack of enforcement of environmental laws
- General insensitivity to community concerns, or lack of integration of these concerns into planning and implementation of projects
- Inadequate staffing, resources and facilities with sometimes low motivation to carry out departmental mandates
- Institutional inability to adapt to changing circumstances and trends
- NGOs and CBOs ability to participate is often limited by human and financial resources.

24. These issues have also been articulated in the National Action Programme to Combat Land Degradation in Trinidad and Tobago, which identifies the barriers to sustainable land management as a lack of capacity building, mainstreaming and harmonisation of policies and financing.

Capacity Building

25. *Individual Level* – In Trinidad and Tobago, there is an absence of a deep connection with the natural resource base and consequently either ignorance or a lack of consideration of the long term consequences of actions which impact on the natural physical environment. In this regard, residents of communities, farmers, staff within national agencies and the leadership of the country are not highly motivated towards sustainable land management. There are no structured programmes for education and awareness building on issues pertaining to and degradation. In

addition, agricultural extension services to farmers which would facilitate sustainable use of land resources and good agricultural practices are inadequate and ineffective. Where there are skilled persons operating within national agencies they tend to be stretched or underutilized.

26. Institutional Level – There are several institutions in Trinidad and Tobago with statutory control over land management and protection. These institutions are constrained by the fact the many of the legal and policy instruments are outdated and need urgent revision to address land degradation. Such instruments include the Forests Act, the Conservation of Wildlife Act, the Agricultural Fires Act, the Pesticide and Toxic Chemical Control Act, the Town and Country Planning Act, the Tobago House of Assembly Act, the Environmental Management Act and related Environmentally Sensitive Species and Areas Rules, and the Municipal Corporations Act. The Ministry of Planning, Housing and the Environment is responsible for setting policy direction for the environmental sector and for the supervision of the Environmental Management Authority, one of the key agencies with responsibilities for land use and management. The environmental mandate of the Ministry is managed by a small and understaffed Environmental Policy and Planning Division, which coordinates the implementation of the UNCCD and a number of other MEAs. The Ministry of Planning Housing and the Environment also includes the Town and Country Planning Division which is the central government institution for land use planning and development control. The Division has however over the years lacked the capacity and resources to effectively monitor land development and to enforce policy and legislation. The Forestry Division of the Ministry of Agriculture, Land and Marine Resources, is another critical land management institution, having management responsibility for approximately 50% of the surface area of the island, through its system of Forest Reserves. Similarly, the management of the country's water resources is managed by the Water and Sewerage Authority and Water Resources Agency, of the Ministry of Public Utilities. The country has no coastal management plan to manage the coastal zone sustainably. Data and information of the type, range and continuity required for the adequate assessment of land degradation are currently inadequate. There is also very little research undertaken with respect to indigenous knowledge related to sustainable land management and as a consequence such knowledge is ignored in national policy and programmes.

27. Systemic Level – The National Physical Development Plan by the Town and Country Planning Division of the Ministry of Planning, Housing and the Environment is 21 years old and grossly outdated. The current land administration and physical planning systems do not adequately contribute to sustainable land use and management, the structures and mechanisms for regulation and enforcement are weak, and institutional accountability and responsibility needs to be improved. The capacity for implementation, monitoring and evaluation of plans policies and programmes, related to sustainable land management also remain inadequate and for the most part ineffective.

Mainstreaming and Harmonization of Policies

28. Individual Level – Sustainable management of natural resources including land is possible with various combinations of inputs and roles among public, corporate, civil and community sectors. However, there are limited institutionalized processes and capacities to allow for community motivation and engagement through interactive participatory approaches to consultation and active involvement in the design, development and implementation of public policies. Similarly, the capacity of citizens within

communities to contribute to sustainable land management particularly as regards indigenous knowledge and experience has also been limited and is rarely incorporated into national plans and strategies.

29. Institutional Level – The policy framework for land management in Trinidad and Tobago is complex and fragmented and there are several areas of duplication and gaps as regards the roles and responsibilities of the various institutions. There is no coordinating mechanism to ensure that all agencies are operating consistently with existing policies or to make use of synergies or manage the tradeoffs among objectives. The State has subscribed to the rhetoric of sustainable development and has ratified many Multinational Environmental Agreements that are predicated on this approach. However the necessary adjustments within the public administration system to facilitate their implementation are limited. There still exists a highly sectoral approach to policy analysis and formulation and economy, environment and social progress are still compartmentalized. Coordination among public sector entities with responsibility for decision-making authority relating to housing, infrastructure, tourism, water, forests, mining and community development is low to non-existent.

30. Systemic Level – There is an inadequate framework to allow collaboration among state agencies and with non-government and community-based organizations towards sustainable use and effective co-management of the country's land resources.

Finance

31. Individual Level – Poverty among resource-poor farmers and residents in communities have led to a number of indiscriminate and unsustainable use of land resources in the effort to secure land for subsistence and/or commercial farming and for housing. The Green Fund, which was established seven years ago to provide support to assist and encourage community based and other civil society organizations in activities which would contribute to sustainable land management, is yet to be operationalised.

32. Institutional Level/ Systemic Levels - There is limited recognition on the part of politicians and decision makers that land degradation is a significant barrier to sustained economic development. Environmental/national resource economics – which should include cost/benefit analyses of the present land use system, the cost of doing nothing in comparison with similar analyses of the sustainable land management option - has not been developed nor applied to land use planning and policy development.

PART II: PROJECT STRATEGY

PROJECT DESCRIPTION

Baseline course of action

33. Trinidad and Tobago has adopted a National Action Programme to Combat Land Degradation for the period 2006-2020. The implementation of the NAP is intended to combat land degradation and promote sustainable land management through: -

- Implementation of actions to reduce/prevent deforestation, soil erosion, flooding, pollution and land salinisation,
- Rehabilitation of degraded lands,
- Promotion of wise land resources use and practices,

- Implementation of forecasting and prevention systems for natural hazards such as drought like conditions, floods and landslides, and
- Encouragement of changes in behaviour which would lead to a symbiotic relationship between people and the land they occupy.

34. The NAP also provides a synergistic framework for encouraging the coordination of activities and programmes being implemented at the national level in meeting the country's commitments to other international agreements, in particular the UNFCCC, the UNCBD, the Ramsar Convention on Wetlands of International Importance and the Basel Convention. The NAP also provides a framework for strengthening ongoing national efforts to combat poverty and to achieve sustainable development as embodied in the Millennium Development Goals, Agenda 21 and the Mauritius Strategy for the Implementation of the Barbados Plan of Action.

35. As part of the overall strategy for combating land degradation and achieving sustainable land management, the NAP aims to encourage and enable the population of Trinidad and Tobago to exercise better choices as they relate to the use and management of land resources. The approach of the NAP is one which engages the government, the private sector and the population at large to work in partnership to reduce land degradation and promote sustainable land management. It recognizes the fundamental role to be played by the NGO and community sectors in the implementation of the UNCCD. Community involvement and the strengthening of the civil society sector are key elements of the Programme.

36. At present in Trinidad and Tobago, there are a number of annual environmental competitions geared at raising public awareness among various publics which include the Secondary Schools Public Speaking Competition, the Ozone Poster Competition, the Plastics Recycling Competition and the Best Village Environment and Sanitation Programme. In addition, there are a number of national and community based organisations which are involved in advocacy, and projects aimed at environmental protection and monitoring. The Government, in recognition of the role of the non government sector particularly at the community level in the promotion of behavioural change and the implementation of environmental projects has established the Community Environmental Protection and Enhancement Project (CEPEP) and the National Reforestation and Water Rehabilitation Programme. These programmes represent a significant step in making communities responsible for the management and restoration of natural resources within their communities and environs in the spirit of the bottom-up, people-centered co-management approach of the UNCCD.

37. Currently the Minister responsible for Planning Housing and the Environment has invited proposals for the preparation of a National Strategic Development Plan within the context of the Vision 2020 National Development Strategy. The Plan is expected to replace the outdated National Physical Development Plan and determine the manner in which land should be used over the 15 year planning horizon. The National Strategic Development Plan is expected to address the following land related issues:

- Development pressures in hillside and other areas that may increase vulnerability to flooding, landslides and other natural disasters.
- The loss of good quality agricultural land to built development.
- Adhoc decision making which varies from policies articulated in the statutory development plan.
- Location and increased density of development in sensitive environments with attendant negative consequences.
- Destruction of ecosystems.

38. The Plan will also provide a framework for the effective participation of the country's residents in development planning and implementation and the establishment of sustainable communities.

39. The recently developed Draft Five Year Plan of the Forestry Division of the Ministry of Agriculture, Land and Marine Resources proposes the following: -

- Revision of the Forest, Sawmill and Conservation of Wildlife Acts.
- Greater community involvement and participation in forest planning, monitoring and management.
- The introduction of forest management plans as a means of rationalizing and realizing sustainable use of forest resources.
- The implementation of System of National Parks and other Protected Areas Plan.
- The enactment of the National Parks and Wildlife Authority Act

40. In addition, the former Ministry of Public Utilities and the Environment initiated a redraft of the National Forest Policy, which is currently before the Cabinet. This new forest policy will greatly facilitate sustainable land management through its emphasis on stakeholder involvement in the process of forest management, as well as its emphasis on the multiple goods and services provided by forests. The Forestry Division has also entered into an arrangement with the United States Forest Service to develop a new map of forest distribution in Trinidad and Tobago. This mapping exercise is expected to be a precursor to a national inventory of forest resources that will provide information on the size, distribution, composition and condition of the country's forest resources.

41. The Crop Science Department of the University of the West Indies (UWI) conducts research on soil types in order to determine suitability of trees and crops by soil type. UWI collaborates with the EMA, the MPEE and the Ministry of Land and Marine Resources (MALMR) in the conduct of research and publication of research findings which are used to inform development planning. The University of Trinidad and Tobago (UTT) is a relatively new institution that is technology based and is equipped to provide training in the use of technological applications for land use and to prevent land degradation. The UTT proposes to establish a campus in Tobago and it is expected that a department dealing with SLM would form part of this establishment during the life of this project. It is also expected that the UTT, in collaboration with the Crop Science Unit of UWI would provide support in knowledge management and capacity building. UWI would focus on academic training and UTT would focus on technological applications for agriculture.

42. The Ministry of Agriculture, Land and Marine Resources with the assistance of the Inter-American Development Bank, is implementing the Land Adjudication and Registration Project (LARP). This project involves the systematic adjudication, or ascertainment, of rights and interests in all land throughout Trinidad and Tobago, and the recording and registration of these rights and interests in a new land registry system. The general objective of LARP is to improve the reliability of the real property rights system in Trinidad and Tobago. The Programme will also clarify land tenure to support the development of a more dynamic land market and promote more efficient use of land resources. It will also provide land information systems (LIS) to support the implementation of broader national environmental sustainability strategies.

43. Recent studies conducted under the auspices of the Agricultural Sector Reform Programme (ASRP) and the Agriculture Sector Investment Programme (ASIP) have identified numerous legal, institutional and technical reforms that are needed to improve State land administration, secure land tenure and generally develop a more dynamic private land market. Significant investments and improvements have already been made, such as the production of parcel index maps, computerisation of the Registrar General's Department, being just two examples. The centre piece of the reform process is, however, the Land Title Legislative Package of 2000. The Registration of Titles to Land, the Land Adjudication and Land Tribunal Acts 2000 (the Land Title Legislative Package) will establish a nation-wide systematic administration and adjudication process whereby the legal interests in every parcel of land in the country will be determined and registered in a new, more efficient "real property" registry. It is anticipated that

this new, more effective land registry system will significantly improve efficiency, transparency and security of tenure for the citizenry.

44. The National Environment Policy (NEP) 2005 is broad-based and applies to all sectors. The goal of the policy is the conservation and wise use of the environment in Trinidad and Tobago to provide for meeting the needs of present and future generations and enhancing the quality of life. The NEP is quite comprehensive and addresses most of the country's current environmental concerns. The Policy also seeks to maintain the total area of land zoned for Forest Reserves and prevents conversion to other land use including quarrying. In addition, it provides for rehabilitation programmes for mining sites and the treatment of sewage and wastewater before discharge.

45. The Environmental Management Authority (EMA) is the main focal point for environmental policy and management at the level of Central government and is responsible for coordinating the environmental aspects of development activities, in collaboration with the municipal governments and other central government sectoral institutions. Two instruments available to the EMA for the sustainable management and protection of land resources are the Environmentally Sensitive Areas (ESA's) Rules of 2001 and the Certificate of Environmental Clearance (CEC), also of 2001. The ESAs rules authorize the authority to designate areas in Trinidad and Tobago as environmentally sensitive and hence of value to the conservation of natural resources, the protection of the environment and the promotion of sustainable socio-economic development. To date three areas of the country have been designated ESAs and limitations have been established on the use of the areas and the types of activities to be undertaken. The CEC rules establish a comprehensive framework for proper management of developed land and to safeguard against degradation. The rules apply to proposed developers who are planning undertake any one of the 44 designated activities which cover a range of development from agriculture and heavy industry. Such developers must obtain a CEC from the EMA prior to pursuing planning approvals from the Town and Country Planning Division.

Capacity and Mainstreaming Needs for SLM

46. As indicated above the National Capacity Self Assessment is now being implemented, but a number of capacity needs were identified during two prior national consultations conducted during the preparation of the NCSA proposal. The needs identified in this proposal are consistent with those articulated in the National Action Programme to Combat Land Degradation in Trinidad and Tobago. In addition, an assessment done utilizing the indicators of the National MSP Annual Project Review Form in the UNDP Resource Kit contributed to the summary of capacity and mainstreaming needs listed below at individual, institutional and systemic levels.

47. *Individual Level* - Behavioural change and capacity building at the level of the individual is perceived as one of the cornerstones of sustainable land management. How people behave is determined by many factors including their socio-economic situation, their response to existing institutional structures and their cultural norms and values. It is necessary to understand the value systems which influence the actions of the population and lead to land degradation. There is need for increased public awareness, sensitization and empowerment at the community level which would allow citizens to contribute effectively to any national effort towards sustainable land management. Training and human resource development is also needed both within the government and non government sectors in several key areas. These includes in land information systems, land management information systems, GIS, GPS, etc. In addition there is need for skills development in participatory, people-centered, integrated approaches to sustainable land management is also required particularly among the staff within government planning

bodies in keeping with the spirit of the UNCCD. Farmers also require improved training in sustainable agricultural practices from agricultural extension agents and NGOs and CBOs with increased capacities for SLM. NGOs and CBOs also need training and assistance in the development of project proposals to allow them to better access available funding for natural resource management/SLM. The capacities of government planners also need to be strengthened to enable the integration of LIS and SLM into planning at the local and national levels. Additionally, these planners should be trained in the application of environmental/natural resource economics, and in the identification of economic and financially viable land management alternatives. There is also need for the recognition of the value of indigenous knowledge in the process of sustainable land management. The National Action Programme for the Combat of Land Degradation in Trinidad and Tobago needs to be popularized and gain national support and advocacy for its effective implementation.

48. *Institutional Level* - Sustainable land management needs to be included as a key component of the new development strategies. The current institutional, legislative and policy framework for land management needs to be reviewed, rationalized and revised to meet the objectives of the NAP and facilitate its effective implementation. A more collaborative approach is required and there is need for mechanisms that would increase coordination among State agencies and reduce the duplication of efforts and gaps in roles and responsibilities. The government needs to build on its community-based environmental protection and management projects by the inclusion of strategies for empowerment of non government and community based organizations to participate more interactively and effectively in environmental decision making and co management of the country's land resources. Accordingly, there is need for the complete operationalisation of the Green Fund to provide financial support to the relevant civil society organizations. The Environmental Policy and Planning Division of the Ministry of Planning, Housing and the Environment needs to be strengthened and the National Coordinating Body for the UNCCD needs to be formalized and include adequate representation of all sectors in order to ensure the effective implementation of the NAP. Research institutions need to focus on sustainable land management issues and develop a research ethic that embodies sustainable development principles. There is also need for the development of research design which is interdisciplinary and multi-sectoral, including collaboration with other entities including communities and capitalizing on indigenous knowledge. Data from such research should be made more readily available to the public and be made user friendly.

49. *Systemic Level* – There is need to reform the current land administration and physical planning systems: strengthen the regulatory and enforcement structures and mechanisms; and increase institutional accountability and responsibility to improve the performance of the institutional framework for SLM in Trinidad and Tobago. The organization of the public administration system responsible for land management is highly sectoral and distributed among many government departments and statutory authorities. This arrangement inhibits systematic application and implementation of these policies. In this regard, there is urgent need for the establishment of an effective coordinating mechanism to facilitate the harmonization among the various agencies and enable the successful implementation of the NAP. At present policy implementation occurs through projects within the Public Sector Investment Programme and external funding opportunities. There is need for the commitment of funds to the implementation of projects through a national investment plan for SLM. The process of interactive participation of civil society actors into the development planning system needs to be institutionalized. There is also a need to develop a systematic approach to monitoring and evaluation of policies plans and programmes, which would allow for effective adaptive management. Moreover, a comprehensive land information system that includes inter alia forest land information as well as data on ownership, condition of land/resources, data on leases and zoning, needs to be developed that can be used by all the relevant land management authorities. Such an LIS system should include: a) a protocol on information sharing and conditions of access; b) identification of overlaps and avoidance of unnecessary duplication; and c) identification of key information gaps and of measures to fill the gaps.

Project Rationale and Objective

50. The implementation of the MSP for Capacity Development and Mainstreaming for Sustainable Land Management is necessary to build capacities for the successful implementation of the National Action Programme to Combat Land Degradation in Trinidad and Tobago. Without its implementation the barriers to the mainstreaming of sustainable land management would persist and not provide an enabling environment for the effective implementation of the NAP, and the process of land degradation would continue to be a major threat to the sustainable development of Trinidad and Tobago. The funding provided by GEF under this project would:

- stimulate activity for the integration of sustainable land management into the development planning framework;
- allow for the enhancement of technical skills within relevant government agencies and resource users; and
- enable the development of public education initiatives that would raise public awareness and sensitivity, and which could lead to the behavioural change proposed in the NAP;
- Strengthen the capacity of civil society organizations to allow for their interactive involvement in the implementation of the NAP in the spirit of the bottom up participatory approach of the UNCCD;
- mobilize adequate financial resources for the successful implementation of the programmes and projects articulated in the NAP.

51. This project is part of the UNDP/GEF LDC and SIDS Targeted Portfolio Approach for Capacity Development and Mainstreaming of Sustainable Land Management. The project addresses all three of the outcomes under Immediate Objective 1 of this umbrella project:

- Cost-effective and timely delivery of GEF resources to target countries – Trinidad and Tobago is one of the LDC/SIDs countries to be funded under the Portfolio Approach.
- Individual and institutional capacities for SLM will be enhanced – a large part of this project is directed towards these types of capacity building.
- Systemic capacity building and mainstreaming of SLM principles – this project also addresses policy development and mainstreaming of SLM.

52. The overall goal of the project is to promote global and local benefits through provision for and maintenance of ecosystem health, integrity, stability and function in the context of Trinidad and Tobago's plan for sustainable economic development.

53. The principal objective of the MSP is to halt and reverse land degradation by:

- establishing an enabling environment to combat land degradation through a participatory process;
- capacity building; and
- mainstreaming of SLM into national development strategies, processes and resource allocation.

Expected Project Outcomes and Outputs

The project will have the following Outcomes and Outputs:

54. **Outcome 1: SLM is mainstreamed into national development plans, programmes and policies:**
Total cost: US\$273,916; GEF request: US\$153,416; Government Contribution (In-kind): US\$120,500.

- Output 1.1: A land degradation awareness programme is implemented with key stakeholders at all levels;
- Output 1.2: : NAP objectives integrated into sector policies (energy policy, agriculture policy, forest policy, protected areas policy, national spatial strategy); and,
- Output 1.3 National legislative and regulatory instruments revised to incorporate principles of SLM and to implement NAP

55. **Outcome II – Strengthening of institutional and individual level capacities to implement SLM and the NAP.** Total cost: US\$694,025; GEF request: US\$166,025; Government Contribution (In-kind): US\$528,000.

- Output 2.1: The establishment of a Land Management Coordinating Committee (LMCC) for NAP implementation;
- Output 2.2: A communication system for improved and timely reporting to all stakeholders, on progress of NAP implementation and UNCCD commitments;
- Output 2.3: Design and establish a National Monitoring System for land degradation and drought to facilitate regular updates of national land use planning;
- Output 2.4: The LIS database online and functioning;
- Output 2.5: Training of technical staff in analytical applications for decision making to support SLM planning, and operation, maintenance and information-access of the LIS; and,
- Output 2.6: : Trained farmers and other resource users (within construction, quarrying, commercial, energy-related sectors) practicing SLM

56. **Outcome III - Resource Mobilization to Support SLM and the Implementation of the NAP.**

Total cost: US\$95,559; GEF request: US\$83,559; Government Contribution (In-kind): US\$12,000.

- Output 3.1: Resource mobilization plan linked to priority areas identified in the NAP;
- Output 3.2: Medium term financing plan (**part of the** resource mobilization plan developed to finance NAP Implementation);
- Output 3.3: Development of investment plans in key economic sectors (agriculture, tourism, construction, commercial, **energy**) that incorporate priority actions for SLM as defined in NAP prepared; and,
- Output 3.4: Development of sector incentive regimes that include Payment for Environmental Services (PES)Develop competencies in Geographic Information Systems

57. **Outcome IV –Lessons Learnt through Monitoring and Evaluation** Total cost: US\$170,000; GEF request: US\$72,000; Government Contribution (In-kind): US\$98,000.

- Output 4.1: Project evaluated based on outputs from the Monitoring and Evaluation Plan;
- Output 4.2: : Project implementation through adaptive management;

Risks and Assumptions

58. It is assumed that mainstreaming SLM in government's plans and policies would be sustained and that awareness programmes would assist in motivating relevant government agencies to the integration of SLM into sustainable development plans and strategies. The recent establishment of the Multilateral Environmental Agreements Unit, within the Ministry of Planning, Housing and the Environment, which has responsibility for monitoring and implementing international obligations under the environmental treaties, has institutionalized arrangements for mainstreaming these obligations and is therefore expected to assume the responsibility for leading the implementation of this project thereby ensuring sustainability.

59. An additional assumption is the staff trained during the course of the project would be committed to continue working and an enabling environment would be provided for the effective implementation of skills learnt, as the institutional and human capacity of the MEA Unit is strengthened including coordination with relevant institutions

60. Given that the Government has recently adopted the NAP as national policy with respect to SLM, it is anticipated that there is commitment both at political and planning levels to the successful implementation of the NAP and the support for the required legislation.

Global and Local Benefits

61. The principal direct global benefit of the project is the enhanced capacity for ecologically and socially sustainable land management in Trinidad and Tobago. Indirect global benefits include:

- Maintenance of the structure and functions of unique ecological systems found on Trinidad and Tobago;
- Enhanced conservation of endemic and rare island biodiversity due to reduced deforestation, land degradation, reduced sedimentation in waterways, and improved health of coral reefs through improved development planning and regulatory capacity; and
- Reduction in global warming by enhancing carbon sequestration as well as through improved capacities and knowledge for sustainable agriculture and reduced deforestation.

62. The principal national benefits are the enhanced capacities for economic and financial sustainability of the agricultural, pasture and forest use systems of the country. Indirect national benefits include the following:

- Enhanced crop production through improved soil fertility maintenance;
- Reduced vulnerability to natural disasters by increased ability of all stakeholders to use modeling and predictive GIS tools;
- SLM contributes to the health of wetlands, waterways and coral reefs that are in turn critical for the tourism industry, for fishing and, in the mid to long-term, for avoiding catastrophic beach erosion;
- Greater empowerment and self-sufficiency of resource users and stakeholders to participate directly in the conception, monitoring and adaptive management of land;
- Greater integration of all actors in LM with a view to promoting a holistic approach to SLM.

63. The achievement of the outcomes of the project would greatly enhance co-operation of all actors in SLM so that activities would be mainstreamed. This should overcome the problem of overlapping roles and responsibilities and lead to greater productivity. The development and strengthening of capacities and knowledge systems for SLM would ensure that the necessary skills and equipment are available and that they could be utilized effectively. The result of all of these activities would impact positively on forest conservation, and therefore reduction of greenhouse emissions, global warming and climate change; biodiversity conservation; soil productivity would be enhanced through reduced erosion and increased quality of the surrounding marine waters of Trinidad and Tobago.

Linkages to IA activities and programs

65. The UNDP program in Trinidad and Tobago emphasizes meeting the MDG targets and the protection of the environment. In addition, the UNDP has actively supported the UN process for the 10-year review of the Barbados Plan of Action regarding sustainable human development of Small Island Developing States (SIDS) that took place in Mauritius in January 2005. In this context, coordination and synergies shall be fostered with other initiatives which are funded by the GEF Implementing Agencies and State donors. Emphasis shall be laid on cross-cutting initiatives as well as those that involve capacity assessment and capacity building activities. Further, the UNDP has supported enabling activities under other MEAs such as CBD, UNFCCC and the Montreal Protocol.

66. The enabling activities under the UNDP/GEF funded Climate Change Project under the UNFCCC would complement this project since it deals with reduction of greenhouse gas emissions that are implicated in global warming. There is a direct link between climate change activities and SLM since both seek to conserve forested areas. Similarly, the activities to eliminate the use of ozone-depleting substances funded by the Montreal Protocol Secretariat are also directly linked with global warming and as such Trinidad and Tobago has achieved 90% success in implementing the use of replacements for CFCs.

67. The National Capacity Needs Self Assessment (NCSA) Project funded by UNEP/GEF shall be complementary to the UNDP/GEF MSP on SLM. The NCSA Project has been approved and is being implementation. The NCSA process can contribute effectively to the achievement of Outcome II of the Project.

68. Synergy will be built with the UNEP/UNDP/GEF project on Integrated Watershed and Coastal Area Management that promotes management of the coastal area by controlling effluent upstream of the coastal area. This would be particularly useful in devising strategies for arresting hillside settlements, deforestation and forest fires.

69. This project will complement the capacity assessment of the Main Ridge in Tobago that is a joint undertaking of UNDP and the THA. This project will assess the carrying capacity of the Forest Reserve with a view to establishing user plans that are economically viable but yet do not compromise the integrity of the Reserve.

Stakeholder Involvement Plan

70. The key Stakeholders identified in this project include government ministries and statutory bodies, private sector groups, civil society bodies and resource users. A detailed Stakeholder Involvement Plan matrix is presented in Annex C with separate columns for the name of each stakeholder, the stakeholder's interest in SLM, the justification for inclusion of stakeholder and the expected role of the stakeholder in the project.

71. A multi sectoral Project Steering Committee to be known as the Land Management Coordinating Committee (LMCC) will be established and will comprise representatives of the following Ministries - the Ministry of Public Utilities, the Ministry of Agriculture Land and Marine Resources, the Ministry of Local Government, the Ministry of Planning, Housing and the Environment, the Ministry of Community Development Culture and Gender Affairs and the Ministry of Works and Transport, the Ministry of

Finance and the Tobago House of Assembly. The Committee will also include high level representation of the Environmental Management Authority, the University of the West Indies, the University of Trinidad and Tobago, the UNDP, the Caribbean Network of Integrated Rural Development, the Agricultural Society, and the Council of Presidents of the Environment (COPE). The principal tasks of the Committee will be to provide high level orientation and guidance to the implementation of the project, to ensure that the project develops in accordance with national development objectives, goals and policies, to pay special attention to the assumptions and risks identified in the Logical Framework and seek measures to minimize threats to the project success. In addition, the Committee will ensure collaboration among the institutions and free access to key documents, pay special attention to post-project sustainability and ensure the integration and coordination of project activities with other related government and donor funded initiatives. Staff of the collaborating agencies would also benefit from the training provided by the project. The establishment of such a committee is in keeping with the NAP, and its nomenclature is consistent with the terminology in the NAP.

1. The Ministry of Planning, Housing and the Environment (MPHE) is the NFP for the UNCCD and has responsibility for the administration of the UNCCD in Trinidad and Tobago and for implementation of the NAP. This Ministry is an important stakeholder and its divisions, (Town and Country Planning Division, Environmental Policy and Planning Division) as well as its statutory bodies and agencies (the EMA and the Chaguaramas Development Authority) have mandates and responsibilities that are directly or indirectly related to sustainable land management. The Multilateral Environmental Agreements Unit of the Environmental Policy and Planning Division of the MPHE will be the lead Executing Agency and will house the Project Management Unit (PMU) and will benefit from the addition of staff that would not only manage the project but would also enhance the capacity of the core staff of the Ministry.

2. The multi sectoral LMCC will act as the Technical Advisory Committee and will facilitate the necessary cross sectoral integration among relevant Ministries civil society and the private sector and ensure a people centered, participatory approach to the implementation of the project. In this regard, the committee will be vested with the authority to co-opt representation from various civil society groups in Trinidad and Tobago, as the need arises. Such civil society groups will include including 4H and Young Farmers Clubs (YFC), Caribbean Forest Conservation Association (CFCA), Protectors of the Environment, Fondes Amandes Reforestation Project and the various village councils in Tobago. They will contribute to traditional knowledge sharing in reviews, workshops and meetings. They will be an integral partner in the implementation of SLM in Trinidad and Tobago.

FINANCIAL PLAN

Streamlined Incremental Costs Assessment

73. **Global Environmental Objectives:** The Global Environmental Objectives of the project are to build capacity for sustainable management of the unique ecological landscapes of Trinidad and Tobago. The project will secure GEF incremental funding to complement other financing sourced from the GORTT, THA, the Partnership Initiative for Sustainable Land Management, FAO and UNDP for mainstreaming SLM into national plans and strategies, for human resource development in key sectors, for developing knowledge management capacities for integrated SLM and for implementation of the NAP.

74. **Systems Boundary:** The project will build capacity and address inconsistent policies to sustainable land management, by providing improved technical capabilities within Government, NGO and CBO stakeholders. In this manner it will address some of the root causes of land degradation in Trinidad and

Tobago and so assist in overcoming barriers to SLM. It will not deal with land degradation associated with beach erosion or with urban developments.

75. **Costing of Baseline activities.** The Baseline costs have been estimated over the period 2009-2011 as follows:

- **Mainstreaming of SLM** The Government of Trinidad and Tobago will invest an estimated US\$120,500 in the integration of SLM into strategic planning documents, including the National Forest Policy, National Spatial Strategy and other planning instruments, and in support of the development of the Land-related Education and Awareness Programme (LEAP) as described in the NAP.
- **Human Resource Capacities Needed for SLM** This element of the MSP is the most important due to its emphasis on the establishment of institutional capacities within State and NGO actors. It provides for the establishment of the LMCC, and the National Monitoring and Early Warning System (NMEWS) as called for under the NAP. In addition, it places an emphasis on the operationalization of the national Land Information System (LIS) and the training of stakeholders in the use of this system. The LIS is being developed within the Town and Country Planning Division of the MPHE and will facilitate national land use planning and greatly enhance natural resources management. Government co-financing for the LIS and the capacity building required for utilizing this system will be at least US\$528,000. It is expected that as the LIS is further developed the GoRTT's investment in this project will be increased by several factors. GEF funding will be used to establish protocols for LIS information sharing, conditions of access and the use of LIS for SLM monitoring, use of LIS in land use planning and zoning.
- **Resource Mobilization** This component of the project will realize the development of a medium term financial plan and resource mobilization plan for the NAP. This will involve development of a financial gap analysis and the identification of key economic incentives for institutionalizing the NAP. In this regard the GoRTT will provide US\$12,000 in-kind support for the professional and stakeholder consultative process to be funded through the GEF funded element (budgeted at US\$ 83,559).
- **Lessons Learnt & Monitoring and Evaluation** This component of the MSP will allow for the use of M&E lessons to be integrated into the other elements of the project and reinforce the role of the LMCC and its effectiveness. It will also allow for the inclusion of stakeholders in the evaluation processes for the MSP, and so increase the potential for the project to self-correct should various elements of the project be observed to be under-performing. In this regard, the GoRTT will provide US\$98,000 in support of this component of the project.

76. The GoRTT has invested **US\$16,275** in the completion of its NAP, which was an essential baseline activity to enable the development of the elements of the MSP. Other Baseline activities that qualify as Co-financing: Trinidad and Tobago is currently undertaking several activities which will enhance the integration of SLM into national land use/management strategies. These include the revision of the National Forest Policy (NFP), and development of a Protected Areas Policy. To date the Government has invested \$200,000 towards the development of these policies.

Project Budget

Table 3 summarizes the recommended cost benchmarks. Please refer to Annex B for the detailed Project Budget.

Table 3: Budget summary

Component	GEF	Gov't Co-finance	Total
Mainstreaming	153,416	120,500	273,916
Capacity Development	166,025	528,000	694,025
Medium Term Investment Plan and Resource Mobilization	83,559	12,000	95,559
Lessons Learnt & Monitoring and Evaluation ¹	72,000	98,000	170,000
Project Management	0	572,400	572,400
PDF - A	25,000	6,500	31,500
TOTAL MSP	500,000	1,337,400	1,837,400

Table 4: Detailed descriptions of estimated co-financing sources

Co-Financing Sources				
Name of Co-Financer (source)	Classification	Type	Amount (US\$)	Status
GoRTT	Government	In Kind	1,337,400	Committed
Sub-Total Co-financing			\$1,337,400	

Table 5: Project management Budget/cost

Component	Estimated consultant weeks	GEF(\$)	Other sources/In Kind (GoRTT) (\$)	Project total (\$)
Local consultants*	156	0	180,000	180,000
International consultants*	0	0	0	0
Professional Services ¹		0	150,000	150,000
Office facilities, equipment, vehicles and communications		0	200,000	200,000
Travel		0	32,400	32,400
Miscellaneous		0	10,000	10,000
Total		0	572,400	572,400

* Local and international consultants in this table are those who are hired for functions related to the management of project. For those consultants who are hired to do a special task, they would be referred to as consultants providing technical assistance.

¹ Professional Services of staff of the MEA Unit of the Ministry of Planning, Housing and the Environment

Table 6: Consultants Working for Technical Assistance Components:

Component	Estimated consultant weeks	GEF(\$)	Other sources/In Kind (GoRTT) (\$)	Project total (\$)
Local consultants	468	147,618	533,600	550,618

¹ M&E Functions and costs are in-kind contributions from the Government of Trinidad and Tobago as detailed at Table 7 of pages 38-39

<i>Component</i>	<i>Estimated consultant weeks</i>	<i>GEF(\$)</i>	<i>Other sources/In Kind (GoRTT) (\$)</i>	<i>Project total (\$)</i>
International consultants	0	0	0	0
Total	468	147,618	533,600	681,218

PART III: MANAGEMENT ARRANGEMENTS

PROJECT IMPLEMENTATION PROCESS

Institutional framework and project implementation arrangements

77. **General Framework:** The project will be implemented over a period of three years beginning in January 2009. The implementation agency for the project will be the UNDP Trinidad and Tobago Country Office. The project will be executed under UNDP National Execution (NEX) procedures. The lead executing agency for the project will be the Multilateral Environmental Agreements Unit of the Environmental Policy and Planning Division of the MPHE, which will be directly responsible for the timely delivery of inputs and outputs and for coordination with all other executing agencies. The project will receive high level guidance and oversight from the LMCC (SC). The TOR of the SC is presented in Annex D. The SC will normally meet once a month but may meet exceptionally as needed.

78. A **Project Management Unit (PMU)** will play a key role in project execution and will be responsible for the daily operations of the project guided by approved work plans and budgets. The Project Manager will oversee the overall implementation of the project and in coordination with the GEF-Implementing Agency (UNDP), will be responsible for achievement of the objectives and outputs of the Project. It will be attached to the Multilateral Environmental Agreements (MEA) Unit of the MPHE and will be headed by a Project Manager (PM) He/she will be a national professional recruited for the two-year duration of the project. The PM will work under the direction of the Head of the MEA Unit. He/she will be responsible for the application of all UNDP administrative and financial procedures and for the use of UNDP/GEF funds. The PM will have a small support staff (secretary/administrative assistant, accountant and driver) that will be provided by the MPHE. The PMU will have overall responsibility for project management, administrative, technical and financial reporting. The PMU will manage the selection process for all local contracts and recruitment of local consultants – this will be done in close consultation with other concerned executing agencies. This will include preparation of TORs, call for bids and organization of the selection process. This will all be done in close coordination with UNDP and with the contracts awarded by the Permanent Secretary of the MPHE. The PMU will manage and coordinate the execution of all local contracts.

79. **Responsibilities by Outcome** The Environmental Policy and Planning Division of the MALMR will have lead responsibilities for Outcome 1 -- Mainstreaming. This will be done in collaboration with the Forestry Division and EMA. The Town and Country Planning Division and independently recruited consultants will play key roles in the execution of Outcome 2 – Capacity Building. The Multilateral Environmental Agreements Unit and independently recruited consultants lead the implementation of the elements of Outcome 3 – Resource Mobilization. This will be done in close collaboration Ministry of Finance MALMR, and others. The MPHE will be the lead for Outcome 4 – Adaptive Management. This will be done in close collaboration with the NGO, CBO and other stakeholders.

Are they part of 28. or are they de Jure MPHE.
 ↳ MPHE.

80. Responsibilities for **managing funds** GEF funds will be administered by UNDP. The PMU will manage the execution and implementation of all contracts with local service providers. The PM will manage the GoRTT funds for the functioning of the PMU, under the direction of the Permanent Secretary of PHE. UNDP will advance funds for a three-month period. At the end of the three-month period, the PMU will submit justification for expenses and the funds spent will be renewed by UNDP.

81. Criteria and procedures will be developed for performance-based contracts with service providers. Under performance-based contracts, the service provider will be paid only for work completed. Work partially completed will be paid on a *pro rata* basis

Implementation Arrangements

82. UNDP through its office in Trinidad and Tobago will serve as the Implementing Agency. The project will follow the UNDP National Execution (NEX) modality. UNDP-Barbados will act to ensure that all implementation activities comply with policies outlined in UNDP's Programming and Financial manuals and are in line with UNDP GEF procedures. The project will comply with UNDP's monitoring, evaluation and reporting requirements as spelled out in the UNDP Programming Manual. The PMU PM will have lead responsibility for reporting requirements to UNDP. UNDP- Trinidad and Tobago will also act to provide management oversight and is ultimately responsible for project monitoring, evaluation, timely reporting by the PMU and ensuring the submission of annual audits to UNDP HQ. The regional Coordination Unit in Panama will provide technical backstopping, UNDP GEF policy advice and trouble shooting and advisory services as necessary.

83. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including among others, project hardware and vehicles purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgment to GEF.

Audit Requirements

84. The project will be audited on a yearly basis for financial year January to December as per NEX procedures and Global Environment Facility requirements. The Office of the Auditor General or a commercial auditor engaged by the Government will conduct the audit.

85. The Head of the Multilateral Environmental Agreements Unit shall also certify the yearly Combined Delivery Reports issued by UNDP based on financial statements prepared by the Project Accountant.

Legal Context

86. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement (SBAA) between the Government of Trinidad and Tobago and the United Nations Development Program as signed by the parties on 20th May 1976. The host country-implementing agency shall, for the purpose of the SBAA, refer to the government cooperating agency described in that Agreement.

87. UNDP acts in this project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to the UNDP as per the terms of the SBAA shall be executed '*mutatis mutandis*' to GEF.

88. The UNDP Resident Representative in Trinidad and Tobago is authorized to effect in writing the following types of revisions to this project document, provided s/he has verified the agreement thereto by the UNDP GEF unit and is assured that the other signatories of the project document have no objections to the proposed changes:

- (a) Revisions of, or addition to, any of the annexes to the Project Document;
- (b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of inputs already agreed to or by the cost increases due to inflation;
- (c) Mandatory annual revisions which re-phase the delivery of agreed project inputs, or reflect increased expert or other costs due to inflation, or take into account agency expenditure flexibility, and;
- (d) Inclusion of additional annexes and attachments relevant to the Project Document

89. **Intellectual property rights on data, study results, reports, etc.** All data, study results, information, reports, etc, generated with UNDP/GEF project funds will be the property of GoRTT and UNDP

PART IV: MONITORING AND EVALUATION

Monitoring and Evaluation Plan

90. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures and will be provided by the Project team and the UNDP Country Office (UNDP-CO) with support from UNDP/GEF Global Support Programme and includes the following elements.

91. The Logical Framework Matrix in Table 8 provides performance and impact indicators for project implementation along with their corresponding means of verification. These indicators have been derived from the Resource Kit for Monitoring, Evaluation and Reporting on GEF/UNDP supported Sustainable Land Management Medium Sized Projects in LDC and SIDS countries. The baseline situation in this document also utilizes these indicators.

92. Additional baseline information will be documented by the PMU and submitted to the UNDP Trinidad and Tobago Country Office and LMCC using the National MSP Annual Project Review Form in which all 'compulsory' and 'optional' questions and indicators will be completed by July 16th 2009 and updated by that date each year. For the optional indicators, the PMU will select the most appropriate indicators for the project and include these in the form. Those indicators included in the Logical Framework matrix are compulsory and will not be modified.

93. The PMU will use the Form as (a) a basis for the annual review of project progress, achievements and weaknesses; (b) as a basis for planning future activities; and (c) to feed into the UNDP Trinidad and Country Office –wide reporting and planning.

94. The PMU will work with the UNDP Country Office to complete two annual surveys that each respond to two of the compulsory indicators, which are (a) a compulsory indicator at the objective level of public awareness regarding sustainable land management and (b) a compulsory indicator for Portfolio Outcome 1 that requires a survey of a group of land users to determine the percentage that is satisfied with available technical support.

95. These surveys will be implemented with funding included in this MSP project budget.

96. **Monitoring Responsibilities, Events and Communication** – A detailed schedule of project review meetings will be developed by the PMU in consultation with project implementation partners and stakeholder representatives and incorporated into the Project Inception Report. The schedule will include (i) tentative time frames for Tripartite Reviews, Project Coordination Committee Meetings (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities (see Detailed Monitoring and Evaluation Plan and Budget, Table 2).

97. **Day to Day Monitoring of Implementation Process** will be the responsibility of the PMU, operating out of the Ministry of Planning, Housing and the Environment and based on the project's Annual Work Plan and its indicators. The PMU will inform the UNDP Trinidad and Tobago Country Office of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

98. **Periodic Monitoring of Implementation Process** – This will be undertaken by the UNDP Trinidad and Tobago Country Office through quarterly meetings with the project proponent or more frequently as deemed necessary. This will allow parties to take stock and troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. The Project Coordinator in conjunction with the UNDP/GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

99. **An Inception Report** will be prepared immediately following the Inception Workshop and submitted within three months of the project implementation. It will include a detailed First Year/Annual Work Plan divided in quarterly time frames detailing the activities and progress indicators that will guide project implementation during the first year of the project. This Work Plan will include the dates of specific field visits, support missions from the UNDP Country Office of the Regional Coordinating Unit (RCU) or consultants as well as time frames for meetings of the LMCC. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12 month time frame. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may affect project implementation. When finalized, the report will be circulated to project counterparts, who will be given a period of one calendar month in which to respond to comments or queries. Prior to the circulation of the Inception Report the UNDP Trinidad and Tobago Country Office and the UNDP/GEF regional Coordinating Unit will review the document.

100. **Quarterly Operational Reports:** short reports which will outline main updates in the project progress will be provided quarterly to the local UNDP county Office and the UNDP/GEF Regional office by the Project Team.

101. **Technical Reports** will be scheduled as part of the Inception Report. The Project Team will prepare a Draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the project and tentative due dates. Where necessary or applicable, the Reports List will be revised and updated and included in subsequent Annual Progress Reports. Where necessary, Technical Reports will be prepared by external consultants and will be comprehensive, including specialized analyses of clearly defined areas of research within the framework of the project and its sites. These technical reports will represent as appropriate, the project's substantive contribution to specific areas and will be used as the basis for dissemination of best practices at local, national and

international levels. Information from reports will be shared with the UNCCD Focal Point and the LMCC.

Annual Project Report (APR) and Project Implementation Review (PIR)

102. The Annual Project Report (APR) is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self-assessment report by project management to the Country Office (CO) and provides CO input to the reporting process and the Results Oriented Annual Report (ROAR), as well as forming a key input to the Tripartite Project Review. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project managers and offers the main vehicle for extracting lessons from ongoing projects. These two reporting requirements are so similar in input, purpose and timing that they have now been amalgamated into a single Report.

103. An APR/PIR is prepared on an annual basis following the first 12 months of project implementation and prior to the Tripartite Project Review. The purpose of the APR/PIR is to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The APR/PIR is discussed in the TPR so that the resultant report represents a document that has been agreed upon by all of the primary stakeholders.

104. A single, global APR/PIR is prepared by UNDP GEF. However, the PMU together with the UNDP Trinidad and Tobago UNDP Office have primary responsibility for providing the required information on the MSP implementation for this global exercise. This includes the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- Annual Work Plans and related expenditure reports
- Lessons learned
- Clear recommendations for future orientation in addressing key problems in lack of progress

105. The UNDP/GEF M&E Unit will analyse the individual APR/PIRs by focal area, theme and region for common issues/results and lessons. The Reports are also valuable for the Independent Evaluators who can utilise them to identify any changes in project structure, indicators, work-plan, etc. and view a past history of delivery and assessment.

Mid Term and Final Evaluation

106. The project will be subjected to two independent external evaluations. The UNDP Trinidad and Tobago Country Office could order an independent external Mid Term Review if (a) the project duration exceed two years, (b) the project encounters serious difficulties, (c) it is necessary to significantly redesign the project. The UNDP in coordination with the PMU may allow evaluation by the project team. The evaluation will take place three months before the project is operationally closed, prior to the terminal tripartite review meeting and will focus on determining progress being made towards the achievement of outcomes and will identify effectiveness, efficiency and timeliness of project implementation, highlight issues requiring decisions and actions and present initial lessons learnt about project design, implementation and management. The evaluation will also look at impact and sustainability of results, including the contribution to capacity development and achievement of global environment goals.

Audits

107. The government of Trinidad and Tobago will provide the UNDP Resident Representative with certified periodic financial statements and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Financial manuals. The Audit will be conducted by the Office of the Auditor General of the government of Trinidad and Tobago or by a commercial auditor engaged by the government. The project foresees an independent audit to be conducted at the end of the project by a recognised national firm.

Adaptive Management

108. Lessons learnt will be continuously extracted from the MSP Project. Lessons will be disseminated through the national network established by the NAP and through the National Coordinating Body for the UNCCD. Other mechanisms to be used include inter-agency MOUs, incorporation of MSP elements into Annual Work Plans and capacity development and training initiatives by Government Ministries and other State Agencies. In addition, there will be sharing of information between projects, stakeholders and policy representatives to ensure effective mainstreaming. There is an opportunity during the implementation of the MSP for review of the implementation of the NAP and to take into consideration the lessons learnt for the MSP.

109. The lessons learnt during the implementation of the MSP will be incorporated into the MSP. In addition to the monitoring, evaluation and feedback mechanisms already identified, the LMCC will review progress on a quarterly basis, identifying lessons learnt and discuss project progress with the involvement of a wider stakeholder audience as necessary. The ideas and lessons learnt will be incorporated into the management of the project and further implementation process by the LMCC with adjustments to the Work Plans required.

Table 7: Detailed M&E Plan and Budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team Staff time</i>	Time frame
Inception Workshop (IW)	<ul style="list-style-type: none"> ▪ Project Manager ▪ UNDP CO ▪ UNDP GEF 	\$0	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO 	\$0	Immediately following IW
Measurement of Means of Verification for Project Purpose Indicators	<ul style="list-style-type: none"> ▪ Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members 	\$4,000	Start, mid and end of project
Measurement of Means of Verification for Project Progress and Performance (measured on an annual basis)	<ul style="list-style-type: none"> ▪ Oversight by Project GEF Technical Advisor and Project Manager ▪ Measurements by regional field officers and local IAs 	\$10,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP-CO ▪ UNDP-GEF 	\$0	Annually
TPR and TPR report	<ul style="list-style-type: none"> ▪ PS, MPUE ▪ UNDP CO ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit 	\$0	Every year, upon receipt of APR
Steering Committee Meetings	<ul style="list-style-type: none"> ▪ Project Coordinator ▪ UNDP CO 	\$8,000	Following Project IW and subsequently at least once a month
Periodic status reports	<ul style="list-style-type: none"> ▪ Project team 	\$0	To be determined by Project team and UNDP CO
Technical reports	<ul style="list-style-type: none"> ▪ Project team ▪ Hired consultants as needed 	\$7,000	To be determined by Project Team and UNDP-CO
Mid-term External Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. evaluation team) 	\$18,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP- CO ▪ UNDP-GEF Regional Coordinating Unit ▪ External Consultants (i.e. 	\$20,000	During the last three months of the project.

	evaluation team)		
Terminal Report	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-CO ▪ External Consultant 	\$0	At least one month before the end of the project
Lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP-GEF Regional Coordinating Unit (suggested formats for documenting best practices, challenges) 	\$5,000	Yearly
Audit	<ul style="list-style-type: none"> ▪ UNDP-CO ▪ Project team 	\$8,000	Yearly
Surveys (2)	<ul style="list-style-type: none"> ▪ Project Management Unit, UNDP/GEF RCU, UNDP/GEF Task Manager, UNDP CO, Project Team 	\$6,000	At the outset of project implementation and mid-way through the project
Visits to field sites (UNDP staff travel costs to be charged to LA fees)	<ul style="list-style-type: none"> ▪ UNDP Country Office ▪ UNDP-GEF Regional Coordinating Unit (as appropriate) ▪ PS, MPUE ▪ EMA 	0	Yearly
TOTAL INDICATIVE COST <i>Excluding project team staff time and UNDP staff and travel expenses</i>		US\$ 86,000	

RESPONSE TO GEF SECRETARIAT REVIEW

During the interval between the first submission and the resubmission of this proposal, there were a few factors that affected delays in submission of the proposal:

- A structural change in the organizational structure of the government causing addition of an Environment section to the Ministry of Planning, Housing and the Environment
- Changes in staffing in key line ministries including the Ministry of Planning, Housing and the Environment, the executing agency for this project including three changes of Permanent Secretary in the Ministry of Planning, Housing and the Environment,
- In addition, there were elections which entailed further changes in the government agencies responsible for developing this project.

Provide a concise response to all points raised by GEF Secretariat after first submission (if any).

GEFSEC Comment	Response	Location where document was revised
Endorsement letter	The Letter of Endorsement dates from August 2005 and the Government of Trinidad. Following guidance from GEF Secretariat, UNDP has requested the Government of Trinidad and Tobago to provide a new and updated Letter of Endorsement.	Section III: Additional Information PART I: GEF Operational Focal Point Endorsement Letter, Page 63
Project Design The project seems to be premature and this is reflected in an incomplete project document. Main sections are incomplete and need to be finalized before resubmission	The project document has been completely rewritten and is now fully compliant with the quality standards that characterize UNDP Project Documents.	Entire Project Document
Co-financing letters No co-financing letters are attached to the project document.	In the course of the preparatory process the co-financing for the project was confirmed, and the Government of Trinidad and Tobago provided the corresponding letter. All co-financing is provided by the Government.	Part II, Page 64
Budget The detailed GEF-relevant budget information are missing. Please complete	The detailed Financing Plan and budget, including the respective budget notes, have been completed.	Financial Plan, pages 26-29 Total Budget and Work Plan, Annex B, pages 55-57
Overall quality The MSP is not in line with the agreed conditions for submission under expedited procedure and for technical clearance. The document seems incomplete and work in progress. Please finalize and resend.	As noted above, the project document has been completely rewritten and now complies with conditions for submission	Entire Project Document

SECTION II: STRATEGIC RESULTS FRAMEWORK

Table 8 - Logical Framework for Sustainable Land Management in Trinidad and Tobago

Project Strategy	Objectively verifiable indicators			Target and Timeframe (by Quarter – Q)	Sources of verification	Risks and Assumptions
	Indicator	Baseline				
<p>Goal: <i>To promote global and local benefits through provision for and maintenance of ecosystem health, integrity, stability and function in the context of Trinidad and Tobago's plans for sustainable economic development</i></p>						
<p>Objective of the project: to halt and reverse land degradation by establishing an enabling environment to combat land degradation through a participatory process, capacity building, and mainstreaming of SLM into national development strategies, processes and resource allocation</p>	<p>Best practices and guidelines for SLM are broadly disseminated and used for development planning</p> <p>Gaps and constraints within the legislative and administrative framework for SLM identified</p> <p>Mechanisms for the Implementation of National Action Plan to Combat Land Degradation in Trinidad and Tobago are established</p>	<p>SLM not fully integrated into the development planning process.</p> <p>Legislative and administrative systems not responsive to SLM</p> <p>National Action Plan is completed and has received the approval of Cabinet</p>	<p>Inclusion of SLM in the decision-making processes utilized by national planning agencies, guided by the NAP</p> <p>Review and amendment of legislative and administrative systems for SLM</p> <p>Implementation is scheduled for the period 2006-2020 in three phases: - 2006-2008, 2009 to 2013 and 2014 to 2020.</p>	<p>Inter-agency guidelines for SLM integration into planning, developed and disseminated</p> <p>Enactment and/or amendment of appropriate SLM legislation</p> <p>Reports to the UNCCD and other relevant national, regional and international bodies.</p>	<p>Lack of cross-sectoral support for SLM integration into traditional planning processes.</p> <p>Legislative revisions not afforded priority in legislative agenda by Parliament</p> <p>Institutional, administrative and financial capacity constraints limit implementation of the NAP</p>	

<i>Objectively verifiable indicators</i>				<i>Risks and Assumptions</i>
<i>Project Strategy</i>	<i>Indicator</i>	<i>Baseline</i>	<i>Target and Timeframe (by Quarter – Q)</i>	<i>Sources of verification</i>
<i>Outcome 1: SLM mainstreamed into national development policies, programmes, and plans.</i>	1.1 % increase in awareness of land degradation issues and effects on the national economy and on poverty reduction.	Low level of awareness. Level (category) to be documented during the inception phase of the project through a baseline Awareness Survey.	High level of awareness (>80%) of respondents to Awareness Survey by GO and NGO partners and 50% of general public demonstrate awareness by the end of the project. (Q1-Q8)	Motivation by government authorities will not decrease with changes in political administration Awareness messages by media and other agencies have a positive effect on motivating planning authorities to facilitate the process of integration of SLM into sustainable development plans and strategies.
	1.2 Land-related Education and Awareness Programme described in the NAP established	Lack of a systematic education programme on SLM	Gap analysis completed; Land related education for school developed and implemented; Development of community-based education programme developed and implemented; establishment of Trinidad and Tobago land internet portal. (Q1 – Q4)	Results of awareness survey at the national level with stratification at the ministry level taken twice at inception and final phase of project. Publication of gap-analysis and awareness materials; Inclusion of SLM issues into schools syllabi There is commitment both at the political and planning levels for the implementation of the NAP.

<i>Objectively verifiable indicators</i>					
<i>Project Strategy</i>	<i>Indicator</i>	<i>Baseline</i>	<i>Target and Timeframe (by Quarter – Q)</i>	<i>Sources of verification</i>	<i>Risks and Assumptions</i>
	1.3 Planning and policy documents revised to include SLM and measures for social, cultural and economic analyses of land use options oriented towards NAP implementation.	There are ongoing efforts to revise policy instruments in a number of government agencies.	Integration of SLM into government policies in the areas of energy, agriculture, forestry , protected areas and national spatial planning (Q3 – Q7)	Revised policy documents.	Lack of priority placed on legislative agenda for SLM
Outcome2: Strengthening of institutional and individual level capacities to implement SLM and the NAP	2.1 The Land Management Coordinating Committee (LMCC) for the NAP is established and operationalized.	The present LMCC is an ad hoc entity with no clear mandate as it relates to NAP implementation.	The LMCC is Cabinet appointed. (Q1) Establishment of NAP Secretariat (Q1) Establishment of community coordinating committees (Q1)	Terms of reference for Members of the LMCC. Members of community coordinating committees designated Minutes of meetings	Willingness of individuals to participate in committee activities. Approval of Cabinet for the establishment of the LMCC and other committees Financial support for establishment of the NAP Secretariat

<i>Objectively verifiable indicators</i>					
<i>Project Strategy</i>	<i>Indicator</i>	<i>Baseline</i>	<i>Target and Timeframe (by Quarter – Q)</i>	<i>Sources of verification</i>	<i>Risks and Assumptions</i>
	2.2 An effective communication system to report NAP implementation and SLM issues to stakeholders developed	Lack of effective communication system between stakeholders on SLM and NAP implementation and status	Establishment of an effective communication and reporting systems (Q2 – Q4)	Functional internet and print media information provided on a frequent basis to stakeholders Surveys	Availability of personnel and financial resources on a timely basis to sustain the communications programme
	2.3 A National Monitoring and Early Warning System (NMEWS) for Land Degradation and Drought Prediction operational	Lack of a national early warning system for drought or for monitoring land degradation	Develop a framework to address the technological and human resource requirements for assimilation and dissemination of nationally relevant information on drought and land degradation predictions (Q1 – Q6)	Publication of a draft national framework for drought and land degradation monitoring and prediction (including details of human resource and technological requirements for establishment of the NMEWS	Availability of information for modeling; Participation of sector experts in framework development All stakeholders have the capacity to participate in proposed NMEWS framework

<i>Objectively verifiable indicators</i>		<i>Target and Timeframe (by Quarter – Q)</i>	<i>Sources of verification</i>	<i>Risks and Assumptions</i>
<i>Project Strategy</i>	<i>Indicator</i>			
	2.6 The capacity of relevant national NGOs and community based organizations and resource users are enhanced for playing effective roles in the implementation of the NAP.	Relevant NGOs, community based organisations and resource users (including farmers and other private land owners) are knowledgeable of the contents of the NAP and at least 20 are trained to execute the roles identified for them in the NAP. (Q4 – Q8)	Level of participation in workshops and training programmes. Results of Survey to determine increased knowledge and skills development.	working and effectively applying skills learnt within their respective institutions. Multiple institutions will be willing to share information.

<i>Objectively verifiable indicators</i>					
<i>Project Strategy</i>	<i>Indicator</i>	<i>Baseline</i>	<i>Target and Timeframe (by Quarter – Q)</i>	<i>Sources of verification</i>	<i>Risks and Assumptions</i>
<i>Outcome 3: Resource mobilization to support Sustainable Land Management and Implementation of the NAP</i>	<p>3.1 A resource mobilization plan for NAP implementation developed.</p> <p>3.2 A medium term financial plan for NAP implementation developed.</p> <p>3.3 Investment plan for key economic sectors developed (agriculture, tourism, construction, commercial, energy).</p> <p>3.4 A sector incentives regime that includes payments for environmental services is developed.</p>	<p>No formal SLM investments programme exists. Resources for implementing the NAP/SLM are provided on an ad-hoc basis in the annual national budgetary process</p>	<p>A holistic financial investment framework is formalized and developed to ensure the sustainable implementation of SLM and the NAP. (This financial framework makes explicit recognition of payments for environmental services) (Q4 – Q8)</p>	<p>Final resource mobilization plan, medium term plan, and sector incentives regime are published and circulated to key stakeholders</p>	<p>The investment climate remains favourable.</p> <p>The private sector accepts responsibility for SLM financing.</p> <p>The government and key institutions will commit the resources needed to maintain the effort beyond the life of the project.</p> <p>High level of donor interest to support NAP implementation.</p>

		Objectively verifiable indicators					
Project Strategy	Indicator	Baseline	Target and Timeframe (by Quarter – Q)	Sources of verification	Risks and Assumptions		
<i>Outcome 4: Effective project management, through learning, evaluation, and adaptive management.</i>	All elements of the Monitoring and Evaluation Plan for this project are fully implemented	M & E system does not exist.	An M&E system that allows adaptive management of the project and for identification of lessons learned that can be widely accepted.	Final project evaluation describes replication aspects. Systematization document distributed Annual Progress Reports	Project is fully implemented. Annual project reports, interim reports, audits and other review documents are prepared		
	Establishment of the Land Management Coordinating Committee	LMCC does not exist, however an ad-hoc Committee to Guide the Formulation of the NAP was temporarily convened during the NAP preparation	LMCC established and constituted in a manner that represents all relevant stakeholders	LMCC reports	LMCC personnel are willing to serve on committee		
	Establishment & operation of Project Implementation Unit	PIU does not exist	Unit is operational within 1 month of Project start-up. (Q1 – Q8)	PIU personnel contract(s)	Personnel recruitment, equipment procurement and other administrative requirements for PIU are provided in a timely basis		

Table 9: Work Plan

		Activities							
Output		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1.1. A land degradation awareness building programme is implemented with key stakeholders at all levels.	1.1.1. Undertake a needs assessment of current land related education and awareness programmes in order to determine the gaps and develop mechanisms for addressing these gaps								
	1.1.2. Workshops/public events to gather information on local effects of land degradation and steps to combat land degradation at the local level and national levels.								
	1.1.3. Development of a Land Education Awareness Programme (LEAP)								
	1.1.4. Produce and distribute land degradation information packages in print and power-point presentation to support Municipalities, GOs and NGOs in information campaigns, based on LEAP.								
	1.1.5. Preparation of a film documentary on municipal-level examples of types, causes, and effects of Land Degradation and desertification processes (Salinization, Inappropriate land management, Inappropriate management practices, poor infrastructure and maintenance, soil contamination, settlement effects), based on LEAP.								
1.2. NAP objectives integrated into sector policies (energy policy, agriculture policy, forest policy, national parks policy, national spatial strategy).	1.2.1. Sector specific workshops (GO sectors, NGOs and CBOs, and local government) to harmonize sector and NAP objectives within the context of sector development policies.								
	1.2.2. Develop sector specific policies to support NAP implementation.								
	1.2.3. Inter-agency and inter-sector agreements to support objectives in line with sector policies.								

Output	Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1.3. National legislative and regulatory instruments revised to incorporate principles of SLM and to implement NAP	1.3.1 Review and (redraft) amend as necessary the existing legislative framework for SLM (including Forest Act, Conservation of Wildlife Bill, National Parks and other Protected Areas Bill) based on the sector specific policies.								
	1.3.2 Conduct consultations with all key stakeholders on the redrafted/amended legislative framework.								
	1.3.3. Finalize legislative framework for parliamentary approval.								
2.1 The establishment of a Land Management Coordinating Committee (LMCC) for NAP implementation	2.1.1. Development of terms of reference for the LMCC in consultation with key stakeholders.								
	2.1.2. Consult with key stakeholders in identifying LMCC membership								
	2.1.3. Appointment of LMCC membership by Minister of PHE								
2.2 A communication system for improved and timely reporting of progress towards NAP objectives and UNCCD commitments implemented.	2.2.1. Develop communication tools and protocols (including print and internet-based media).								
	2.2.2. Agreements with municipalities, NGOs, CBOs and Government Agencies on actions for reporting LD problems and actions in support of common objectives to combat land degradation.								
	2.2.3. Training of stakeholders in the use of the system tools and reporting protocols (Government agencies, Municipalities, and NGOs and CBOs).								
	2.2.4. Establishment of protocols for processing information and regular reporting of results to National and International partners in communications to UNCCD, other MEAs , PRSP, and PND.								
2.3 Design and establish a national monitoring system for land degradation and drought to facilitate regular updates of national land use plans.	2.3.1. Review of existing national systems for drought forecasting and land degradation modeling.								
	2.3.2. Technical workshops for selecting indicators and developing methodologies for establishment of a national monitoring and early warning system (NMEWS).								
	2.3.3. Develop cost and technical proposals for NMEWS for inclusion in mid-term financial plan								

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Output	Activities							
2.4. The Land Information System is online and functioning.	2.4.1. Assess existing land, social, economic information systems and identify gaps and needs to upgrade the system to meet the SLM needs of the relevant stakeholders							
	2.4.2. Develop an interagency protocol on information access and sharing and data standards.							
	2.4.3. Create the land use data base and information system that provides real-time internet based land information to all stakeholders.							
2.5: Training of technical staff in analytical applications for decision making to support SLM planning, operation, maintenance and information access of the LIS.	2.5.1 Assess training needs among the technical staff of stakeholder institutions, agencies and NGOs/CBOs to enable full use, and development of LIS							
	2.5.2 Develop an interagency/ stakeholder training plan for use of the LIS							
	2.5.3 Implement training plan for interagency/NGO-CBO users on use of LIS							
2.6 Train farmers and other resource users in practice of SLM	2.6.1 Preparation of extension information on sustainable land management practices, specific to the tourism, agriculture, construction, quarrying, and energy related sectors.							
	2.6.2 Dissemination of Training Materials							
	2.6.3 Conduct at least 3 seminars in Trinidad and 1 Seminar in Tobago on SLM techniques for the tourism, agriculture, construction, quarrying, and energy related sectors.							
3.1: Resource Mobilization Plan linked to priority areas identified in the NAP	3.1.1. Financial Gap analysis to define the assets and investments necessary to combat land degradation based on NAP, operations plans, and cost proposal for establishment and monitoring of indicators.							
	3.1.2. Inventory of Government Actions, Investments, and Services.							
	3.1.3. NGO inventory and assessment to determine areas of influence (technical and geographic), capacity, and assets for technical actions and for financing SLM.							
	3.1.4. Workshops to develop and validate the resource mobilization plan.							

Output	Activities	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
3.2: Medium-term Financing Plan (Part of the Resource Mobilization Plan) developed to finance NAP implementation and action plans.	3.2.1. Identification and analysis of potential financing sources and mechanisms to close the financial gap per gap analysis								
	3.2.2. Defined and/or improved structure to facilitate investments over the mid-term and financing of the strategic plan.								
	3.2.3. Workshops to develop the Financing strategy and plan.								
	3.2.4. Draft the Financing Plan								
3.3 Investment plan for key economic sectors (tourism, agriculture, construction, energy)	3.3.1 Stakeholder consultations to identify key economic investments for SLM in the priority sectors								
	3.3.2 Draft investment plan for SLM prepared								
	3.3.3 Investments plan mainstreamed into annual interagency budgets								
3.4 A sector incentives regime that includes payments for environmental services	3.4.1 Stakeholder consultations to identify key economic incentives for SLM in the priority sectors								
	3.4.2 Draft incentives plan for SLM prepared								
	3.4.3 Incentives plan mainstreamed into annual interagency budgets								
4.1: Project evaluated in accordance with a Monitoring and Evaluation Plan, which provides for robust adaptive management.	4.1.1 Establishment of PIU								
	4.1.2 LMCC established								
	4.1.3 Project audits and reports completed								
4.2: Lessons learnt from Project recorded and disseminated.	4.2.1 Participatory evaluations								
	4.2.2 Events for dissemination of lessons learned								
	4.2.3 Yearly workshops to incorporate lessons learned into the Annual Action Plans								
	4.2.4 Participatory annual meetings, Mid-term and final project evaluations								

Annex A: LAND DEGRADATION ROOT CAUSE MATRIX – Trinidad and Tobago

Items in italics in the column "Potential Corrective Mitigating Measures" are those that have been integrated into the project log frame. Other mitigating measures not addressed by this project will be addressed by the SLAM investment plan and through training and capacity building.

Type of Land Degradation	Bio-Physical Impacts	Root Causes	Potential Corrective/ Mitigating Measures
1. Deforestation	<ol style="list-style-type: none"> 1. Loss of habitat/biodiversity 2. Loss of vegetative cover resulting in soil erosion 3. Significantly lowers water table and causes siltation in watercourses 4. Increases flooding and reduces perennial stream flow 	<ul style="list-style-type: none"> • Clearing for non-sugar agriculture <ul style="list-style-type: none"> • Tradition of top-down approaches towards soil conservation measures • Poor development of participatory approaches to agricultural extension • Practice of agriculture on sloping land without adequate soil and water conservation measures (bands of vetiver, terraces, mulching, etc); • Inadequate use of soil nutrients leads to depletion of nutrients; • Subsistence agriculture, especially in Tobago, does not generate enough profit and incentives for investments in sustainability; • Improper use of chemical fertilizers that leach into the water table • Land tenure – the land lease system is largely dysfunctional. • Insecurity of tenure is a major disincentive to investments in sustainable agriculture. • Clearing for sugar cane plantations <ul style="list-style-type: none"> • Some small planters and estate planters still burn residues and plow to replant, leaving soil exposed to heavy rains; • Many planters use bulldozing to rake out topsoil and pile soil and residues; • Mechanization and heavy equipment causes soil compaction. The severity of this phenomenon is contested; • Farmers have little incentive to invest in soil conservation/sustainable agricultural practices; • Ecological sustainability is dependent on the financial sustainability – this is largely dependent on the sugar subsidy from the EU; • The pending reductions or loss of the sugar subsidy may lead to major changes in land use, some of which may be much less sustainable than the present systems of sugar cane cultivation. 	<ul style="list-style-type: none"> • <i>Development of an equitable, functional leasing system for agricultural land.</i> • <i>Development of incentives (such as Agricultural Development Certificates) for leasees to adopt sustainable, soil conserving practices and disincentives for destructive practices ;</i> • Analysis of pros and cons of privatization of agricultural land • <i>Identification and synthesis of best practices for sustainable agriculture and their integration into agricultural development strategies and extension programs ;</i> • <i>Development of strategies to improve the profitability of agriculture thereby making investments in sustainable agriculture more feasible ;</i> • Studies on soil nutrient depletion and development of capacities for soil testing to identify needs for soil amendments. • Development of systems whereby downstream beneficiaries of erosion control and increased infiltration contribute to the costs of investments in sustainable practices. • <i>Remote sensing based monitoring and enforcement of regulations requiring vegetation strips left on each side of steam courses</i> <p>Sugar cane plantations</p> <ul style="list-style-type: none"> • <i>Identification of alternative land uses and analysis of the ecological, economic/financial and social sustainability of each in order to identify the SLAM practices to be encouraged through policy, regulations and incentives.</i>

Type of Land Degradation	Bio-Physical Impacts	Root Causes	Potential Corrective/ Mitigating Measures
		<ul style="list-style-type: none"> • Clearing for quarrying <ul style="list-style-type: none"> • No system for monitoring forest clearing for quarrying • No accurate maps of lease lands • Few incentives for enforcement • On privately owned forest land <ul style="list-style-type: none"> • Infringement of use of lands not penalized as no systems in place • No penalties even in presence of pieces of legislation <p>The nexus between private and state lands:</p> <ul style="list-style-type: none"> • Clearing/conversion on privately owned land • Clearing of forest land and conversion to other land uses, especially agriculture • The extent and nature of this problem is not known because Forestry Division has no accurate forest cover maps, nor forest information system or monitoring capacity for privately owned forest lands • Lack of awareness of general public/decision makers • Clearing/conversion on State forest lands <ul style="list-style-type: none"> • Encroachment by adjoining private land owners • No monitoring or enforcement systems • Boundary markers lost/not visible – boundaries not marked • Clearing for settlements <ul style="list-style-type: none"> • Clearing for housing • Clearing by squatters 	<ul style="list-style-type: none"> • Awareness raising on forest loss • Develop remote-sensing based system for monitoring forest clearing for agriculture, quarrying and squatting on state-land and for forest conversion on private land • Diffusion of monitoring results to general public and decision makers • Develop Forest Service capacity for enforcement of regulations on clearing on lease land • Develop forest management systems that combine clearing for agriculture with reforestation systems • Develop regulations governing forest clearing on private lands • Assessment of the nature and extent of the problem (using remote sensing/GIS) • Assessment of the sustainability and environmental impacts of the alternative land uses • Awareness raising • Participatory Development of appropriate regulations where needed • Use of remote sensing to identify sites of obvious or potential encroachment • Field checks by forest officers • Enforcement • Development of land information system • Land use planning and zoning • Enforcement of zoning provision and land use restriction • Increased transparency in the land allocation/permitting systems

Type of Land Degradation	Bio-Physical Impacts	Root Causes	Potential Corrective/ Mitigating Measures
		<ul style="list-style-type: none"> • Cross-cutting root causes: <ul style="list-style-type: none"> • Forestry Division does not have accurate, up-to date maps of forest cover by cover type, ownership, condition • There is no computerized Forest Information System (FIS) combining forest type, land ownership, forest condition, sustainable forest uses; • Perceived lack of political will; • Insufficient trained manpower • Economic/financial incentives for forest protection/sustainable use are not developed • Sustainable forest management systems are not developed • Capacity for monitoring and enforcement are weak 	<ul style="list-style-type: none"> • Participatory definition of FIS needs • Develop capacity for accurate forest cover mapping using remote sensing and ground truthing • Develop GIS-based FIS capacity with data on forest type, land ownership, forest condition, etc. • Use these tools to analyze causes of forest loss on private and to develop appropriate measures • Awareness raising for decision makers, general public • Develop tools and capacity for economic and financial analysis of costs and benefits of forest use/management options and identification of economic/financial incentives for sustainable management of forests
2. Inland and coastal erosion	<ul style="list-style-type: none"> • Erosion causes loss of fertility, decrease of soil depth, decrease in soil organic matter and water holding capacity; • UWI study shows loss of 68 tonnes of soil per hectare from Maracas/Matelot soil over two rainy seasons, with up to 55 tonnes of soil per hectare lost from bare soil in a 3-month period • Another study on Concordia soils in Tobago showed extremely high soil losses from bare soil of between 100 and 150 tonnes per hectare per annum. 	<ul style="list-style-type: none"> • Inland erosion <ul style="list-style-type: none"> • Extent of soil fertility unknown; • Improper use of fertilizers; • Control of fertiliser use by type unknown; • Piecemeal legislation on land use patterns • Lack of monitoring of land use especially on hillsides; • Lack of enforcement of existing laws; • Soil left bare by pasture grazing (limited). • Coastal erosion <ul style="list-style-type: none"> • No setbacks observed; • No allowances made for natural coastal degradation • ODPM not ready to deal with damage to coastlines from disasters; • No disaster contingency plan; • Land salinisation affecting coastal vegetation. 	<ul style="list-style-type: none"> • Accurately determine soil types and fertility • Commission studies on causes of soil erosion • Develop an awareness programme for farmers in collaboration with NGOs and CBOs to sensitise them to best practice e.g in the use of fertilisers; • ODPM needs to develop a plan of action for addressing coastal erosion from disasters; • Develop a disaster management contingency plan; • Erection of coastal defenses; • Implement a short-term programme to immediately address soil infertility

Type of Land Degradation	Bio-Physical Impacts	Root Causes	Potential Corrective Mitigating Measures
	<ul style="list-style-type: none"> • Depletion of soil phosphate and other nutrients limits the choice of crops that can be grown. • Diminished levels of soil organic matter and loss of water-holding capacity and degraded soil structure • Soil compaction reduces infiltration and inhibits root growth • IMA study showed severe coastal erosion in Cedros and Icaos. 		
3. Severe degradation from fire on steep slopes in Northern Range and Main Ridge	<ul style="list-style-type: none"> • Repeated fires have converted natural forest to grasslands with scattered shrubs • Repeated fires prevent the establishment of evergreen woody cover that is resistant to forest fires. • Soil erosion • Diminished groundwater recharge • Excessive/rapid runoff rates. • Danger of flooding • Landslides 	<ul style="list-style-type: none"> • Use of fire is considered to be the principle cause of the past degradation of these sites from forest to grassland or savanna and fire is the principal impediment at present preventing the reforestation of these areas. If closed canopy forests could be reestablished, they should be much less susceptible to fire. • Slopes were once commonly burned by herders to obtain succulent regrowth from perennial grasses for goats/livestock during the dry season (The importance of this factor has diminished as goat herding has diminished); • Other reasons for burning – including criminal burning; • Limited budget/resources of the land management authority (Forest Department); • No economically viable, proven models/techniques/models for restoring these sites to full, evergreen forest cover and for sustainable management of the restored forest; • Municipality contributes nothing towards restoration and sustainable land management. • Squatters established illegally on these mountains; • Use of fire as a tool for clearing the land – slash and burn. • Access to land tenure – Land is owned by the State and private companies. Local populations have little incentive to protect. 	<ul style="list-style-type: none"> • <i>Identification and testing of innovative options for minimizing frequency and intensity of wildfires – such as grazing by cattle to reduce grass cover and fire danger or use of very early, light, patchy, partial controlled burns to minimize dry season wildfires.</i> • <i>Strengthening of multi-disciplinary, participatory, intersectoral approaches including civil society groups;</i> • <i>Development of adaptive management approaches for monitoring fire risk management and reforestation options tested and for modifying techniques accordingly ;</i> • <i>Economic/financial analyses to identify the most cost effective fire control and reforestation systems</i> • <i>Program of awareness raising, fire prevention and control</i> • <i>Enforcement to prevent settlement by squatters.</i>

Type of Land Degradation	Bio-Physical Impacts	Root Causes	Potential Corrective/Mitigating Measures
4. Loss of wetlands (Lack of monitoring system does not allow quantification)	<ul style="list-style-type: none"> Loss of hydrological functions Loss of biodiversity 	<ul style="list-style-type: none"> Strong pressures for development of these economically high value sites; Condition/loss of wetlands is not being monitored systematically ; 2002 Environmental Act required EIA for any development of wetlands but lack of monitoring system makes it impossible to analyze how well this law is being respected; Many wetlands are on private lands making ground monitoring difficult; Institutional responsibilities and regulations for wetlands conservation are fragmented and unclear. 	<ul style="list-style-type: none"> Awareness raising on importance of wetlands ; Development of a wetlands conservation strategy for definition of clear institutional responsibilities, mobilization of adequate resources for definition of site-specific priorities; <i>Integration of wetlands into land information system</i> <i>Development of wetlands monitoring system using satellite imagery and ground visits and linked with clear enforcement capabilities.</i>
5. Degraded oil and gas installations	<ul style="list-style-type: none"> Contamination of land from oil wells and gas installations Utilisation of valuable agricultural and housing lands for oil and gas infrastructure 	<ul style="list-style-type: none"> Installations such as pipelines, wells, injectors, pumps and storage facilities which are out of main stream production are a source of leaks; Accidental spills, wellhead blowouts render land infertile; Strong economic pressures to exploit oil and gas resources; 	<ul style="list-style-type: none"> Identify all abandoned oil and gas installations and decommission them; Establishment of minimum procedures and processes to be used in the clean up of oil polluted areas, including soil remediation; <i>Operationalisation of the health and safety Inspectorate to equip inspectors with the knowledge base, institutional capability and commitment to effectively monitor oil and gas operations and penalize non-compliant operators;</i> <i>Negotiations with oil companies to determine location of oil and gas infrastructure.</i>

Annex B - Total Budget and Work Plan

Award ID:	42982							
Award Title:	PIMS 3450 Trinidad and Tobago - Capacity building and Mainstreaming of Sustainable Land Management in Trinidad and Tobago							
Business Unit:	TTO10							
Project ID	49943							
Project Title:	PIMS 3450 Trinidad and Tobago - Capacity building and Mainstreaming of Sustainable Land Management in Trinidad and Tobago							
Implementing Partner (Executing Agency)	Ministry of Planning, Housing and the Environment							
GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Total (USD)
OUTCOME 1: SLM is mainstreamed into national development plans, programmes and policies	GoRTT	62000	GEF	71200	International Consultants	0	0	0
		62000	GEF	71300	Local Consultants	20,778	20,778	41,556
		62000	GEF	72100	Contractual services - Company	14,731	14,731	29,461
		62000	GEF	72500	Supplies	8,278	8,278	16,556
		62000	GEF	73100	Rental & Maintenance-premises	8,572	8,572	17,143
		62000	GEF	74100	Professional Services	12,215	12,215	24,429
		62000	GEF	74200	Audio Visual & Print prod. costs	12,136	12,136	24,271
					Sub-Total	76,708	76,708	153,416
					Total Outcome 1	76,708	76,708	153,416
OUTCOME 2: Strengthening of institutional and individual level capacities to implement SLM and the NAP	GoRTT	62000	GEF	71200	International Consultants	0	0	0
		62000	GEF	71300	Local Consultants	20,480	16,757	37,237
		62000	GEF	72100	Contractual services - Company	21,991	17,992	39,983
		62000	GEF	72500	Supplies	2,819	2,307	5,126
		62000	GEF	73100	Rental & Maintenance-premises	2,732	2,235	4,967
		62000	GEF	74100	Professional Services	23,998	19,635	43,633
		62000	GEF	74200	Audio Visual & Print prod costs	19,293	15,786	35,079
					Sub Total	91,314	74,711	166,025
					Total Outcome 2	91,314	74,711	166,025
OUTCOME 3: Resource Mobilization to Support SLM and the	GoRTT	62000	GEF	71200	International Consultants	0	0	0
		62000	GEF	71300	Local Consultants	9,821	12,004	21,825
		62000	GEF	72100	Contractual services - Company	2,236	2,732	4,968

Implementation of the NAP	62000	GEF	72500	Supplies	4,392	5,369	9,761	G
	62000	GEF	73100	Rentals & Maintenance-premises	3,571	4,364	7,935	D
	62000	GEF	74100	Professional Services	14,314	17,495	31,809	E
	62000	GEF	74200	Audio Visual & Print prod costs	3,267	3,994	7,261	F
				<i>Sub-Total</i>	<i>37,602</i>	<i>45,957</i>	<i>83,559</i>	
				Total Outcome 3	37,602	45,957	83,559	
OUTCOME 4: Lessons Learnt and Monitoring and Evaluation	62000	GEF	71300	Local Consultants	23,500	23,500	47,000	B
	62000	GEF	74100	Professional Services	0	0	0	E
	62000	GEF	72500	Supplies	7,500	7,500	15,000	G
	62000	GEF	74200	Audio Visual & Print prod costs	5,000	5,000	10,000	F
				<i>Sub-Total</i>	<i>36,000</i>	<i>36,000</i>	<i>72,000</i>	
				Total Outcome 4	36,000	36,000	72,000	
Project Management Unit	62000	GEF	71400	Contractual services - Indiv.	0	0	0	
				Sub Total	0	0	0	
				Total Project Management Unit	0	0	0	
				PROJECT TOTAL	241,623	233,377	475,000	

Budget Notes

- a. **Office expenditures:** no GEF resources will be allocated for this; all support will be co-financed
Consultants: contracted both individually and through existing technical organizations and NGOs, include but are not limited to:
- Communication Specialist (local):** outcome 1: Sustainable land management mainstreamed into national development policies, programmes, and plans.
 - Policy Specialist (local)** - outcome 1: Sustainable land management mainstreamed into national development policies, programmes, and plans.
 - Legal Specialists (local)** - outcome 1: Sustainable land management mainstreamed into national development policies, programmes, and plans.
 - Technical Specialists/Trainers to build capacity in decision making on SLM re available data (local):** - outcome 2: Strengthening of institutional and individual level capacities to implement sustainable land management and the national action plan
 - Technical Specialists/Trainers to train SLM practitioners including farmers and other resource users (local):** - outcome 2: Strengthening of institutional and individual level capacities to implement sustainable land management and the national action plan
 - IT/Database Management specialists (local)** - outcome 2: Strengthening of institutional and individual level capacities to implement sustainable land management and the national action plan
 - Business/Investment Development Specialists (local)** - outcome 3: Resource mobilization to support sustainable land management and implementation of the national action plan

8. *Business Administration Analysts (local)* - outcome 3: Resource mobilization to support sustainable land management and implementation of the national action plan
9. *Project Evaluator (local)* - outcome 4: Effective project management through learning, evaluation, and adaptive management.
10. *Institutional Analyst (local)* - outcome 4: Effective project management through learning, evaluation, and adaptive management.
 - b. **Contractual services – company:** these are additional services rendered by specialized organizations. These services will include, but not limited to, design of systems, conduct of surveys, conduct of research, awareness campaigns, preparation of documentation, equipment installation and service.
 - c. **Rental & maintenance-premises:** it is anticipated that several meetings and training workshops will be held across the country and the budget is reflective of the costs associated with hosting of these meetings. This includes the venue rental and catering for participants.
 - d. **Professional services:** these services will include but not limited to media production, advisory, facilitation, etc.
 - e. **Audio, visual and printing production costs:** costs associated with multiplication of resource, knowledge and web based materials.
 - f. **Supplies:** materials and other consumables

Annex C: Stakeholder Involvement Matrix

Name of Stakeholder	Stakeholder's interest in SLM	Justification for inclusion of stakeholder	Expected role of stakeholder
MPUE	Dealing with all environmental issues including capacity building. Domestic, industrial and agricultural water supply and waste water management; River and stream flow; surface and underground water and agricultural water supply and waste water management; River and stream flow; surface and underground water	Mandate; Overall supervision. Responsible for domestic, industrial and agricultural water supply, and safe waste water disposal; Regulating and implementing authority for waste water disposal	Resource persons on watershed conservation; advocacy for sustainable watershed management and management of access to water resources.
Forestry Division	National coordination for project	Custodian of the State's forest resources. Responsible for National Forest Policy and legislation. Conserves important ecosystems, protects biodiversity and exercises influence on and regulation of activities on private lands through forest extension and incentive programmes and issuing permits for the removal of timber and monitoring of forest fires.	Officers will be trained on GIS, LIS, Forest Cover Maps, Forest type Maps, digitization of boundaries, etc. Will provide valuable input during workshops and training
MPHE	Coordinating body; Funding: Financial control; Incremental cost	Focal point for UNCCD and other Conventions; All GEF projects have to be channeled through this Ministry;	Facilitation for funds and government commitments. Will act as facilitator and develop synergies between various environmental & rural projects. And will be responsible for implementing the UNCCD/NAP in close collaboration with MALMR.
MALMR (Lands & Surveys Division)	Mandate for State lands management	Presently developing LIS for Trinidad and Tobago and digitization of island boundaries; Has all maps, hard copy and digital	Act as resource persons in SLM workshops, contribute to harmonization of an integrated LIS;
MPHE (Land	Data of all land (State and private)	Mandate	Data on land use with regard to human

Settlement Agency)				settlement. Provide information on areas of land settlement and policy issues; will benefit as trainees in the SLM workshops
SoA, UWI	Research, training, capacity building; extension and outreach	This is the only tertiary institution dealing with training and capacity building in SLM and Sustainable Agriculture	Will run training courses, award certificates, provide resource persons for Workshops on SLM; will provide information and research data on SLM	
Sugar Feed Centre	Research in sugarcane production and extension	Have some GIS data on sugarcane lands; have an ongoing project on soil erosion	Research methodology; provide some resource persons and research findings	
Corinth Teachers' College & School of Education, UWI	Training of primary & secondary school teachers in environmental education; Public awareness	These are the only tertiary institution dealing specifically with training of primary & secondary school teachers in agricultural and environmental issues	Public awareness; preparation of brochures; talks	
SoA, UWI	Research and extension in non-sugar agriculture	Responsible for research and extension on crops other than sugarcane	Providing detailed data on individual planters and fields; share research results; policy issues	
MALMR	Apex body for funds and policy on agricultural research	Advisor to Government on agricultural policies, especially related to research.	Coordinating and funding body for agricultural research; Focal point for FAO; can contribute as co-financier of SLM projects	
EMA	Biodiversity conservation	Provides synergy between UN Convention on Biodiversity and UNCCD	As resource persons in SLM workshops, as participants in SLM workshops	
MPHE	Satellite photos and their interpretation; remote sensing	Provider of satellite images; Training	Interpretation of land degradation images; Satellite photo interpretation and ground truth; geo-referencing	
Meteorological Services	Meteorological data (intensity, duration and distribution pattern of rainfall; drought forecasting; cyclones; floods; climate change	Focal point for UNCCC; synergy between UNCCC and UNCCCD	Provide valuable input on climatological data related to land degradation	
MLG	All aspects of beach management	Responsible for beach management and beach erosion control	Control of beach erosion; Awareness raising on beach management	
IMA	All aspects of the marine environment	Responsible for research on ocean currents, marine tides, corals, etc.	Provide data on marine data, waves, marine and brackish organisms and marine environment; Providing data on water quality; incidence of organic, inorganic and heavy metal pollutants; Information on	

Resource Users	Sustainable land management directly impacts on the livelihood of resource users and their activities impact on the status of land degradation in the country.	The spirit and letter of the UNCCD promotes a bottom up people centered approach to the implementation of the Convention and in this regard resource users must be integrally involved in any effort towards sustainable land management	river and stream flows, drainage maps, etc. provide volume of waste water provide resources person, will be participants in SLM workshops
Caribbean Network for Integrated Rural Development (CNIRD)	Sustainable land management is a key factor in the process of integrated rural development in Trinidad and Tobago and the Caribbean.	Caribbean Regional and National Focal Point for the International Network of NGOs for Land Degradation (RIOD). CNIRD has been integrally involved in the implementation of the UNCCD in Trinidad and Tobago and the Caribbean.	Participation in capacity building activities, and design, implementation and monitoring and evaluation of project activities.
Council of Presidents of the Environment (COPE)	COPE consists of the Presidents of all the large environmental NGOs (eNGO) in Trinidad and Tobago. Its members are key stakeholders in SLM and are committed to sound environmental management.	COPE is a vital conduit for information dissemination within the eNGO movement in Trinidad and Tobago, and can provide a coordinating role for eNGO action on SLM	Facilitation of civil society interactive involvement in the design, implementation, monitoring and evaluation of the activities of the project.
Agricultural Society of Trinidad and Tobago	An NGO representing the interests of non-government stakeholders agricultural sector	This NGO can provide an important means for dissemination of information on SLM and for reciprocal learning and adaptive management of the public education components of this project	Facilitation of eNGO participation in implementation of project, and dissemination of lessons learnt to local NGOs involved in land management.
			Facilitation of NGO participation in implementation of project, and dissemination of lessons learnt to local NGOs involved in land management.

**Annex D - Terms of Reference
Project Manager, Steering Committee
And Technical Advisory Committee**

I. Project Manager

Background: The Project Manager (PM) will be responsible for the implementation of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will manage the Capacity Building for SRM MSP, will be fully accountable to the Head of the Multilateral Environmental Agreements Unit and to the LMCC for satisfactory execution of the entire project and will be responsible for meeting government obligations under the Project, under the national execution modality. The Project Manager will be the head of the Project Management Unit. The PMU will have operational and financial autonomy, including the authority to select and sub-contract specific project activities or components to local consultants and local institutions. The PM shall perform a liaison role with government, UNDP, and all stakeholders involved with the project.

Duties and Responsibilities

1. Overall management of the project.
2. Supervise and coordinate the production of project outputs as per the project document;
3. Ensure the technical coordination of the project;
4. Mobilize all project inputs in accordance with UNDP procedures for nationally executed projects;
6. Finalize the ToR for the consultants and subcontractors;
7. Coordinate the recruitment and selection of project personnel;
8. Supervise and coordinate the work of all project staff, consultants and sub-contractors;
9. Work closely with project partners to closely coordinate all the actors involved with achieving Project Outcomes, Outputs and Activities;
10. Supervise the work of all PMU staff, including national staff.
11. Prepare and revise project work and financial plans, as required Government and UNDP;
12. Manage procurement of goods and services under UNDP guidelines and oversight of contracts;
13. Ensure proper management of funds consistent with UNDP requirements, and budget planning and control;
14. Establish project monitoring and reporting;
15. Arrange for audit of all project accounts for each fiscal year;
16. Prepare and ensure timely submission of quarterly financial consolidated reports, quarterly consolidated progress reports, PPER, mid-term reports, and other reports as may be required by UNDP.
17. Disseminate project reports to and respond to queries from concerned stakeholders;
18. Report progress of project to the Steering Committee.
19. Oversee the exchange and sharing of experiences and lessons learned with relevant conservation and development projects nationally and internationally.
20. Preparing a detailed annual work plan for the project
21. Undertaking any other activities that may be assigned by the Steering Committee.

Selection Criteria

1. Post-graduate degree in natural resources management or other relevant academic and profession qualifications with at least 10 years professional experience;
2. Proven extensive experience and technical ability to manage a large project and a good technical knowledge in the fields related to SLM, participatory approaches and/or environmental economics;
3. Effective interpersonal and negotiation skills proven through successful interactions with all

- levels of project stakeholder groups, including senior government officials, business executives, farmers and communities;
- 4. Ability to effectively coordinate a complex, multi-stakeholder project;
- 5. Ability to lead, manage and motivate teams of local consultants to achieve results;
- 6. Good capacities for strategic thinking and planning.
- 7. Excellent communication skills;
- 8. Knowledge of UNDP project implementation procedures, including procurement, disbursements, and reporting and monitoring highly preferable;

Duration of the assignment: Project implementation is for a period of two years, starting with May 2010. Continuity of staff during this time will be crucial for effective implementation.

2. Land Management Coordinating Committee (LMCC)

The Land Management Coordinating Committee (LMCC) will serve as the Steering Committee for this Project and will be composed of senior personnel of the key ministries related to SLM and will provide high-level policy guidance and orientation to the project. The PS of Ministry of Planning, Housing and the Environment will chair the LMCC. The LMCC membership will be the following:

- a. PS, Ministry of Planning Housing and the Environment;
- b. PS, Ministry of Finance;
- c. Office of the Attorney General (Legislative Unit);
- d. PS, Ministry of Agriculture, Land and Marine Resources (Lands and Surveys Unit);
- e. Ministry of Local Government
- f. PS, Ministry of Housing (Land Settlement Unit)
- g. Director, Environmental Management Authority;
- h. UNDP;
- i. Caribbean Network for Integrated Rural Development;
- j. COPE (representatives of the eNGO and CBOs);
- k. Representative of the Agricultural Society;
- l. Director of Town and Country Planning Division; and
- m. Director of Forestry

The principal tasks of the LMCC are the following:

- 2. Provide high level orientation and guidance for the project.
- 3. Ensure that the project develops in accordance with national development objectives, goals and policies.
- 4. Pay special attention to the assumptions and risks identified in the log frame, and seek measures to minimize these threats to project success;
- 5. Ensure collaboration between institutions and free access on the part of project actors to key documents, land information systems, remote sensing imagery, etc.
- 6. Pay special attention to the post-project sustainability of activities developed by the project.
- 7. Ensure the integration and coordination of project activities with other related government and donor-funded initiatives.

SECTION III: ADDITIONAL INFORMATION

PART I: GEF Operational Focal Point Endorsement Letter



12 April 2019

Ms. Monique Barbut
Chief Executive Officer and Chairperson
Global Environment Facility

Dear Ms. Barbut,

Re: Endorsement for the project Capacity building and Mainstreaming of Sustainable Land Management in Trinidad & Tobago

In my capacity as GEF Operational Focal Point for Trinidad and Tobago, I confirm that the above project proposal (a) is in accordance with the Government's national priorities and the commitments made by Trinidad and Tobago under the relevant global environmental conventions and (b) has been discussed with relevant stakeholders, including the global environmental convention focal points, in accordance with GEF's policy on public involvement.

Accordingly, I am pleased to endorse the preparation of the above project proposal with the support of United Nations Development Programme (UNDP). If approved, the proposal will be prepared and implemented by the Environmental Management Authority. Further, I request UNDP to provide a copy of the project document for reendorsement by this office before it is submitted to the GEF Secretariat for CEO endorsement.

I understand that the total GEF financing being requested for this project is \$500,000 inclusive of PDF A, and a 10% Agency fee to UNDP for project cycle management services associated with this project.

I consent to the utilization of the following indicative allocations available to Trinidad and Tobago in GEF-6 under the GEF Resource Allocation Framework to cover the GEF project preparation and implementation as well as the associated Agency fees for this project.

Land Degradation: \$500,000

Sincerely,
ENVIRONMENTAL MANAGEMENT AUTHORITY

Joth Singh Ph.D.
Managing Director/Chief Executive Officer

cc: Ms. Veronica Belgrave – GEF Political Focal Point and Permanent Secretary, Ministry of Planning, Housing and the Environment
Dr. Marcia de Castro, UNDP Resident Representative, Trinidad and Tobago
Mr. Yanyanek Glenarce, UNDP/GEF Executive Coordinator

8 Edgarson Street, St. Elizabeth, Trinidad and Tobago, West Indies
Tel: (662) 628-8542 2144 Fax: (662) 629-6100
www.ema.gov.tt

© 2018. All Rights Reserved. GreenPrint Chairman, Mrs. Narene Williams, Chair, Ms. Yanyanek Glenarce, Managing Director/Chief Executive Officer, Joth Singh (Managing Director/Chief Executive Officer), Mrs. Barbara Lodge-Johnson, Mrs. Louise Boscain, Secretary General, Mrs. Jacqueline Jack, Dr. Karel Merviel, Mr. Norman Looi, Treasurer

PART II: CO-FINANCING LETTERS



RECEIVED
13/2/10
E.M.A.

February 17, 2010

Mr. Edo Stork
Deputy Resident Representative
United Nations Development Programme
3A Chancery Lane
PORT OF SPAIN

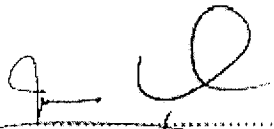
Dear Mr. Stork,

Re: Request for Co-Financing Letter to accompany submission to LDC-SIDS project for Trinidad & Tobago

Further to your correspondence dated 5 January 2010 on subject matter and the Government of the Republic of Trinidad and Tobago (GoRTT) submission of a LDC-SIDS project document entitled "Capacity Building and Mainstreaming of Sustainable Land Management of Trinidad and Tobago" to the UNDP for submission to the Secretariat of the Global Environmental Facility (GEFSEC). The GoRTT has indicated an in-kind contribution of USD1,337,400.00 to the project which is viewed as its co-financing contribution.

Kindly accept this Letter of Endorsement in order to facilitate the submission to the GEF so as to commence the approval process for the project.

Sincerely,
ENVIRONMENTAL MANAGEMENT AUTHORITY


J. Singh Ph.D.
Managing Director/CEO
GEF Operational Focal Point, Trinidad & Tobago

cc: Ms. Esmé Rawlins-Charles, GEF Political Focal Point, Trinidad & Tobago

8 Elizabeth Street, St. George, Port of Spain, Trinidad & Tobago, West Indies
Tel: (868) 628-8342, 8344 Fax: (868) 628-8722 E-Mail: ema@ema.gov.tt



DIRECTORS: Mr. Robert C. Green (Chairman), Mrs. Nisha Nairan Green, Ms. Avelina Benjamin, Dr. Joth Singh (Managing Director/CEO),
Mrs. Phillipa John, Mrs. Barbara Lodge-Johnson, Mrs. Esmé Rawlins-Charles, Dr. Len Dapplewell, Ms. Jacqueline Jack,
Dr. Rene Monard, Mr. Narine Latchumdas

SIGNATURE PAGE

Country: Trinidad & Tobago

UNDAF Outcome(s): Sustainable land management implemented to promote sustainable development opportunities.

Expected Outcome(s)/: Appropriate institutional and legal arrangements for sustainable development; training, awareness and education of key stakeholders on SLM.

Expected Output(s)/: National capacity enhanced and awareness raised to manage adverse effects of land degradation and implement sustainable land management practices, including the integration of SLM into governance and production systems.

Indicator:

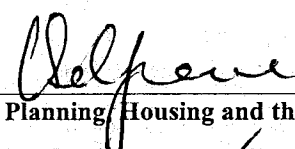
- SLM integrated in national development and land-use planning and policy
- Enhanced capacity, knowledge and awareness of SLM

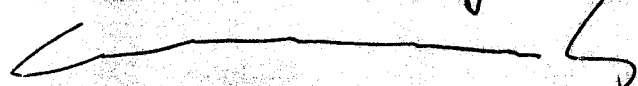
Implementing partner: Ministry of Planning, Housing & the Environment

Other Partners: _____

Programme Period: 2 years Programme Component: OP15-SP1 Project Title: Capacity building for Sustainable Land Management in Trinidad and Tobago Project ID: 00049943 Project Duration: 2 years Management Arrangement: NEX	Total Budget \$1,805,900 Allocated resources: GEF \$475,000 In kind contributions Government \$1,330,900
---	---

Agreed by (Government): 
Senator the Honourable Dr. Emily Gaynor Dick-Forde, Minister of Planning, Housing and the Environment

Agreed by (Implementing partner/Executing agency): 
Ms. Veronica Belgrave, Permanent Secretary, Ministry of Planning, Housing and the Environment

Agreed by (UNDP): 
Dr. Marcia De Castro, Resident Representative