TIMOR-LESTE

NATIONAL ACTION PROGRAMME

TO

COMBAT LAND DEGRADATION

REVISED DRAFT

Dili, November 2008

TABLE OF CONTENTS

LIST OF ABREVIATIONS

ADB	Asian Development Bank
ALGIS	Agriculture and Land Use Geographycal Information System
COP	Conference of Parties
GDP	Gross Domestic Product
GIS	Geographycal Information System
GoTL	Government of Timor-Leste
IMWG	Inter-Ministerial Working Group
LD	Land Degradation
MAF	Ministry of Agriculture and Fisheries
MEAs	Multilateral Environment Agreements
MI	Ministry of Infrastructure
NAP	National Action Programme
NCSA	National Capacity Self Assessment
NDF	National Directorate of Forestry
NDLP	National Directorate of Land and Property
NDP	National Development Plan
NFP	National Focal Point
NGOs	Non Governmental Organization
PNAs	Protected Natural Areas
SLM	Sustainable Land Management
SNCC	SLM National Coordinating Committee
SNSC	SLM National Steering Committee
SSRD	Secretary of State for Rural Development
UNCCD	United Nations Convention to Combat Desertification
WSSD	World Summit on Sustainable Development

1. INTRODUCTION

1.1. Background

Land degradation has long been regarded as an important constraint on achieving sustainable development. The World Summit on Sustainable Development (WSSD) recognized that tackling land degradation is a key to the eradication of extreme poverty. Land degradation means reduction of land productivity through deterioration of land resources that affect ecosystem integrity. Severe land degradation often leads to loss of agriculture productivity which poses a challenge to food security.

The United Nations Convention on Desertification (UNCCD) was adopted in 1994 through a global consensus to address land degradation – with an ultimate objective to combat desertification and mitigate drought effect in affected countries – through international cooperation and partnerships. Sustainable land management is a strategy adopted under UNCCD and is aimed at improving living condition through the sustainable use of resources such as soils, water, animals and plants for the production of goods to meet human needs.

The Government of Timor-Leste (GoTL) recognizes the importance of combating land degradation to achieve sustainable agriculture development and maintain ecosystem integrity. This was realized through the accession to the UNCCD in August 2003 and its ratification in April 2006.

As a party to the UNCCD, GoTL is obliged to contribute to the achievement of the objective of the convention through the implementation of its principles with all its requirements in a manner appropriate to Timor-Leste. The convention requires all members to submit regular reports to the secretariat detailing how their commitments have been carried out at national level. Member countries also must attend Conference of Party (COP) meetings and other subsidiary meetings for sharing information and lessons learned and above all to review the overall implementation of the convention.

However, experiences from many countries show that successful implementation of the convention at the national level is often hampered by lack of capacity to manage land sustainably, whether at individual, organizations or systemic level. Small and lesser-developed countries are often weak with smaller pools of scientific and technical capacity; small and understaffed organizations operate under significant financial constraints; and weak governance frameworks with sub-performing or dysfunctional laws and regulations, economic regimes and incentives, land tenure arrangements, infrastructure and many other factors affecting land management[1]. All of these constraints exist in Timor-Leste.

[1] United Nations Development Programme – Global Environment Facility, 2007. Manual Capacity Development for Sustainable Land Management. Global Support Unit (GSU): http://www.gsu.co.za//

1.2. Approach

National Action Programmes (NAP) are one of the key mechanisms in the implementation of the UNCCD. NAPs spell out practical steps and procedures, identified through a participatory process, for combating land degradation in order to contribute to the achievement of UNCCD objectives. NAPs are intended to serve as a guide in the implementation of the principles of UNCCD at country level. A NAP is an integral part of national strategies for sustainable development. The principal aim of a NAP is to develop national capacity and to mitigate and prevent land degradation as a prerequisite for sustainable development and improving the welfare of the people by preventing land resources degradation, improving land productivity, ensuring food security and political stability while preserving biodiversity and reproductive capacity of the natural environment.

The set of programmes formulated within the NAP offers a variety of measures, which will enhance and improve the overall institutional, legal and operational environment related to the sustainable land management in Timor-Leste. The programmes outline only the general direction for action. Successful implementation will largely depend on the the effectiveness of initiatives at the national, regional and local levels. NAP programmes will depend on the financial and institutional support of the existing national strategies and economic mechanisms. Therefore the active participation of all stakeholders – institutions, administrations at all government levels, civil society and the private sector for raising alternative and additional resources - is of great significance.

The programmes within the NAP are being proposed under two categories i.e. 1) preventive and 2) mitigating measures. The preventive measures focus on action programmes to minimize the contributing factors and therefore prevent further development of the land degradation process. The mitigation measures are set to alleviate the effect of land degradation.

The NAP has been developed, prior to the collection of important ground information, on the fundamental causes and the extent of land degradation in the country due to the need to carry out sustainable land management investment plan. The NAP has been based on a number of studies with often inconsistent results because of lack of comprehensive information they referred to. Therefore, it is imperative that NAP be considered as a live document which will be subjected to frequent changes as more information is obtained through the on-going programs and projects.

1.3. Rationale

The first NDP of Timor-Leste gave high priority to poverty reduction across all sectors and regions of the Nation. A major element of the poverty reduction strategy of Timor-Leste is to create an enabling environment to generate opportunities for the economic participation of the poor, by improving their productivity and enhancing their income. In this context, the GoTL realizes that poverty reduction is only possible if the environment is able to provide the services

that people depend upon and if natural resources are used in a manner that does not undermine long-term development.

Land is a finite resource, while the natural resources it supports can vary quantitatively and qualitatively over time according to management conditions and uses. Expanding human requirements and economic activities are placing ever-increasing pressures on land resources, creating competition and conflicts and often resulting in suboptimal use of both land and land resources.

The majority of the population of Timor-Leste lives in rural areas and engage in primary agriculture, livestock production and forestry. Their livelihoods and options for economic development are directly linked to the quality of the land and its resources. Shifting cultivation with slash and burn practices and free grazing are still the main farming methods which are being practiced countrywide, particularly in sloping upland areas. In a number of places, forest lands are being increasingly used for shifting cultivation to meet the needs of the rapidly increasing rural populations. Most people in both rural and urban areas are dependent on natural forests as main source for their fuelwood and timber demand. This often results in overcutting which is becoming evident in a number of districts, particularly those along the northern part of the country. In combination with other natural and manmade factors (discussed in the following sections 2 and 3), the country is facing significant challenges to develop a sustainable agriculture that can support national efforts to eradicate poverty and to develop sustainably.

The NAP formulates the general strategic framework and development vision for sustainable land management in Timor-Leste and offers the application of immediate measures and actions, which will create a solid base for an overall integrated and long-term policy in the field. The NAP is the framework that provides the guiding vision for implementation of the national course of action for sustainable land management and thus fosters and creates favorable possibilities for all stakeholders and institutions to further develop their own ideas and initiatives, putting added value to the concept and the objectives of the NAP.

2. SITUATIONAL ANALYSIS

2.1. Natural Environment Situation

2.1.1. Topography

Timor-Leste is located about 500 km from northern Australia in the Lesser Sunda Islands and includes the eastern half of Timor Island, the Oecusse region, and Atauro and Jaco Islands. The country is basically mountainous, surrounded by a generally narrow flat plain. Timor-Leste has a land area of ± 15,000 km² of which nearly half has a slope of 40% or more. The highest point is Mount Ramelau which rises to 2,963 m above sea level.

The soil of Timor-Leste is derived from limestone and metamorphosed marine clay which are low in fertility and fragile. The steep slopes are mainly covered only with thin soils which has low organic matter and water holding capacity. Infrequent and torrential rainfalls often wash away topsoil in flash floods, leaving much of the sloping land in Timor-Leste is susceptible to erosion and not suitable for sustainable cultivation. In addition, deforestation, unsustainable farming practices, recurring wildfires and overgrazing have further increased the susceptibility to erosion in many areas.

2.1.2. Rainfall and Temperature

Rainfall varies from as low as 500 mm/annum along the northern coast to as high as 2000 mm/annum in mountains. Most areas receive maximum rainfalls during the northwest monsoon in December or January extending to April in some years. Areas in the east and southeast also have a secondary wet season during the southwest monsoon in May or June.

There is limited seasonal variation in temperatures in most areas in Timor-Leste. The average temperature during rainy season ranges from 29° - 35°C. Dry season temperatures between May and November average 20° - 33°C. Day temperatures are warm to hot, but are cool to cold at night in mountainous areas.

2.1.3. Soil

There are 3 major types of soils found in Timor-Leste: cambisols, vertisols and fluvisols[2]. Cambisols are generally found in the interior mountainous region, particularly in areas with higher altitude in the central parts of the country. In some particular places in the districts of Covalima, Bobonaro, Viqueque, Manatuto, Baucau and Lautem with much lower altitude, the soils are of vertisols. Whereas, fluvisols are predominant in coastal areas particularly in the south coast zones. According to the same study, other soil types, which are of minority in the country, are also found in different places around the country. These, among others, include

[2] **Os Solos de Timor** by Sacadura Garcia, J. and Carvalho Cardoso, J., 1978.

acrisols and luvisols that are found respectively in Liquiça and Manatuto and in Tilomar, Baucau and Lautem.

In relation to fertility and sensitivity to erosions of the types of solos found in Timor-Leste, 'Os solos de Timor Data' are indicated as followings:

Os solos de Timor	Hectares	PERCENT	Fertility	Sensitivity to erosion
Cambissolos	449,148.1	30.1	Medium	Low
Vertissolos	310,488.9	20.8	High	Low
Fluvissolos	152,776.2	10.2	High	Medium
Regossolos	141,007.7	9.5	High	Medium
Unclassified	132,159.2	8.9	Medium	-
Cambissolos ou Acrissolos	113,918.2	7.6	Low	Low
Ferrossolos ou Acrissolos	48,912.94	3.3	Low	Low
Litossolos ou Rendzinas ou Regossolos ou Cambissolos ou Luvissolos	39,050.28	2.6	Medium	Medium
Luvissolos	38,997.65	2.6	Medium	High
Gleissolos	32,745.83	2.2	Medium	Low
Castanozenos	12,375.6	0.8	Medium	Low
Rankers	8,514.32	0.6	Medium	High
Regossolos ou Acrissolos	5400.43	0.4	Low	Low
Histossolos	2142.16	0.1	High	High
Litossolos	1674.32	0.1	Medium	High
Solonetz	1787.18	0.1	Low	High

Os Solos de Timor Data

The altitudinal range of Timor-Leste has a major role in modifying soil formation through temperature and rainfall variation. There are three soil moisture zones identified in Timor-Leste based on the effect of organic matter production in combination with other important factors such as clay formation, nutrient leaching and erosion intensity[3]. The wet and moisture climatic zone – in higher mountainous areas with less than five months dry season – where the rooting zone of the soil does not dry out for more than three consecutive months is called 'Udic' zone. Aileu, Ainaro, parts of Bobonaro and along the southern part of the country are included in this 'Udic' climatic zone. The 'Ustic climatic zone covers areas with lower rainfall that have a dry season of more than six months and where soils dry out for three months or more. Other parts of the country including the coastal area of Manatuto, Bobonaro and Lautem District are areas where an 'aridic' soil moisture regime is found and the dry season exceeds nine months.

The implications on the above information is that larger portion of Timor-Leste soil is of low to medium fertility level, thus sustainable land management practices is required is any of land use types. In addition, since lots of mismanagement of land has taken place for years, depletion to the natural conditions of the above described soil types might also have taken place. Thus soil studies need to be carried out to assess current conditions of each of the major soil types found in Timor-Leste. This will inform better land use decisions and appropriate conservation measures.

[3] Pederson & Arneberg, 1999 in Hunt L., Rapid Rural Land Use Assessment and Land Use Classification Model, ALGIS Unit, 2001.

2.1.4. Water resources

There are many rivers found in Timor-Leste but only around ten rivers flow all year[4]. Water is in surplus in the wet season but supplies are unreliable in the dry season with reliability varying according to topography and location. The perennial rivers inter alia Loes, Laclo and Clere are the most significant hydrological units that are currently providing water for domestic use and irrigation.

A study on national water demand done by ADB[5] concluded that agriculture sector water demand is highest in Timor-Leste. The study also shows that in normal years only 16% of the total water resource is being utilized whereas in dry years this figure rises up to 26%. However the question of water is still problematical here. Despite the fact that water is plentiful during wet season, water shortages are being experienced by people all over the country during dry season which is mainly the result of lack of water infrastructure to allow easy access to water. Although small scale water harvesting for domestic use is generally ok and widely possible, larger scale harvesting for agriculture is very difficult in TL because it is high cost and might be risky due to the physical condition of the land which have low water holding capacity. This is a limiting factor in agriculture production and a source of food insecurity and poverty. Consequently, environment degradation and encroachment of natural resources, particularly forest resources have taken place. Food insecurity and poverty also weakens the nation's efforts to develop sustainably .

2.2. Macroeconomic and Poverty Situation

The total population of Timor-Leste is currently estimated at about one million, with approximately 80% living in rural areas. Agriculture remains the main source of income in most of the rural villages and accounts for about one quarter of the GDP. Subsistence production of staple food crops, including rice, corn, cassava and sweet potatoes dominates, while smallholder coffee is an important cash crop. Other agricultural products include, soybeans, cabbage, mangoes, bananas, vanilla, mung beans, taro (swamp and upland), onions, peanuts, sago, coconuts, and tobacco.

Livestock productivity is low with most households owning some livestock such as cattle, buffalo, sheep, pigs poultry and goats to support their subsistence farming. Livestock ownership is not uniform across the country. There is potential for development of a limited live animal export industry. However, livestock marketing is limited as livestock are kept primarily for household use and consumption and only small numbers are sold for cash.

Most coastal communities rely mainly on fishing. In 2002, the National Directorate for Fisheries estimated that there are 20,000 fishermen in Timor-Leste with over half of them depending upon fishing as their primary source of food and income. There are some small-scale

[4] ADB TA 3986 No. 8 – National Water Resource Policy: Implementation Strategy and Action Plan
[5] Ibid

but locally significant aquaculture activities scattered around the country. Although Timor-Leste is surrounded by huge fish markets, there is still limited export of marine resources.

Forest resources are also important to the economy of Timor-Leste. Traditionally, people take timber, firewood and medicinal plants from nearby forests for both domestic use and sometimes for sale. While trading in forest product, particularly fuel wood, timber and wild birds, is banned, these activities are essential in rural areas to meet basic needs and derive some income. The increasing trend of demand for fuel wood is causing degradation problems in some areas, especially in the vicinity of larger towns and where there is easy access to Dili. Fuel wood extraction and slash and burn agriculture activity are increasingly seen to put much pressure on native forest resources, biodiversity and land resources. Law and order breakdown in 2006 has added to this problem. Although accurate data are not available, many places including parts of national parks were cleared during this crisis period.

2.3 The Nature of Land Degradation

2.3.1. Current Status

Land degradation means reduction of land productivity through deterioration of land resources such as soil, water and vegetation that affect ecosystem integrity. The UNCCD defines land degradation as *reduction or loss of the biological or economic productivity and complexity of rain fed crop land, or large, pasture, forest and woodlands resulting from land uses or from a process or combination of processes, including processes arising from human activities and habitation patern, such as: i) soil erosion caused by wind and/or water; ii) deterioration of physical, chemical and biological or economic properties of soil; and iii) long term loss of natural vegetation.*[6] Whereas Desertification is defined as *land degradation in arid, semi-arid and dry sub-humid areas.*[7]

Land degradation and poverty are inextricably linked. Land degradation impacts the livelihoods of the rural communities in many ways. Infertile soil cannot support the desire of the farmers to increase production. Erosion of sloping areas causes silting of waterways which eventually leads to damage of irrigation and road infrastructures, flooding of agriculture lands and community settlements. All these result in losses to crop and livestock production and in turn reduce the incomes and welfare of rural dwellers. Decisive prevention and control of land degradation, especially deforestation and desertification is critical and fundamental to achieving sustainable agriculture, poverty reduction and ultimately sustainable development.

Land degradation in Timor-Leste is a widespread problem that is severe in some areas. Until recently, however, there is little or no basis for estimating its extent and severity. Land degradation in Timor-Leste manifested itself in bare lands, deforestation, soil degradation, overgrazing, weed invasion, landslides, gullies and siltation of waterways. The causes could be both man-made and natural causes. Although unsustainable agriculture practices, illegal logging

[6] Training Handbook: Global Environment Facility's Sustainable Land Management Approach
[7] OECD, 2002. The DAC Guidelines Integrating Rio Convention into Development Co-operation,

of native wood species, recurring wild fires, firewood extraction, uncontrolled grazing and cultivation of marginal lands are often cited as the main causes of land degradation, no research has been done to thoroughly investigate this problem.

Forest and watershed degradation

Deforestation is the most prominent land problem in Timor-Leste, particularly in upland areas. It is also taking place in many dry lowland areas. Deforestation allows soil erosion and adversely affects the state of watersheds. Fuelwood and timber production are reduced. Groundwater sources (springs) are also adversely affected as a result of reduced water penetration and lower water holding capacity of soils. Most of the deforestation occurred during logging operations of important tree species such as teak, redwood, sandalwood, and mahogany for export purposes. The use of wood as a primary fuel source by both rural and poor urban households has added to the problem of forest cover loss.

Deforestation has initiated a chain of environmental degradation. Loss of vegetation and soil leads to the degradation of the catchment and decrease in the amount and quality of water. With this comes a decline in agricultural capability and capacity, micro and macro climatic change, loss of biodiversity, and damage to marine habitats by increase in runoff and silting**.**

Loss of forest cover exposes the soil to direct impact of rain and drought. Soils on steep slopes as well as soils with poor soil structure are most vulnerable to erosion due to the removal of forest cover. Landslides frequently occur during the rainy season in areas with steep slopes and high rainfall. Deep gullies and landslide scars are also common on both grazed lands and lands used for shifting cultivation. Riverbank erosion along large rivers is evident in a number of important watershed areas found in the country[8].

Soil degradation and Sedimentation of waterways

Soil erosion is probably the second most common type of land degradation in Timor-Leste but it is more pronounced in sloping upland areas. This is evident from sedimentation in water channels and irrigations infrastructures. Although there is still lack of studies on this subject, there are various reasons to believe that soil erosion is prominent in Timor-Leste. These include: the short-term but intense rainfall coupled with steep slopes, poor and degraded soils structures and diminishing land cover increase the chance for intense soil erosion incidents.

Soil erosion and loss of soil fertility are posing a detrimental impact on forest and other plants to grow normally; thus eventually leads to loss of land productivity. Soil erosion is adversely affecting the livelihoods of the people of Timor-Leste, particularly the poor and poorest communities in rural areas. Degraded soils will no longer be able to support any agriculture activity on it. This will result in reduced yield production, reduced income, malnutrition and further deterioration to community wellbeing in rural areas. The process will followed by a series of other social and economical impacts such as poor health, more school dropouts and increased youth crimes.

[8] River Catchments and Marine Productivity in Timor-Leste (An ATSEF Project Report)

Shallowing and widening of riverbeds due to erosion have resulted in damage to agriculture lands particularly paddy fields, which are normally situated along riversides, due to intense rain following a wet period. The problem also leads to damage of roads, bridges and irrigation infrastructure which are frequently being experienced in recent years. This again leads to eventual loss of rural economy therefore it adversely affect rural communities initiatives to develop sustainably.

However, despite these problems being common knowledge, scientific information is lacking to inform the decision makers so effective preventive and mitigation interventions can be done to solve them. Little is known about the forms, extent, intensity and distribution of soil erosion problems and their impacts on agriculture production. Although, initiatives have started at some farming communities to deal with this problem by developing indigenous knowledge of soil conservation, many farmers are still using practices that are not sustainable.

Weed invasion

Frequent land clearing and deforestation have followed by invasion of Siam weed (Chromolaena odorata) in agriculture and grazing lands. Chromolaena odorata attack on pasture and crop lands is reported to be widespread. According to the information released by DNA, the weed was first introduced in 1975 from Indonesia and now it has affected nearly 90% of total land of Timor-Leste[9].

Siam weed has an extraordinary capacity to cover an area and establish itself rapidly and take over the land because of its ability to suppress other plants. Its attack are more prevalent in pasture lands and shifting cultivation lands because of the high prevailing light intensity. It is widely known to be harmful to crops and animal production. In turn it will affect the livelihoods of the rural populations who rely heavily on farming activities as source of household income.

Siam weed attack also poses higher environmental risks. Its ability to spread rapidly and produce massive land cover has the potential to increase fuel load for bush fire when it dries of during dry season. This in turn reduces ground vegetation cover and therefore increases the risks of soil erosion on hillsides.

There might be other cases of invasive weed species, however research has not been done on this topic to gain further knowledge on their relationship with land management practices.

Increased water shortages

Poor land management, particularly deforestation increases the risks of runoff as a result of surface compaction and loss of vegetation cover, thus decreases infiltration of rainfall into the ground. Spring waters, which are the major water sources for most households, are reported to have dried up in many upland areas. This obviously adds more burden to women and children, as vulnerable groups in the communities, as they have to travel farther to fetch water for domestic use. In most cases, such situation will result in denied education for children because

[9] Serie Informasaun Agrikultura, No. 14

they are tasked with fetching water or school dropouts due health problem because of lack of sanitation facilities. Mother will have less time to provide proper care for their young children because they have to travel longer hours to fetch water.

Water scarcity also affect agriculture production. Without adequate water supply, farmers are unable to sustain their production. Low production means low income, and low income means inability of families to get enough food to eat, resulting to malnutrition. When people are malnourished, they get sick, and cannot study; or when there is low income, there will be no money for education, and children just drop out. It will be difficult to transform values, or depart from the old habit. In such situation, social crimes will increase, tension will develop and peace and order will be a problem. Low education means inability to get employment for a living; or inability to get access to land and environment technology. Unemployment or poor technology means more and more misuse/mismanagement of, or more pressure on land and environment.

However, a national survey is required to quantify this problem and assist prioritization of remedial actions.

2.3.2. Causes of land degradation

Land degradation is basically caused by both natural and human factors. Natural factors are the physical conditions of the environment which contribute to a high degradation hazard, for example steep slopes as a hazard for water erosion. However, much of the land degradation causes are of human factor. This can be classified into two i.e. direct causes and underlying causes. Direct causes are inappropriate use and management of land, for example deforestation, unsustainable agriculture practices (cultivation of steep slopes, slash and burn and uncontrolled grazing without incorporating soil conservation measures) and recurring forest fires. Underlying causes are the driving forces of why inappropriate land use and land management practices have taken place; for example, the slopes may be cultivated because the poor farmers have no land to cultivate to grow food for their family, and conservation measures not being adopted because they lack tenure security.

2.3.2.1 Direct Causes

Deforestation and illegal logging of important tree species

Several studies reported an overcutting of natural forest and woolands in Timor-Leste over the period of 1972 and 1999 Approximately 25% and 26% of the territory were primary and secondary forests respectively. This figures has dropped to only 16% of primary forests and 19% of secondary forests or nearly 30% in 1999[10]. During the Indonesian occupation, there was widespread destruction of forest ecosystems due to unsustainable harvesting and exporting of much of the country's most valuable resources, notably sandalwood, ebony and redwood.

[10] Sundland, et. al., 2001. *Assessing Environmental Needs and Priorities in East Timor*. Final Report – UNDP, Dili and Norwegian Institute for Nature Research, Throndeim.

A study on vegetation cover recorded that the most significant change was experienced in woodland area as indicated in the following table.

Table 1 Land cover change between 1989 and 1999

Cover type	*Area (km2) 1989*	*Percent of area 1989*	*Area (km2) 1999*	*Percent of area 1999*
Dense forest	410.5	5	265.02	3
Forest	833.3	10	758.78	9
Plantation	260.57	3	421.43	5
Forest/coffee	467.19	6	575.05	7
Woodland	2555.64	31	1497.56	19
Woodland (poor)	568.48	7	1749.06	22
Heath/shrub	213.45	3	401.69	5

Bouma & Cobryn, 2002, pg.4

It is estimated that the rate of deforestation during this period was equivalent to 1.1% per year, four times higher than the global average of 0.3%. Within this period, it was estimated that about 114,000 hectares (35%) of dense forest were lost and 78,000 hectares (24%) of sparse forest were destroyed. Most alarming was an increase of more than 200,000 hectares of open areas.

A lot of the above deforestation incidents took place on sloping lands thus contribute more to soil erosion problems, landslides and eventually sedimentation of waterways.

Shifting cultivation

The majority of the population is engaged in upland farming using shifting cultivation practices. Based on the survey conducted by NDF, each family occupies 1 – 2 hectares depending on the available labour in the family. Each family has 2 –3 farm areas. Most of the farmed areas are located in the fertile soil along the river or creek within the watershed areas but there are lots on the hillside areas as well. NDA estimated that approximately 70.000 ha of the total land area of Timor-Leste is cultivated each year and 60% from this total is found on sloping areas. Crops that are commonly planted include corn, cassava, beans and some vegetables. The cultivation period lasts for about 3 years and the land is abandoned thereafter to a tumbledown fallow for some years after which it is again cropped without proper conservation measures..

This can result in land and watershed degradation and loss of biodiversity. However, the understanding of the issue is still lacking and further study is needed to ascertain if shifting cultivation system is to be blamed for the land and watershed degradation.

Uncontrolled grazing

Although not well documented, uncontrolled grazing could be a contributing factor to land degradation in Timor-Leste. Overgrazing occurs in the rangelands, which are public lands and not owned by the people who own the animals. Generally, livestock is not “stall fed.” Livestock pens are only used in some areas. Under intensive grazing, regeneration of humus is affected and this causes soil mineralization over many years. This could lead to poor regeneration of grass that can protect the soil from water and wind erosion.

Grazing by too many animals over a long period can result in the compaction of soils, which in turn would reduce the infiltration of water and increase the risk of excessive runoff and soil erosion. Overgrazing also leads to invasion of alien weed species such as Siam weed. However, despite the extensive siam weed attack on grasslands and parture lands as discussed above, other evidence is lacking to make a claim that uncontrolled grazing has contributed to land degradation in Timor-Leste.

Forest fire and slash and burn activities

Forest fires in Timor-Leste could be unintentional or accidental and are often aggravated by climatic conditions. However, more often, the fires are due locals practices in animal farming, shifting cultivation and hunting. In the northern part of the country, grazing lands are burned at the end of the dry season for the regeneration of new pasture. This practice often leads to soil erosion and loss of soil fertility due to lack of ground cover. In a number of local communities, fire are alos use for hunting wild lives such as ground bird (local name: Kiukai in Maliana) and deer in Manatuto and Natarbora. Fire is also commonly use in shifting cultivation practices where slash and burn activity is widely adopted prior to land preparation period for crop cultivation during rainy season.

Forest fires normally happen in areas dominated by grasses, eucalyptus, bamboo, casuarina, and teak. Information on areas damaged by fire is incomplete but based on 1994 data, a total of 60,301 hectares were damaged by fire within that year alone. Forest fires occur in the dry season thereby leaving the ground uncovered at the beginning of the wet season and prone to erosion before ground cover can be formed.

Firewood collection

Fuelwood is the main energy source for domestic use for the majority of the Timor-Leste families both in urban and rural areas and most families collect fuelwood from nearby forests[11]. Some families, particularly those living in the vicinity areas of Dili and Baucau as two main urban areas in Timor-Leste, sell fuelwood to support their household income. This has resulted in the diminishing of forest cover particularly in hilly areas sorounding Dili and other places in Aileu, Manatuto and Liquica Districts as areas of major supplies of fuelwood to Dili. Coupled with frequent burning of slopes, fuelwood harvesting activity have contributed significantly to soil erosion in these areas, most prominently on hills surrounding the Capital.

2.3.2.2 Underlying Causes

Poverty

More than two fifths of East Timorese live in poverty. The poorest households are mostly farmers with little land and no education and most of them are in living rural areas. This reflects higher economic pressures to obtain sufficient food and income to meet immediate needs. Due

[11] The World Bank, Timor-Leste Issues and Options in the Household Energy Sector: A Scoping Study, 2007.

to such pressure in the short term, labour, land and capital resources cannot be spared to care for the land. The increased economic pressures of the farmers also will drive then into opening of forest areas to do shifting cultivation and fuelwood collection for quick cash.

Demographic pressures

The demographic pressures in TL, expressed in annual population growth rate of 3.4% (projection for 2005/2025)[12], exert influence on land quality and land degradation in many forms. Increase in population will increase demand for extension of crop land for increasing food production. Increased demand for cropland in combination with demand for timber and fuel wood will cause reduction in areas under forests and grass lands.

Ineffective law enforcement

Weak forestry policies and regulations, coupled with ineffective enforcement and disruption of customary laws, resulted to the inability of government to stop widespread deforestation and destruction of forest ecosystems.

2.3.3. Responses and Challenges

The Government is well aware of the above issues and the acute land degradation problem confronting the country. It recognizes the urgent need for sustainable land management. Despite some serious barriers, the following actions have been taken in its attempt to address this serious problem.

Policy and Legislative framework

The concern for environment protection and sustainable development is well reflected in the Constitution of Timor-Leste. Environment protection and the preservation of natural resources is stated as one of the fundamental objective of the State in Section 6 (f) under the Part I of the country's constitution.

Section 61 paragraphs 2 and 3 state that: *The State shall recognize the need to preserve and rationalize natural resources;* and *The State should promote actions aimed at protecting the environment and safeguarding the sustainable development of the economy.* In addition to this, Article 139 paragraph 3 on natural resources protection states " the exploitation of the natural resources shall preserve the ecological balance and prevent destruction of ecosystems."
Further in Section 96 provided for the authorization of the Government to make laws that defines a policy on environment protection and sustainable development. In addition, section 139 (3) of the national constitution stated that "*The exploitation of the resources shall preserve the ecological balance and prevent destruction of ecosystems*"

This was emphasized explicitly in its first five years National Development Plan (NDP) with a statement that 'Timor-Leste will manage and utilize its natural resources in a sustainable

[12] Timor-Leste Human Development Report 2007/2008

manner that takes account of environmental needs in order to support economic growth and improve community welfare.

The national legislative framework concerning sustainable land management has been regulated under **UNTAET Regulation No. 17/2000** on the Prohibition of Logging Operations and the Export of Wood from East Timor (prohibits logging, hunting and forest burning). **UNTAET Regulation No. 19/2000** On Protected Places - declares and protects 15 Protected Wild Areas, terrestrial and marine, coral reefs, wetlands, mangroves, endangered species and historical, cultural and artistic sites). However, the boundaries and total land area covered under this so-called protected areas is unknown because they have not been mapped or agreed with communities and stakeholders as yet. The only known area is the Nino Konis Santana National Park and the Tilomar Reserve in Suai District.

Government Resolution No. 8/2007 on the Creation of Nino Konis Santana National Park (terrestrial and marine). Nino Konis Santana National Park is the largest among the declared protected areas which covering a total area of 123,600ha (68,000ha land and 55,600ha sea). This incorporates 3 protected wild areas into one and extends them - thus as of now there are 12 Protected Wild Areas and 1 National Park. In addition to this a nation-wide terrestrial biodiversity surveys, conducted by BirdLife International in cooperation with the GoTL, have identified a total of 24 terrestrial sites that are likely to be incorporated into the Protected Area Network[13].

Problems in managing these PNAs are lack of resources; the proliferation of slash and burn farming; illegal logging sponsored by external interests using local community members; wildfire (slash and burn and other); threat of inappropriate development (e.g. bad tourism, industrial scale agriculture, industry, poverty and other development such as hydroelectric development). Thus, to stop this encroachment, there is a pressing needs to forge a long-term partnership between the communities and the government and to plan for the protection and sustainable management of resources whilst ensuring local involvement and ownership, improved livelihoods and equity of benefits to communities.

Government Resolution No. 9/2007 on the National Forestry Policy and Strategy (objectives include forest protection, water conservation and land restoration). The key strategy of this policy is to protect all forests from damage or loss through programmes that will empower, encourage and involve communities to manage forest land, through public relations and education activities, the prevention and physical control of wild fires and reduced livestock grazing.

A **draft Community Forestry Policy** is underway with the purpose to implement the Government's plan to delegate authority for the management of natural resources to the lower levels of government and to the civil society. The aim of the draft Forest Policy is to enable the implementation of sustainable forest management for the long term economical benefit of the

[13] BirdLife International: Trainor *et al*. 2007. Important Bird Areas in Timor-Leste, Key Sites for Conservation.

nation (particularly the rural communities) and for maintaining the provision of ecosystem goods and services.

The **National Forestry Legislation** is awaiting government approval. The overarching objectives of this prospective law is to provide for a sustainable use and management of forest resources for the good of all people through the achievements of a balance between: the conservation and rehabilitation of the forest resources to guarantee the necessities and interests of the future generations; and the productivity of the forest resources to satisfy current economical necessities and the livelihoods.

Draft Law on Fertilizer and **Draft Law on Pesticide Use** are finalized and will be presented to the Council of Ministers, the decisions making body of the government, for approval. These laws are intended to regulate import and selling of the types of both pesticide and fertilizer products that are not harmful to the environment. These have been positive steps taken by the government towards securing sustainable land management as these laws will control the distribution of inappropriate products with harmful substances that can be toxic to the soil and can contaminate underground water.

The **Government Law Decree No. 211 for Quarantine** was adopted on 31 December 2003 for establishment of general practical rules and processes related to sanitation control of import and export of plants and animal and their derived products or other items. The objective of this law decree is to avoid introduction or spread of pest and diseases in national territory. This Law Decree also control the introduction or spread of exotic species from other countries that can threat the existence of native species.

Despite the good will of the government to adopt different policies and laws to conserve and to protect the environment, the enforcement of these laws continue to be a challenge due to individual and institutional capacity issues that are facing by the government. Illegal logging, slash and burn activities and hunting of protected wildlife keeps occurring from time to time. Violators have never been brought to justice because most cases that are brought to the national police are rarely processed or follow up by relevant agencies. Thus institutional and individual capacity strengthening should be prioritized to allow for proper enforcement of the existing laws and to develop complementary laws for sustainable land management in Timor-Leste.

Despite the above mentioned legal framework, the **customary law: *tara bandu*** is also being practiced locally to enforce conservation measures. During pre-colonization era, *tara bandu* was practiced nationwide and it was coordinated among leaders of all communities which shared borders. The system was very strong then that the positive impact on the environment was proven to effective experienced in all places. However, the system was not being practice as consistently during the colonization era due to the introduction of new structures that created confusion in the implementation of the *tara bandu*[14]. Consequently, environment incidents have also taken place regularly coincide with the weakening of the *tara bandu* system.

[14] Carvalho, D.A., et.al, 2008, Nature Conservation through Tara Bandu (Case Stduy)

After the independence, efforts have been made to revitalize the implementation of tara bandu for environment protection and natural resource conservation. *A* Case Study which was recently conducted by Haburas and Yayasan Rai Maran, shows that revitalization of *tara bandu* after the independence have been proven fruitful in a number of communities were illegal felling of important tree species is a concern. The study also found that some communities have stop selling of firewood from banned trees. Thus, further reinforcement of the *tara bandu* should be pursued for sustainable land management purposes meanwhile the legal system of it is in the process.

Institutional Framework

Responsibility for land management is currently shared among various Government agencies including Ministry of Agriculture and Fisheries, the Secretary of State for Environment of the Ministry of Economy and Development, the Secretary of State for Public Works and the Secretary of State for Electricity, Water and Urbanization of the Ministry of Infrastructure, the Ministry of Justice. The specific roles played by each of these institutions related to land management are as summarized in table 2.

Table 2 Agencies involved in land management activities

Agencies	Institutional Mandates
Ministry of Justice	
National Directorate of Land and Property	Planning and allocation of government lands for residential, agricultural and other land use purposes
Ministry of Agriculture and Fisheries	
Secretary of State for Agriculture and Arboriculture:	
National Directorate of Forestry	Planning and management of national forestry, forest lands rehabilitation, management of national parks
National Directorate of Agriculture	Planning and management of agriculture land development
ALGIS[15]	Development of agriculture land use information system
National Directorate for Irrigation	Planning and implementing programs to bring water access to farmers
Secretary of State for Livestock:	
National Directorate of Livestock	Planning and management of pasture land development
Ministry of Economy and Development	
Secretary of State for Environment	• National environmental planning and development; review and approve investment development application; pollution control and EIA. • Coordinate the implementation of MEAs which includes UNCCD
Ministry of Infrastructure	
Secretary of State for Electricity, Water and Urbanization	Ensuring the implementation of legal and regulatory framework related to electricity supply, water resource management and licensing of urban constructions.
Secretary of State for Public Works	Review and approve development application and public infrastructure (roads and bridges) development inspection

[15] Agriculture Land Use Information System

However, these institutions have not performed their individual mandates effectively in terms of promoting sustainable land management. Current institutional arrangement does not provide for an integrated approach to land management. Different institutions has been assigned with mandates to deal with certain aspects of land management. For example, although NDF has been appointed as the focal point institution for the implementation of measures to promote sustainable land management, its official mandates is limited to manage forest lands only. Whereas management of agriculture lands is supposed to fall under NDA's mandate and NDLP is assigned with responsibilities to regulate all land use types in the country. It is the mandate of DNLP to develop policy on land tenure status in the country however until this is still unclear. In addition, collaboration among them has been weak and institutional ego from time to time overrides common interests and often results in inefficient resource use.

Several local and international NGOs and private sector are also actively involved in land management-related programs and projects. These include HABURAS, PERMATIL, SANTALUM, HALARAE, Care International, Concern, Oxfam and CCT[16] of NCBA[17]. Various SLM related programs and small scale projects ranges from community agriculture training, upland farming development, reforestation, agroforestry, watershed management and natural disaster management to integrated natural resource management and environment advocacy have been and are being implemented at grass root level under their initiatives. Most of these NGOs have adequate human resources in the relevant areas. However, there is a severe lack of long-term funding that is needed to address successfully these types of problems.

The National Directorate for MEAs was established in 2007 under the State Secretary for Environment (SSE) of Ministry of Economy and Development (MED) with a specific mandate to coordinate the implementation of the MEAs ratified by the GoTL. Thus NDMEAs is expected to play a coordinating role to ensure synergies among all programs and strategies for the implementation of environment conventions including UNCCD. However efforts to promote synergistic development for sustainable land management programs with related program frameworks housed in other sectors is still very limited.

Programs and Projects

Several programs have been launched, with either government or donor funding, to tackle deforestation as well as begin reforestation. These include a nationwide seed propagation program to establish community nurseries and encourage replanting of forestlands, particularly on hillsides and in areas where erosion is a problem. Subsidy programs are under consideration to provide alternative energy sources to rural residents in an effort to reduce dependency on wood as fuel.

A variety of programs and projects (large and small scales) also have been implemented by a number of UN agencies, International and Local NGOs, donor agencies and private sector to improve agriculture practices in both upland and dryland areas aimed at building the capacity of farmers to farm sustainably. Most of the sustainable land management issues are being

[16] Cooperativa Café Timor
[17] National Coffee Business Association

addressed including rural capacity development for better care for the environment, reforestation, forest conservation, agriculture technology for sloping lands, livestock development as well as rural income generation activities. In summary, much has been done to encourage conservation, reforestation, watershed protection and sustainable agro-forestry to overcome forest resource decline.

However, for a variety of reasons the above interventions have made only limited contributions to overcoming land degradation problems. Diminishing forest resources due to population encroachment, conversion to farmland, firewood and building material collection and livestock grazing continues.

Likely causes of why the above interventions have made limited progress in overcoming resources degradation problem are inadequate understanding of the nature of the problem. Most of these programs and projects are donor-driven and therefore short-term in nature, and there is often no follow-up to their initiatives. Meeting basic and most immediate household needs has a higher priority for families than planting trees that will produce value in several decades. Also, incentives to change behavior are not sufficient to attract communities to engage in environmental protection and conservation programs. Unclear land tenure and poverty issues are important. In addition, the Government's general unwillingness to date to continue donor-funded programs or projects after the donors' work is completed has weakened overall efforts at establishing national environmental protection and conservation programs.

In these circumstances there is a great need for all parties to be well informed on the underlying factors that affect the persistence of the degradation problems and therefore they could develop appropriate conservation strategies that correspond to the nature of the problems and take into account the needs of those who will be directly impacted by the new interventions for them to take ownership of these interventions.

3. OPTIONS ANALYSIS

3.1. Needs Assessment

3.1.1. Needs for SLM improvements

Land information

Most of studies conducted in relevant areas confirm the general view of land degradation in Timor-Leste as outlined in earlier sections of this paper. However, there are significant gaps in the information needed for effective land and water management because most of the studies conducted have not covered the principal aspects of land degradation. The key gaps are:

Physical environment features: Climatic, landform and soils are factors that often give rise to natural hazards of land degradation and basis for the distinction of various types of land degradation in the places of different environment features (FAO). Information available on the environment features of Timor-Leste is still inadequate.

Status of degradation: Most studies conducted in relation to land degradation in Timor-Leste have focused on forestry issues, so information produced has not covered adequately other aspects of land degradation such as its extent & intensity, local of occurrences and forms of degradation.

Root causes of degradation: Causes of land degradation can be natural hazards such as storms, flood and drought; direct causes which include deforestation and land clearing, shifting cultivation, overgrazing and forest fire; and underlying causes such as poverty, improper land management policy. The understanding of these processes is not sufficient to allow proper planning and decision making for sustainable land management in Timor-Leste.

Land Tenure: Experience in many countries experiences has shown that insecure land tenure causes unwillingness in farmers or land users to invest in improving and protecting the land against degradation. Land tenure is still unresolved in Timor-Leste. However, how land tenure impacts on land management has not been thoroughly investigated.

Economic consequences of land degradation: Information on the impacts of land degradation on local community economy is scarce. Thus it is important for land degradation assessment to include this point to inform the communities how they are suffering economically when land that they depend on no longer able to perform its productive function. The information is also important to alert the nation's decision makers to give higher priority to solving the issues.

***Women's rights to Land*:** Information on how the majority of women in Timor-Leste lack land ownership rights and are largely excluded from decision-making processes regarding land use management, and what potential impact this exclusion has on tackling land degradation, needs to be assessed.

Effect upon the people: Land degradation affect men and women's lives differently in various forms, however information on this is still limited.

Land use policy and legislation

In addition to several newly adopted government regulations on forestry, Indonesian environmental laws and regulations remains to be valid until Timor-Leste decide to revoke or make new laws and regulations to replace them. However, the problem here is their enforcement and implementation. The existing laws and regulations are not being enforced due to the limited technical capacity of officials of relevant institutions in the country. There is a need to develop local expertise to review, evaluate, and monitor the enforcement and implementation of environmental laws, regulations, and standards.

Other challenges regarding the legislative framework for controlling land degradation include lack of laws to regulate the ownership, possession and management of public, private and community lands; lack of laws on environment protection, soil conservation, waste management, pollution control; lack of laws on agriculture lands protection, agriculture lands ownership and use, agriculture practice rules, protection of waters against pollution and lack of laws on livestock/pasture grazing.

Timor-Leste needs to establish systems of formal land administration and regulatory arrangements for proper land use and the management of land resources in a sustainable manner.

Institutions

Currently there is no single institution responsible for combating land degradation. Responsibility is shared among various agencies and these responsibilities are poorly coordinated.

In order to establish the right framework for implementing land degradation controls, it is imperative that one agency be given this mandate. However, due to the number of agencies involved in various aspects of land management, it becomes necessary to establish a network among these agencies coordinated by one agency with a clear mandate to do so.

Since factors which contribute to land degradation are mainly agricultural in nature, it would be logical to have the Ministry of Agriculture and Fisheries the lead agency. The coordinating role should sit within the office of the General Director of MAF with secretarial support from Directorate of Forestry, which is also the National Focal Point[18] institution for the implementation of the UNCCD.

Under the direct supervision of the General Director of MAF and Director of Forestry, the National Focal Point has a mandate to develop strategies for and to coordinate the

[18] Director of reforestation and forest rehabilitation has been officially appointed by the Minister of Agriculture and Fisheries as the National Focal Point for the coordination of UNCCD implementation in Timor-Leste

implementation of national program of actions to fulfill national obligations as spelled out under the convention. Controls over land degradation process and mitigation of the effect of drought are among the priority obligations that needs to be fulfilled by Timor-Leste to contribute to achieve the objectives of the UNCCD.

Programs

Based on the consultation with stakeholders including government agencies, NGOs and private sector which was done during the initial stage of Sustainable Land Management project implementation, the main message obtained with regards to sustainability of SLM interventions, was that appropriate incentives are required to create ongoing support and ownership of the intervention programs directed to sustainable land use. The essence of this message was that there will be no use to advocate for conservation programs and to urge people to care for the environment if they are struggling to satisfy basic needs for food, fodder and fuel wood. SLM improvement programs must not prejudice satisfaction of basic needs of present land users.

In the meantime, effective and sustainable public awareness programme should be pursued to educate all citizens on the importance of SLM and its inter-linkages with socio-economic and environment wellbeing of the nation.

In addition, proper long term land tenure arrangements to allow people to access and to have rights to use the land for economic purposes could also be a good incentive for people particularly land managers to invest in land conservation activities.

3.1.2. Estimate of needed resources

Timor-Leste needs to lay out foundation to build its capacities for continual assessment of environmental conditions, land use information management and the inter-linkages of environment conditions and socio-economic conditions of the nation. In this regards the country needs social scientists, economists, researchers and trained specialists in relevant fields including agriculture, hydrology, forestry, climatology, GIS, data base management, and mapping.

Timor-Leste also requires capacity for continual assessment, development or reform of national legal instruments related to land use and land management to be able to establish systems of formal land administration and regulatory arrangements for proper land use and the management of land resources in a sustainable manner. Thus it needs to have environmental legislation specialists, land law specialists and general legal analysts.

Strong and appropriate institutional arrangements are required to ensure effective coordination of the implementation of SLM related policies, legislation and on-ground interventions programs. All relevant institutions must have adequate human resources and appropriate facilities and equipment to support their operations.

Secure long-term financing of SLM is required because the changes to take place will only occur slowly. Donors, non governmental agencies and other international agencies come and go but the government will be here forever, thus a secured government fund for SLM is crucial.

3.2. Options

3.2.1. Ground sustainable land management interventions

On-the-ground interventions for the improvement of sustainable land management could include packages of programs and projects that tackle both poverty issues as well as preserve or restore ecosystem stability, functions, and services. These may include the following:

1. **Sustainable agricultural practices** to move towards farming practices that do not have adverse impact on the stability of the land resources and that would have additional benefits related to watershed protection, biodiversity conservation, carbon sequestration capacity of the land; and reduction in carbon dioxide emissions.
2. **Sustainable rangeland and pasture management** to introduce an improved livestock grazing regimes that sustain the economic productivity of rangeland and pasture to increase to rural income with minimal impact on the environment.
3. **Sustainable forest and woodland management** to minimize further encroachments into forests land due to shifting cultivation practices, illegal logging and uncontrolled grazing through development of community-based forestry or integrated agroforestry to increase greater roles of community in forest resource management.
4. **Targeted research** to better understand the underlying causes that drive land degradation and to provide information, knowledge and tools to improved SLM decision making including adoption of SLM practices and technologies.

3.2.2. Capacity building

Based on GEF Guidelines, Capacity development for sustainable land management can be done at three levels as in the followings:

1. Individual capacity development includes interventions that create or improve knowledge, skills and attitudes. This can be done through training and workshop; on-the-job professional development and continuous education; or mentoring, study tours and networking. Individual capacity development at national and community level is necessary for successful implementation of on-the-ground interventions for sustainable land management. Strengthened individual capacities also determine an institution's capacity to perform certain functions.

2. Institutional capacity development include interventions that create or improve missions and mandates; culture, structure and competencies; planning and quality management processes; human resources; effective management and allocation of financial resources; information resources and material conditions. Strengthened institutional capacity is also

a way to develop individual and systemic capacity. Institutions with strengthened individual capacity will be able to develop good policies, regulations and economic incentives which enable successful implementation of SLM intervention on the ground.

3. Systemic capacity development includes interventions that create and improve enabling environment including policies, regulations, and economic incentives to support individual and institutional capacity building.

3.3. Priorities

Priority setting is important to define and deploy a set of feasible and targeted interventions to respond to country's most immediate needs. However, priority setting at this time is problematic because of the general absence or weakness of data required to set priorities. This has been a major constraint to planning and defining interventions to control land degradation. Priority should be given to interventions that could secure a sustainable financing mechanism for targeted research for obtaining appropriate data necessary in SLM planning. Priority also be given to strengthen the capacity of key institutions such as National Soil Laboratory, ALGIS, National Directorate of Forestry and National Directorate of Land, Property and Cadastral Surveys to be able to respond to the TL's most pressing needs, which is to do a better land use planning and management, through better staffing, improved mandates and facilities.

4. ACTION PROGRAMME TO COMBAT LAND DEGRADATION

4.1. Goals

The goal of the NAP is to ensure that the management of agricultural, forest and other terrestrial lands of Timor-Leste is done in a sustainable manner to contribute positively to the environmental, economic and social well-being of the nation.

4.2. Objectives

The overall objective of the NAP is to lay out priority actions towards controlling factors contributing to and mitigation of the effects of land degradation in Timor-Leste in an integrated manner as pre-requisite for forging sustainable livelihoods of the people of Timor-Leste.

4.2.1. Long term objectives

In the long term NAP seek to contribute positively to the economy of rural areas, to the environment and to the people:

1. For the environment:
   - effective implementation of sustainable agriculture and forestry through provision of effective incentive and regulation;
   - effective water resource management;
   - expansion in woodland areas to achieve biodiversity conservation and to increase carbon storage capacity to help tackle global warming
   - land management that maintain local landscape character and responsive to ecosystem requirements;
   - restoration of damaged lands and good management of soils, reducing soil degradation through compaction and erosion.
2. For the economy:
   - Prosperous agriculture and forestry that provide for the nation's food security and improved nutrition
   - All rural communities are self-reliant through improved productivity, increased income and employment opportunities
   - Economic returns of crops will be sufficient to cover investment in sustainable land management
3. For the people:
   - Good understanding of the implications of taking gender issues into consideration in order to combat land degradation
   - better understanding of sustainable land management and its importance to the rural economy therefore they will take the initiatives to protect and conserve the land resources;

- improved quality of life through a better environment, availability of high quality, locally produced food and improved access to water;

4.2.2. Medium term objectives

In the medium term NAP seeks to remove all main barriers to implementing sustainable land management by controlling factors that contribute to land problems in Timor-Leste. Medium-term objectives are:

- Establish an enabling environment for the implementation of sustainable land management through adoption of policies and legislation which provide for proper management of both public and private lands and through mainstreaming of sustainable land management in all policy development processes and at all levels.
- Improve individual professional skills and institutional capacities for identification and analysis of sustainability issues and for planning and implementing appropriate responses.
- Adoption and transfer of appropriate technologies in agriculture, livestock and forestry development which take into account environmental sustainability.
- Protect existing forests and extend green areas in bare lands by establishing plantations, facilitating natural regeneration, and agro-forestry development.
- Enhanced community participation of both men and women in all agriculture and forestry planning and management activities to limit further deterioration of natural resources and for effective protection of designated habitats and species.
- Enhanced environment research and monitoring activities with greater integration of various aspects of land management issues.

4.2.3. Short term objectives

In order to create favorable conditions for the overall achievement of long term and medium term objectives, it is necessary to interlink the objectives with specific programmes. Programmes which will ensure the operational implementation of actions that concentrate on meeting the immediate needs of people such as food security, fuel demand, and clean water for living. These should also include creation of a solid base for the implementation of sustainable land management such as training and extension, adopt legal framework for natural resource management, to do surveys and assessment in the affected and vulnerable areas.

4.3. Priority Programmes and actions

4.3.1. Land degradation prevention

Action Programme 1: Sustainable Agriculture and forestry development

Deforestation and the continuing degradation of Timor-Leste's natural environment is mainly driven by expansion of shifting cultivation practices in upland and dry lowland areas. Most of the rural population continues to have a high dependency on the existing diminishing forest resources for conversion to upland cropping land, for various domestic needs such as firewood and timber collection, and livestock grazing. Shifting cultivation involving sustained clearing

and burning of wooded hillsides represents the principal agriculture techniques in Timor-Leste. In this situation there is a pressing need to develop strategies for sustainable agriculture and forestry programs. The following actions are needed to achieve sustainable agricultural and forestry development in TL:

- Research for better understanding of land degradation problems and deforestation issues in upland marginal areas;
- Recognize the importance of sustainable land management in all relevant sectoral development strategy;
- Transfer of appropriate (improved and environmental friendly) technologies/interventions – seeds, fertilizers, small farm reservoirs and small water impounding;
- Implement soil reclamation and conservation programs;
- Effective response to meeting the basic needs of the communities particularly in food and water provisions as incentives for attitude changes;
- Development of needs-based training packages to support rural communities in sustainable land management
- Regular farmers' training in intensification of soil and water conservation and drought mitigation measures;
- Integrate multi-functional land management into rural economy development policy
- Enhance cross-sectoral collaboration for effective management of land issues since land is a cross-cutting area thus it cannot be dealt with a single institution or a few institutions.
- Promote integrated natural resource management programs

Action Programme 2: Poverty Alleviation Programmes

Food insecurity and widespread poverty are closely linked to land degradation. It will be challenging to change and reduce the high dependency of rural communities on natural environmental capital – subsoil resources, agricultural land and forests – to land use schemes that promote and maintain healthy natural systems and can support sustainable increases in agriculture production. This challenge will be greatest in upland areas where there is pressing need to ensure the sustainability of efforts on rehabilitation of marginal uplands and where mitigation measures must address the socio-economic and livelihood needs of the vulnerable communities. Actions towards achieving a healthy natural system for support of an improved agriculture production will include:

- Conducting in-depth studies on the relationships between poverty and land degradation and on remedial measures to be taken to address the issue include research to test prospective methods of improvement .
- Promote inter-sectoral collaboration for an integrated approach to mainstream sustainable land management in rural development programs which are aiming to reduce poverty.
- Targeting poorer segments of the farmers living in critical areas as the main initiative to combat land degradation because they are most vulnerable to the effect of land degradation.
- Promoting agriculture diversification with value adding and promoting efficient multiple land use.

- Promoting and providing incentives for the adoption of improved cooking stoves by community for more efficient use of wood fuel.
- Improving water access by the poor to enable multiple crops production in a year.
- Food security programs in the course of an increased and stabilized food production system that promotes community self-reliance.
- Establishing a national early warning system and emergency plans to mitigate the effect of drought, floods and other natural disasters.
- Adopting of land reform policies to ensure equal access to land by all farmers particularly the women.
- Implement strategies to enable both men and women to become active natural resource managers with decision-making responsibilities within their communities.
- Promoting community-driven forestry development to allow community access to forest resources at the same time caring for the sustainability of these resources.

Action Programme 3: Public Education and Awareness

The long-term success of any development efforts depends on people's capacity, cooperation and dedication to undertake initial efforts even in the absence of external supports. Therefore it is important to develop, strengthen and empower communities as well as the Government to ensure that each party will take their part in the initiatives for the prevention of land degradation. Actions needed for public education and awareness for sustainable land management include:

- Improving national awareness programs on the character and impact of deforestation, land degradation and drought.
- Implementing National SLM campaign programs
- Establishing integrated information system on knowledge and examples of good agricultural practices for SLM
- Promoting the country's participation in the international events and processes of knowledge exchange of good practices for SLM
- Improving agriculture and environment research, education and extension programs
- Establishing community learning centers for farmers self help programs
- Strengthening Land Degradation-related agricultural research and extension services
- Preparing an inventory and compendium of indigenous/local knowledge in mitigating the effect of drought and combating land degradation
- Improving National Environment Curriculum which integrates the principles of Sustainable Land Management at all levels of formal education.
- Establishing a sustainable financial mechanism for agriculture and environment research.

Action Programme 4: Improvement of the legislative framework and policies for sustainable land management

Legislation and appropriate policies are required to clarify various aspects related to the protection of agriculture, forestry and other lands against different types of land uses that could

lead to inefficient use and management of lands, damage over the natural resources and overall negative impact on the environment, economy and the society.

The following measures are necessary to provide the necessary legislative and policy support for SLM:

- Conduct analysis of the existing community practices, the traditional law of *tara bandu*, to evaluate its effectiveness for encouraging environment protections and natural resources conservation measures, therefore good lessons can be documented to be shared nationwide.
- Conduct analysis of the existing legal practices related to sustainable land management and draft a set of recommendations for adequate and appropriate legal mechanisms to be reinforced within national legislation in that area.
- Adoption of appropriate policies related to access to land by the poor
- Adoption of appropriate policies to address land ownership and land tenure issues
- Adoption of appropriate land use policy and planning
- Drafting and adoption of agriculture land protection law
- Drafting and adoption of soil and water conservation law
- Improved water use policy
- Drafting and adoption of legal frameworks for the protection of lands unaffected by degradation and to encourage the introduction of early warning systems, regular monitoring and control over the activities related to the use and management of the lands.
- Drafting and adoption of a national environment strategy and action plan with proper integration of sustainable land management.

4.3.2. Land degradation mitigation

Action Programme 5: Land Degradation Inventory and Monitoring

Although land degradation is widespread in Timor-Leste, not all places are affected severely. Thus it is necessary to conduct an inventory of affected areas together with the extent, intensity, forms and underlying causes of land degradation in each of the affected areas. All involved parties, particularly land users and land use planners as well as institutions responsible for land use planning and development, will need the information to manage the land in a sustainable manner. The inventory will allow the most vulnerable and affected areas to be identified so interventions for those areas can be given the appropriate priority.

- Inventory and mapping (using GIS systems where specific maps can be prepared as required) of forest resources and degraded lands
- Identification and classification of degraded lands including mangroves
- Identification of the causes and impacts of land degradation on the social and economic dimensions of communities affected by degradation
- Regular monitoring of land management and land degradation processes, with priority given to the most vulnerable and affected areas.

- Establishment and management of a publicly accessible land degradation data and information system.
- Conduct regular information dissemination about sustainable land management to farmers, land owners and forest dwellers.

Action Programme 6: Rehabilitation of Degraded lands and protection of water resources

The achievement of the national development goal of eradicating poverty is directly related to resolution of the land degradation problem. Poverty is the inability to obtain sufficient food and other essential services to live a healthy life. Poverty in rural Timor-Leste is characterized by lack of access to quality land and agricultural inputs needed to produce food, lack of opportunities for remunerative non-farm employment, and inadequate knowledge of ways and means of improving their condition. Population growth means more demand for land for agriculture use, timber for construction, fuelwood, and clean water. Degraded lands will not able to perform its productive function to maintain for the provision of the resources to support basic human needs. Immediate action is required for the rehabilitation of degraded lands and protection of water resources. These include:

- Review past and current initiatives on land rehabilitation
- Rehabilitation of degraded forest, agriculture and other types of land through adoption of appropriate technologies
- Carry out soil conservation and rehabilitation activities through development of soil erosion mitigation plans for areas most severely affected by erosion
- Identification and classification of national water resources for conservation and protection purposes
- Create conditions to restore irrigation systems and water resource protection for sustainable farming in Timor-Leste
- Analyze current irrigation schemes and develop new and improved schemes for water distribution in the existing irrigations systems, new organization and management to adjust to land use changes and to increase water use efficiency.
- Promote reforestation and agro-forestry activities on degraded forest lands
- Develop and strengthen local community (both men and women) capacity to initiate reforestation, agro-forestry and water resource protection programs

Action Programme 7: Monitoring and mitigating the impact of climate variability

Land degradation in the form of soil erosion and loss of vegetation can lead to the reduction of the carbon sequestration capacity of land. Loss of vegetation cover can create adverse local weather pattern. In turn, climate variability can exacerbate land degradation. Changes in rainfall and temperature pattern creates more floods, drought and fires therefore accelerates land degradation and often leads to severe natural disasters.

Climate change can affect agriculture in many ways. Increased temperature alone can lead to reduced crop production, increased pest attacks, scarce water resources and drought, and reduced livestock production. As a small island country, Timor-Leste is also subjected to sea

level rise due to global warming. Increased global temperature also lead to increased susceptibility of communities' to vector borne diseases such as malaria. All these factors will lower local capacity to adapt to the changes and to mitigate it adverse impacts.

Therefore, the utmost concern to combat land degradation should also take into account better understanding of the potential impact of the current and projected climate changes on Timor-Leste's agriculture and to identify ways and means to adapt and mitigate its detrimental impact. The following actions are to be taken in order for the country to be able to respond positively to the changes brought about by the climate change.

- Establishment of early warning systems for disaster preparedness
- Empower local community for disaster management
- Carry out targeted research on climate variability related to land degradation
- Monitoring the impact of drought and promote research on drought resistant-crops
- Develop country's scientific and technical capacity to assess and monitor the state of climate induced degradation of the land.

4.4. Project concepts

Project activities addressing deforestation and land degradations processes in Timor-Leste should focus on the principle aspects of sustainable land management. These include restoring degraded areas, protection and conservation of unaffected areas of high agriculture and environment significance, and capacity building for the enabling of the implementation of both land rehabilitation and conservation activities.

Capacity building should be done at individual, organizational and systemic level. Timor-Leste should first aim at having individuals with improved knowledge, skills, and attitudes through addressing organizational constraints or removing barriers to career advancement within organizations and providing them financial and infrastructural resources to enable them to apply new skills. Institutions should be strengthened to deliver their functions effectively through addressing hierarchy, decision making and accountability issues as well as infrastructure and information and management systems. In order to enable individual and institutions to perform effectively, a strong system should be in place. All structural barriers to acquisition of capacity at individual and organizational level as well as address policy gaps or inconsistencies that may hinder the achievement of sustainable land management should be removed.

The following project concepts are proposed for the Government and its developing partners to pursue for achieving sustainable land management in Timor-Leste.

4.4.1. Capacity Building for sustainable land-use planning and management project

Background

Generally, land degradation constitutes changes to soil quality, increase in water scarcity, reduced vegetation cover and loss of biodiversity. In rural areas, it is usually manifested by

reduction of fuel and fodder supplies, drying up of natural water courses, weed invasion on pasture lands, excessive soil and gully erosion, landslides, surface runoff and stony soils. Land degradation in urban areas is manifested by air and water pollution, damaged roads and overflowing of drainage channels. This shows a clear need for change to current land uses. Therefore proper and strategic planning for use and conservation of land and natural resources is required to minimize impacts.

Land-use planning is the systematic assessment of land and water potential, alternatives for land use and economic and social conditions in order to select and adopt the best land-use options. Its purpose is to select and put into practice the land uses that will best meet current needs of the people while safeguarding resources for the future as well as to provide guidance in identifying and resolving conflicts between competing uses, by indicating which areas of land are most valuable under what use.

However, to be able to carry out proper land use planning, the capacity issues in terms of human resources and institutional mandates needs to first be strengthened.

Objectives.

1. To strengthen the capacity of national land use planners, terrestrial and soil scientists, soil laboratory technicians to assist in the development of land use plans.
2. To strengthen the capacity of land management institutions including the national soil laboratory to be better equipped with improved information and technology for land use planning purposes as well as for continual monitoring and evaluation of land degradation.
3. To develop agriculture land use plans for all the 13 districts in Timor-Leste.
4. To develop management plans for all major watersheds in Timor-Leste.
5. To develop national mangrove management plan.
6. To develop national and local capacity to implement land use plans.

Activities

1. Establish a national land use planning commission to develop policy for training national experts in land use planning and sustainable management of its resources;
2. Train national land use planners and marine and terrestrial scientists;
3. Develop land use plans for all 13 districts;
4. Develop watershed management plans;
5. Develop national mangrove management plan;
6. Develop local capacity to prepare and implement land use plans.

Expected outcomes

1. National capacity will be developed in various relevant areas to formulate land use plans for sustainable land management to avoid land degradation and improper use of land in order to maintain and enhance land quality in Timor-Leste.
2. Land use plans are developed for all 13 districts
3. Watershed management plans are developed for all major watershed in the country

4. National mangrove management plans are developed
5. Local capacity for the implementation of the land use plans is developed

Responsible institutions

Ministry of Agriculture and Fisheries and Ministry of Justice.

Implementation strategy

MAF/National Directorate of Forestry & ALGIS in cooperation with Ministry of Justice/National Directorate of Land, Property and Cadastral Surveys, Ministry of Education and national universities, to identify and send their selected officials (currently working on land management issues) or potential university students or graduates to attend abroad short-term to medium-term courses in relevant areas. These people are to be responsible to carry out the activities listed above after they are trained in the fields.

4.4.2. Local capacity development for sustainable upland farming

Background

A significant proportion of Timor-Leste population rely on shifting cultivation and free grazing agriculture activities and many of these are taking place on upland and dry land areas. Staple food crops such as maize, sweet potatoes, cassava and red beans are among the most common crops planted on the sloping areas mainly for household food supply. With the increased number of population, the need for more lands for shifting cultivation will also increase. This means more forest land will be cleared for shifting cultivation and free grazing. Compounded with the natural topography and intense rainfall, shifting cultivation and uncontrolled grazing will place more risks to soil erosion, landslides and ultimately reduced soil fertility. The ultimate result is reduced agriculture production and food security.

However, the effects of shifting cultivation and uncontrolled grazing are different across districts, depending on local land resilience and resistance. Sustainable farming systems are required urgently for upland farming areas, especially in vulnerable and already degraded areas where food insecurity is already prevalent. It is also important that farmers are aware of the negative impacts their farming practices having on the long-term sustainability of the land to support their livelihoods. Therefore efforts should be made to strengthen the capacity of districts extension workers hence they can support farmers to farm sustainably.

Objectives

1. To conduct a multidisciplinary research and test a sustainable farming system for sloping areas in Timor-Leste to restore and transform degraded and marginal areas into self-sufficient upland farming communities.
2. To initiate a sustainable extension approach through establishment of farmer field schools or other appropriate extension models for sustainable agriculture development in rural areas.

Activities

1. Capacity development for extension workers;
2. Carry a participatory research for testing the application of sustainable land management technology in upland farming villages focusing on food crop production, livestock production, trees for fuelwood and cash crops for household income diversification;
3. Design a sustainable farming system for sloping areas;
4. Train farmers' in sustainable upland farming techniques and in communal land management through 'learn by doing' activities in soil & water conservation, agroforestry, livestock and crops integrated farming.
5. Develop communal irrigation system wherever possible for water harvesting to help solve scarcity of water for irrigation in upland areas

Expected outcomes

1. Trained extension workers
2. Adoption of a sustainable farming system by farmers in upland areas by first targeting the most at risk or severely degraded villages with higher risk of food insecurity and land degradation;
3. Farmers have greater capacity to plan, implement and monitor their own nature conservation activities;
4. Improved water access by farmers on upland areas;
5. Improved food security and local income;
6. Improved land cover and reduced erosion.

Responsible institutions

Ministry of Agriculture and Fisheries (MAF) in collaboration with Secretariat of State for Rural Development (SSRD) and Ministry of Infrastructure (MI).

Implementation strategy

MAF should take the leading role for the initiation of this project. However as one of the components of the project is to develop communal water structures in the targeted communities, Ministry of Infrastructure should take ownership of this particular activity. Meanwhile Secretariat of State for Rural Development is expected to collaborate in farmers training activity for orientation on potential off farm economic activities which could be pursued by the community for income diversification.

The project should be implemented under the direct supervision of the Secretary of State for Agriculture and Crop Production of MAF. It should target at countrywide communities however the initial stage should focus on districts which are most vulnerable to food insecurity and with a significant case of degradation.

4.4.3. Establishment of legislative and policy framework for sustainable land management

Background

An appropriate legal environment is required to regulate and manage current unsustainable land use and management practices. Improvement and fine tuning of general development strategic framework is also required to take into account the overall integration of sustainable land management principles in all rural development programs and projects.

However, since the development process of legal and policy frameworks normally takes a long time to complete, whereas the need for safeguarding natural resources and environment is immediate thus cannot wait for the laws and policy to complete. Therefore revitalization and encouragement of local customary laws and practices that favors environmental protection such as *tara bandu* should be considered meanwhile waiting for the legal frameworks to complete.

Objectives

1. To develop the national legal instruments for regulating the sustainable use and management of agriculture, forestry and other terrestrial land uses.
2. To improve existing development policies to allow for better integration of sustainable land management interventions in national and local level development programs and projects.

Activities

1. Carry out a systematic assessment of existing local/traditional legal systems appropriate for sustainable land management.
2. Revitalize traditional legal systems that can promote sustainable land management practices and protect forest resources from further damaging due to conversion to other land use purposes.
3. Draft a soil and water conservation act.
4. Draft a national land use policy to protect lands unaffected by degradation, to protect the fertility of agriculture lands, to limit the conversion of forest lands to shifting agriculture and to control free grazing.
5. Assess current institutional mandates and drafting specific recommendations for the establishment or improvement of a national body to perform functions related to the overall coordination, implementation and enforsement of sustainable land management policy and sustainable use of land resources.

Expected outcomes

There will be a better legal environment which allows effective long term-term application of various mechanisms for overcoming existing barriers for the implementation of sustainable land management practices in the country.

Responsible institutions

Forestry Directorate and Agriculture Land Use and GIS Unit (ALGIS) will play a major role in the implementation of this project. However, collaboration from other agencies such as Environment, Agriculture, Livestock, Land and Property and Rural Development as well as NGOs working in the relevant fields are required.

Implementation strategy

The project will be directly managed by the General Director of Agriculture with the secretarial support from the National Directorate of Forestry. A legal expert (both national and international) will be hired to carry out the assignments required under each of the above activities.

4.4.4. Rural Renewable Energy Development Project

Background

Fuelwood harvesting is partially contributed to the deforestation problem in this country. This is obvious because firewood has been the main source of energy for the majority households in Timor-Leste. Fuelwood consumption will increase correspond to the increasing population. Thus alternative energy development is important to reduce deforestation due to fuelwood harvesting. The untapped other potential source of energy can be explored to provide the communities with alternatives to their fuelwood demand.

Objectives

1. To promote the development and adoption of alternative energy sources that are less harmful to the environment and that contribute to the sustainable livelihoods of the people to enable them to take care of the land and the environment.
2. To reduce dependency on natural forests for fuelwood collection.

Activities

1. Assess the on-going initiatives on alternative energy development in the country to identify successful experiences which could be replicated in other areas across the country.
2. Investigate other possible energy options (that have been proven successful in other countries and explore the possibilities (cost benefit analysis) for their introduction in urban areas.
3. Carry out survey on rural households energy demand and identify locally available renewable energy sources for development.
4. Conduct piloting of identified potential energy sources to test their suitability and adaptability in local communities.
5. Train farmers and community members for the adoption and maintenance of the introduced renewable energy technologies.
6. Monitor and evaluate the results from the pilot communities do draw successful lessons and replicate that successful process in other rural communities.

Expected outcomes

1. Energy access is available locally
2. Reduced reliance on firewood
3. Improved livelihoods of local communities to enable them to invest in nature conservation.

Responsible institutions

Ministry of Agriculture and Fisheries (MAF) in collaboration with Secretariat of State for Energy Policy (SSEP) and Secretariat of State Rural Development (SSRD).

Implementation strategy

The National Directorate of Forestry under the direct supervision of the Secretary of State for Agriculture and Crop Production of MAF should take the leading role for the inititation of this project. However, the Secretariat of State for Energy Policy should play an equal role, particularly in the identification of renewable energy technologies and in training farmers in the adoption and maintenance of the technology. Meanwhile the Secretariat of State for Rural Development is expected to collaborate in farmers training activity for orientation on potential off farm economic activities which could be pursued by the community for income diversification.

It should target at countrywide communities, however the initial stage should focus on districts where deforestation as result of fuelwood collection is highly significant.

5. NAP IMPLEMENTATION STRATEGY

For an effective implementation of the NAP, an oversight body consist of the representatives of all relevant agencies should be established. This can be the IMWG. The roles to be played by the respective IMWG members could include policy and operational guidance and facilitate donor coordination for specific project implementation that will contribute to the achievement of NAP objectives. Thus, NFP – UNCCD should collaborate with the National Director for Multilateral Environment Agreements (MEAs) to ensure that all issues relevant to achieving national objectives set out in the NAP will be integrated in the annual workplan of the IMWG.

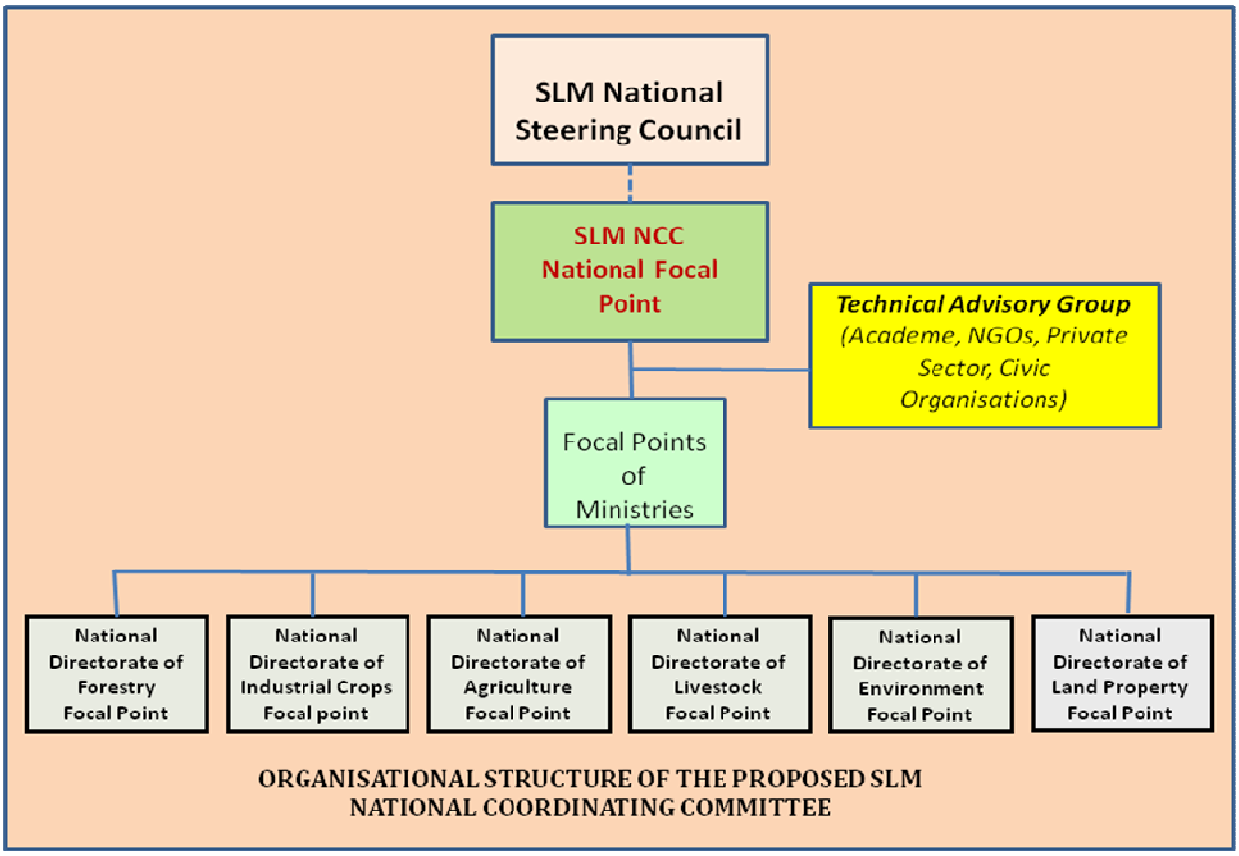
A SLM National Coordinating Committee (SNCC) should be established to become the SLM technical body to ensure that NAP objectives are integrated in the sectoral programs and projects planning cycles. The members should consist of SLM focal points of key directorates of MAF, MJ and MED. It will be backed by a Technical Advisory Group (TAG) composed of representatives from the academe, NGOs, private sector, civic organisations, women's group, and other sectoral representations. The SNCC shall be headed by a National Focal Point (ideally should be the same person as current UNCCD focal point) who may also be called SNCC National Coordinator.

Director General of MAF with the secretarial assistance from the National Directorate of Forestry (NDF), where the National Focal Point for the United Nations Convention to Combat Desertification sits, will take the leadership to coordinate the appointment of the focal points. Their tasks will include drafting of the 'Special Orders' and organizing an inauguration ceremony for official appointments of all the focal points for SLM.

As a starting point, all IMWG members should be adequately informed of the objectives of the NAP and the roles to be played by the individual members of the IMWG in order to secure effective implementation of the activities spelled out in the NAP. Next step will be issuing of Special Order by each minister member to IMWG to officially appoint the successful candidates for Ministry and Directorate SLM Focal Points to be members of the SNCC.

Once established the SNCC should convene its first meeting to identify key SLM actions, from programs as defined in the NAP, that fall under their respective institutional mandates and design a strategy for integration of specific SLM actions in relevant sectoral programs and Projects. Regular meetings should be scheduled to review the progress of the implementation of NAP as well as to define new SLM projects for funding by both the Government and its development partners. The Committee should report on the progress of NAP implementation to IMWG on six monthly basis for political guidance and high level support to new projects.

The organization structure of the proposed SLM National Coordinating Committee is as in the following figure.



ORGANISATIONAL STRUCTURE OF THE PROPOSED SLM NATIONAL COORDINATING COMMITTEE

Draft ToRs for SNCC, SNCC National Coordinator and the Focal Points is attached in Annex 2.

ANNEXES

ANNEX 1. Terms of Reference for Inter-Ministerial Working Group (IMWG) on Environmental Coordination and Natural Resource Management

It is recommended that in order to implement Multi-lateral Environmental Agreements (MEAs) in RDTL and coordinate implementation of the obligations of MEAs and environmental policies across all sectors, a coordination institution should be established with the following broad mandate:

- To be established as the nexus for coordinating between all sectors in planning, policy development, policy implementation, project development and the implementation of MEAs, environmental policies and the management of natural resources.
- To ensure that the impact and assessment of projects on key Ministries can be collaboratively assessed and the inputs incorporated in national policies and directives.
- To oversee and supervise all multi-sectoral activities relating to environmental policies and the management of natural resources.

Task and Responsibilities

1. In view of the broad tasks, the IMWG will have the following tasks and responsibilities, which are not intended to be exhaustive:
   (a) Serve as the principal Government of Timor-Leste (GoTL) inter-sectoral coordination body to ensure full support and cooperation from all stakeholder institutions, especially Ministries;
   (b) Provide overall guidance and coordination for the management of the environment and natural resources;
   (c) Review and endorse the annual workplan, the corresponding budget, and the Financial Reports proposed by the Secretariat,
   (d) Review and approve project proposals under the MEAs;
   (e) Review and establish policies and guidelines for the protection of the environment and the management and sustainable use of natural resources;
   (f) Ensure efficient coordination between different institutions and Ministries and consistent application of policies relating to environmental protection and the management and sustainable use of natural resources;
   (g) Determine actions, if any, to be undertaken to rectify the situation when implementing agency(ies) do not meet expected outputs or performance, and ensure discipline in implementation of the decisions made by IMWG;
   (h) Review and approve all Programme and project outputs, including reports of the National Capacity Self-Assessment (NCSA) National Action Plan;

(i) Review and endorse inter-governmental project initiatives and coordinate across GoTL for consistency and consistent policy application;

(j) Developing national policies concerning the administration and implementation of MEAs, their obligations and projects, as well as cross-cutting and synergistic initiatives;

(k) Evaluate impact, coordinate and make recommendations (to the Council of Ministers) on the accession of Kyoto Protocol and other protocols and

(l) Evaluate and implement critical environmental planning and policy development tools and capacity recommended by convention National Focal Points, lead agencies and line agencies, and to ensure effective coordinated multi-sector application

(m) Provide guidance and coordination to promote the protection of the environment and management and sustainable use of natural resources.

Terms of Constitution

2. The IMWG will be supported by a Secretariat to the IMWG, which will be located under the purview of the Secretary of State for Environmental Coordination.
3. The IMWG will approve its annual workplan and those of the Secretariat, inter-agency committees and the National Focal Points for each MEA.
4. For the IMWG to work effectively, it needs to comprise the highest levels of decision-makers and leaders who can supervise and advise on natural resources and environmental management and, most importantly, have the capability to make decisions on cross-cutting issues and socio-economic issues relating to the environment.
5. The IMWG would also need to have the power, authority and political will to implement the policies and decisions within the framework of the National Development Plan ("NDP") and National Action Plans ("NAP") for RDTL.
6. The IMWG would consider and assess the impact of various projects on key Ministries and agencies, and to ensure inputs from the assessment are incorporated in national policies and directives. The membership of the IMWG therefore includes all Ministries to whom environmental policies and natural resources management would have a direct impact.
7. It is therefore proposed that the IMWG comprise a high-level delegation comprising:

Chairman:
Minister of Economy and Development
Vice Minister of Economy and Development (Vice-Chairman)

Secretary:
Secretary of State for Environment Coordination.

Members:
Minister of Tourism Trade and Industry
Vice-Minister for Education and Culture.
Vice-Minister for Health
Secretary of State for Natural Disaster and Social Assistance
Secretary of State for Fisheries and Aquaculture
Secretary of State for Energy Policy
Secretary of State for Transportation and Communications
Secretary of State for Natural Resources
Secretary of State for Agriculture and Crops
Secretary of State for Electricity, Water and Urbanization
Secretary of State for Public Works

Members Ad Hoc:
Vice-Minister for Foreign Affairs and Cooperation
Vice-Minister for Planning and Finance
National Parliament – Commission for Environment and Agriculture (Commission D)
Secretariat of State for Administration Reform
Local NGOs (Haburas, Halarai etc)
International NGOs (Care International, Oxfam Australia etc)
Civil Society

8. The role of the ad hoc Members is to be kept informed of the activities of the IMWG and where those activities coincide with the interests and responsibilities to attend the particular meeting of the IMWG where those issues will be discussed.
9. As many of the projects implemented under the MEAs will have provision for training and capacity building, it is envisaged that the National Directorate of Public Service and National Directorate for Planning and External Assistance should also maintain a watching brief to ensure that the benefits of training and capacity development opportunities are incorporated within the national agenda for the development of the public service.
10. It is further envisaged that the respective commissions of the National Parliament also be keep informed of developments and activities of the IMWG.

ANNEX 2. Draft Terms Of References For The SLM National Coordinating Committee (SNCC)

Functions

1. Coordinate all SLM-related programmes and activities of various ministries and directorates from planning to implementation, including monitoring and evaluation;
2. Monitor SLM-related activities and suggest ways and means by which programmes and activities can be implemented more effectively and more efficiently;
3. Regularly consult the SLM National Steering Committee (or Council) (SNSC) for guidance and support in order to perform functions more effectively and more efficiently;
4. Provide periodic report to the SNSC and to the various Ministries and directorates on the progress of the SLM programme;
5. Access assistance for the activities and projects of the Committee from donor organisations.

Composition and leadership

The SNCC shall be composed of Focal Points from the key ministries and directorates. It will be backed by a Technical Advisory Group (TAG) composed of representatives from the academe, NGOs, private sector, civic organisations, women's group, and other sectoral representations. The SNCC shall be headed by the National Focal Point who may also be called SNCC National Coordinator.

Organisation and support

The SNCC shall be organised as a special body receiving guidance from the SNSC. Its existence and functions shall be authorised and formalised by the SNSC. Support for the SNCC shall come from the ministries and directorates involved in the National SLM Programme.

TERMS OF REFERENCE OF THE NATIONAL FOCAL POINT FOR SLM

The position of a National Focal Point for SLM shall be established to lead the SLM National Coordinating Committee (SNCC) as a response to the need for a well-coordinated national SLM programme. The position shall be full time. This means the successful candidate shall be detailed to the SNCC from his/her mother agency carrying a new Terms of Reference.

Tasks

The SNCC National Focal Point (also called SNCC National Coordinator) shall be designated to perform the following functions:

1. Lead a team of Focal Points from concerned ministries and directorates in establishing a coordination mechanism with the different ministries and directorates and make use of said mechanism to coordinate the implementation of ministry and directorate plans on SLM;
2. Lead the team in preparing and submitting for approval a work plan of the SNCC to the SNSC;
3. Identify and develop strategies for effective and efficient coordination;
4. Lead the team in regularly consulting the TAG for suggestions on how to enhance coordination within the SNCC and at the systemic level;
5. Develop strategies of accessing support to the activities of the SNCC;
6. Prepare and submit reports on a regular basis to the SNSC; and
7. Other functions that may be required in line with and in support to the above tasks.

Qualifications

The candidate for the post shall be selected with the following basic qualifications:

1. Graduate of a degree in project management, agriculture, forestry, environment or soil and water management, or have undergone trainings in any of the said fields;
2. Experienced in coordination and representation works; and
3. Possesses good communication and coordination skills.

Terms and arrangements

The appointment to position shall be initially fixed for three years but will be renewable annually. Compensation and other benefits shall be determined by the SNSC. Upon expiration of appointment, the National Focal Point shall return to his/her mother agency to perform previous functions. The National Focal Point shall report to the Chairman of the SNSC.

TERMS OF REFERENCE FOR THE MINISTRY FOCAL POINT FOR SLM

The position of a Ministry Focal Point for SLM shall be established within the ministry as a response to the need for a well-coordinated national SLM programme. The designation shall require a re-definition of current Terms of References of the successful candidate so as to allow carrying out of functions under two concurrent positions. The ministry shall allow the successful candidate to devote 60 per cent of his/her official time to perform the tasks of the position.

Tasks

The Ministry Focal Point for SLM shall be designated by the Head of the Ministry to perform the following tasks:

1. Prepare and submit for approval a work plan for the implementation of Ministry's mandate in support of SLM;
2. Establish a coordination mechanism with the directorates of the ministry that have responsibilities in carrying out mandates in line with SLM, and make use of said mechanism to coordinate SLM-related activities within the ministry;
3. Represent the ministry in coordination of activities with other ministries through the SLM National Coordinating Committee while ensuring timely availability of ministry support or contribution to inter-agency coordination such as reports, information, funds (if needed, required and agreed upon by concerned ministries and directorates), manpower, and others;
4. Prepare and submit reports on a regular basis to the ministry and to the SNCC; and
5. Other functions that may be required in line with and in support to the above tasks.

Qualifications

The candidate for the post shall be selected with the following basic qualifications:

1. Graduate of a degree in agriculture, forestry, environment or soil and water management, or have undergone trainings in any of the said fields;
2. Experienced in coordination works at least within an organisation; and
3. Possesses good communication and coordination skills.

Terms and arrangements

The appointment to position shall be initially fixed for three years but will be renewable annually. Compensation and other benefits shall be determined by the ministry in consideration of the added tasks. The Ministry Focal Point shall report to the Head of the ministry. And as a designated ministry representative to the SNCC, the Ministry Focal Point shall also report to the National Focal Point.

TERMS OF REFERENCE FOR THE DIRECTORATE FOCAL POINT FOR SLM

The position of a Directorate Focal Point for SLM shall be established within the directorate as a response to the need for a well-coordinated national SLM programme. The designation shall require a re-definition of current Terms of References of the successful candidate so as to allow carrying out of functions under two concurrent positions. The directorate shall allow the successful candidate to devote 60 per cent of his/her official time to perform the tasks of the position.

Tasks

The Directorate Focal Point for SLM shall be designated by the Head of the Directorate to perform the following tasks:

1. Prepare and submit for approval a work plan for the implementation of directorate's mandate in support of SLM;
2. Establish a coordination mechanism with units of the directorate that have responsibilities in carrying out mandates in line with SLM, and make use of said mechanism to coordinate SLM-related activities within the directorate;
3. Represent the directorate in coordination activities with other directorates through a designated coordinating body while ensuring timely availability of directorate support or contribution to inter-agency coordination such as reports, information, funds (if needed, required and agreed upon by concerned directorates), manpower, and others;
4. Prepare and submit reports on a regular basis to the directorate and to the SNCC; and
5. Other functions that may be required in line with and in support to the above tasks.

Qualifications

The candidate for the post shall be selected with the following basic qualifications:

1. Graduate of a degree in agriculture, forestry, environment or soil and water management, or have undergone trainings in any of the said fields;
2. Experienced in coordination works at least within an organisation; and
3. Possesses good communication and coordination skills.

Terms and arrangements

The appointment to position shall be initially fixed for three years but will be renewable annually. Compensation and other benefits shall be determined by the directorate in consideration of the added tasks. The Directorate Focal Point shall report to the Head of the directorate. And as a designated directorate representative to the SNCC, he/she shall also report to the Ministry Focal Point.