



GEF



## LAND DEGRADATION

## THEMATIC ASSESSMENT REPORT

United Nations Convention to Combat Desertification  
(UNCCD)



Government of Samoa

# SAMOA

20 April 2006

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Prepared by Requirement of the

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## ACRONYMS

ACEO:	Assistant Chief Executive Officer
ADB:	Asia Development Bank
AG:	Attorney General
CBD:	Convention on Biological Diversity
CBDAMPIC:	Capacity Building for the Development of Adaptation Measures in the Pacific Islands
CDC:	Cabinet Development Committee
CDI:	Capacity Development Initiative
CEO:	Chief Executive Officer
CIM:	Coastal Infrastructure Management
COPs:	Conference of Parties
DEC:	Division of Environment and Conservation
DLM:	Division of Land Management
DLSE:	Department of Lands, Survey and Environment
DSAP:	Development of Sustainable Agriculture in the Pacific
EIA:	Environment Impact Assessment
EPC:	Electric Power Corporation
EU:	European Union
FAO:	Food and Agriculture Organization
FIVIMS:	Food Insecurity and Vulnerability Information and Mapping System
GEF:	Global Environment Facility
GIS:	Geographic Information System
GoS:	Government of Samoa
IRETA:	Institute for Research, Extension and Training in Agriculture
ISP:	Institutional Strengthening Project
IWP:	International Waters Project
LD:	Land Development
LLC:	Land Leasing Committee
LSE:	Lands, Survey and Environment
MAFFM:	Ministry of Agriculture, Forestry, Fisheries, and Meteorology
MCIL:	Ministry of Commerce, Industry and Labor
MDG:	Millennium Development Goals
MEAs:	Multilateral Environmental Agreements
MESC:	Ministry of Education, Sports and Culture
MFAT:	Ministry of Foreign Affairs and Trade
MJCA:	Ministry of Justice and Courts Administration
MNRE:	Ministry of Natural Resources and Environment
MNREM:	Ministry of Natural Resources, Environment and Meteorology
MOA:	Ministry of Agriculture and Fisheries
MOF:	Ministry of Finance
MOH:	Ministry of Health
MSP:	Medium Sized Project
MWCSD:	Ministry of Women, Community and Social Development
MWTI:	Ministry of Works, Transport and Infrastructure
NAP:	National Action Plan
NAPA:	National Adaptation Programme of Action
NBSAP:	National Biodiversity Strategy Action Plan
NCC:	National Council of Churches
NCSA:	National Capacity Self Assessment
NEMS:	National Environmental Management Strategy
NGOs:	Non Governmental Organizations

NIP:	National Implementation Plan
NSC:	National Steering Committee
NTT:	National Task Team
NUS:	National University of Samoa
PDF:	Project Development Fund
PEA:	Preliminary Environment Assessment
PICPP:	Pacific Islands Climate Prediction Project
PSC:	Public Service Commission
PUMA:	Planning and Urban Management Agency
SAFT:	School of Agriculture and Food Technology
SAMFRIS:	Samoa Forest Resources Information System
SBEC:	Small Business Enterprise Center
SCOPIIC:	Seasonal Climate Outlook for Pacific Island Countries
SD:	Sustainable Development
SDS:	Strategy for Development of Samoa
SES:	Statement of Economic Strategy
SIA:	Social Impact Assessment
SLC:	Samoa Lands Corporation
SLM:	Sustainable Land Management
SOE:	State of Environment
SOFA:	Samoa Organic Farmers Association
SPC:	South Pacific Commission
SPREP:	South Pacific Regional Environment Program
STA:	Samoa Tourism Authority
STEC:	Samoa Trust Estates Corporation
SUNGO:	Samoa Umbrella for Non Governmental Organizations Inc.
SWA:	Samoa Water Authority
TALAVOU:	Towards A Legacy of Achievement, Versatility and Opportunity through Unity
TAR:	Thematic Assessment Report
TECs:	Targeted Environmental Components
UNCCD:	United Nations Convention to Combat Desertification
UNCED:	United Nations Convention for Environment and Development
UNFCCC:	United Nations Framework Convention on Climate Change
UNDP:	United Nations Development Programme
USP:	University of the South Pacific
WIBDI:	Women In Business Development Inc.
WSSP:	Water Support Sector Programme

## 1.0 EXECUTIVE SUMMARY

The overarching goal of the NCSA Project is to undertake an assessment of Samoa's capacity to address environmental issues affecting the wider public and local populations with particular emphasis on building effective national capacity to implement the three (3) Rio Conventions namely; the United Nations Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD) which would, in the end, required a synergy of crosscutting issues and a subsequent action plan. It aims to develop a plan for the implementation of key activities identified as priority actions to address capacity needs and constraints identified by the three Conventions. The NCSA Process adopted by Samoa comprises five (5) main phases: *Inception Phase, Stocktaking Phase, Thematic Assessment, Crosscutting Assessment and Action Plan development*. The NCSA project has achieved the first two phases of which are the Inception and Stocktaking Phases. The current stage of the NCSA process is the Thematic Assessment Phase which necessitates the production of this Thematic Assessment Report to focus primarily on the assessment of Samoa's capacity to meet its global environmental objectives under the UNCCD in the context of land degradation as it affects Samoa.

Samoa ratified the UNCCD in 1998 and was therefore required to fulfill its obligations to the Convention which includes to:

- (a) give due priority to combating desertification and mitigating the effects of drought, and allocate adequate resources in accordance with their circumstances and capabilities;
- (b) establish strategies and priorities, within the framework of sustainable development plans and/or policies, to combat desertification and mitigate the effects of drought;
- (c) address the underlying causes of desertification and pay special attention to the socio-economic factors contributing to desertification processes;
- (d) promote awareness and facilitate the participation of local populations, particularly women and youth, with the support of non-governmental organizations, in efforts to combat desertification and mitigate the effects of drought; and
- (e) provide an enabling environment by strengthening, as appropriate, relevant existing legislation and, where they do not exist, enacting new laws and establishing long-term policies and action programs.

The question of how to tackle land degradation is a major concern for countries affected and the Convention insists that programmes to combat desertification and land degradation must not be conceived and implemented in isolation, but should be integrated into development goals and policies as a whole, addressing the physical, biological and socioeconomic aspects of the process of land degradation and drought. Parties are also required by the Convention to integrate their anti-land degradation efforts with strategies for poverty eradication in society.

Land degradation as it affects Samoa became an issue that had most recently surfaced as a consequence of land cover change resulting to the loss of soil productivity and vegetative cover induced mainly by unsustainable practices and the inappropriate uses of land resources. The UNCCD was invented within the UN environmental framework during the Rio Earth Summit 1992 to dialogue the issue and to address it with appropriate actions at all levels. For Samoa, the transition from subsistent lifestyle to a cash-based economy has significant potential to strip the land of its limited resources and consequently the ground cover and its nutrient composition. The situation can be made worse with technological transformation of the land to other uses, other than agriculture, dictated highly by demands for infrastructural development, pursuit of materialist and commercial aspirations, and expansion of residential settlements. All significantly add more statistics to the total count of landuse change which indeed are executed at the expense of the land environment with potential contribution to exacerbating land degradation processes if not well-managed. Samoa, prior to its membership to UNCCD, had been mostly silent about the issue however since implementing the Convention it provided a platform to address the buildup realization that land degradation is indeed penetrating the quality of our land in the pursuit of increased production, and that if the use is not strictly controlled by instituting sustainable measures the future of our land to sustain itself looks very bleak and austere.

Implementing the Convention Obligations therefore remains to be the ultimate challenge for Samoa with the view to combating land degradation to ensure durable fertility of the land environment and the subsequent sustainability of the land productivity as its ultimate goal. This goal is to be achieved through the customary use of sustainable land management practices. The fundamental intention of the main objective to the goal is to facilitate alleviation of poverty and enhance the socio-economic stability of affected populations. Again, the question of how remains uncertain in the face of high demand for land development which has proven to be the main source of achieving macroeconomic stability of the country in light of government focus in continuing with the enhancement of the private sector as the engine for economic growth on the one hand and the resultant acute need to eliminate elements of societal poverty on the other. This compelling drive has been repeated time and time again in Samoa's SDS for higher-level recognition and for purposes of execution within a time period, all of which to be accomplished at the expense of land resources, which for Samoa is a finite resource that houses relatively fragile ecosystems and limited resource base. This assessment adopts a didactic approach that is more people-oriented in the appropriate actions that are formulated to address the capacity needs of the country so that the Convention is implemented in a manner that obtains optimal benefits.

To enable a comprehensive assessment, the Convention Obligations in section 8.0 were further organized under twelve (12) key thematic areas which were identified as relevant when addressing issues raised by the Convention and are often used consistently throughout the Report for reference purposes and logical analysis. These thematic areas were coined based on relevance of contribution to addressing all land degradation issues and concerns in Samoa, which in turn shall base proper planning and the sustainable management and use of land resources. Thematic areas are issue-based in design to attain proper evaluation of the issue for clarity purposes on the most appropriate actions required and if implemented would eventuate the effective address and resultant solutions to reverse at best the degradation of land;

- Administrative Management of Resource and Resource Allocation
- Mainstreaming NAP/SLM issues into National Plans
- Land Development Management
- Forest Resource Management
- Management of Agricultural Practices
- Management of Deforestation
- Water Resource Management
- Soil Resource Management
- Management of Drought/Flood Prone Areas
- Rehabilitation of Degraded Lands
- Poverty Reduction and Livelihoods
- Information Management and Sharing

The identification process mentioned above has provided an avenue for Samoa to identify the most pressing capacity needs, constraints and their root causes. Section 9.0 contains the narrative summary of each capacity gap under each respective thematic area and arranged as deemed appropriate under the 3 levels of capacity (*individual, institutional and systemic*). The main focus of this evaluation is to visualize the nature of capacity gaps and their root causes to enable identification of appropriate actions to develop Samoa's capacity to implement UNCCD Obligations more effectively. Section 10.0 which is the final component of this Report contains the inventory of actions required to address the root causes of the capacity gaps that have impeded Samoa's progress in meeting the Convention's Obligations and overall ability to manage land degradation at all levels. To maintain consistency, these identified priority measures have again been categorized under the three capacity levels. The mentioned actions are strategically designed to address the root causes into positive actions which would ultimately be conducive to the development of the capacity of the affected stakeholders in terms of knowledge and training. This would be highly feasible and achievable provided that there is effective capacity of institutional mechanisms in place to coordinate and network the issues especially the management of appropriate actions to address them effectively. The implementation of actions needed to combat land degradation concerns in Samoa has to be supported by effective capacity of systems in place in terms of processes and procedural mechanisms.

## 2.0 INTRODUCTION

Land is the source of identity for the Samoan people. According to one of the participants in a recent consultation forum for the NAP 2006, degradation of land means synonymously the degradation of our identity and subsequently, our culture.

Land, no doubt is the ultimate breadwinner of all the necessity in life including all the luxuries currently enjoyed by society. It provides a source of security and identity which must be protected at all costs because once degraded, our source of pride and culture will subsequently be degraded. Our efforts must ensure that our land does not die by actions of our hands but continues to produce by application of sustainable measures to ensure continuing sustainability of the land productivity. Our land defines our national borders and protects our sovereignty from external infringement and, our efforts must ensure that ownership of land does not get out of our hands in the midst of the booming greed and pursuit of global and national transboundary interests in stimulating local interests to commercialize the use of our land for promises of good returns or collateral purposes. Samoa must look for ways to develop land sustainably to benefit the owners without tempering with ownership aspects and being that customary land holds the key to joint family ownership and source of identity through inheritance from generation to generation, great care must be taken not to commercialize the use of it in a way that would dissolve it from our hands. Commercialization due to forces of globalization provides an avenue for eroding our identity and the subsequent erosion of our culture, what next, is complete erosion of Samoa as a sovereign nation-state which our forefathers fought to preserve and protect.

The task of formulating and finalizing the completion of this Thematic Assessment Report (TAR) on land degradation has been a product of concerted efforts by the UNCCD Taskteam, in its endeavor to fulfill one of the binding requirements of UNCCD under the National Capacity Self Assessment (NCSA) project. UNCCD like CBD and UNFCCC is one of the three key focal areas of the Global Environment Facility (GEF) which has funded this capacity development initiative, responsible primarily with the identification of capacity needs of Samoa to meet the obligations under the Rio three Conventions. Fulfillment of the TAR requirement completes phase II of the NCSA process which commenced with the Stocktaking Phase. The NCSA process is understood to be stages or steps taken to assess the status quo of capacity in the country in order to ascertain the level of capacity needs required to be addressed to enable the implementation of the Convention's obligations more effectively. Stocktaking involved the identification of what Samoa has already done and achieved and those that have yet to be achieved under UNCCD as well as identifying which Convention obligations Samoa has already met and which are still outstanding.

This TA Report therefore follows from the Stocktaking Report which identified past, current and ongoing activities, programmes and initiatives (including enabling environment) that have contributed directly or relatively to meeting UNCCD obligations and addressing in particular land degradation issues as they affect Samoa. Information from the Stocktake Report is used to identify capacity gaps which can be clearly ascertained after a number of stocktaking exercises that had taken place in Phase I. Phase II of which is the Thematic Assessment and for purposes of this report, it involves the identification and assessment of these capacity gaps under the three groupings of capacity levels; namely individual, institutional and systemic. Capacity gaps were identified and assessed under each thematic area affecting and are affected by, land degradation. Appropriate actions to address and strengthen the required capacities to combat land degradation as the predominant issue of desertification, affecting Samoa, is proposed in this report for prioritization. The Thematic Assessment can also be viewed as providing a cleaning-house mechanism for the UNCCD in terms of tidying up of all the national issues of land degradation and the technicality of the Convention for clarity purposes, in particular, the processes of national implementation of the Convention and experiences that had been so far encountered.

Land degradation in the context of desertification and as it affects Samoa and other similar island nations in the region is defined in a slightly different manner from the normal way desertification in the truest sense as a process, is literally affecting dryland regions that are characteristically arid and semi-arid such as the African and Asian regions. Samoa is affected not by desertification per se as its manifestation varies from region to region and country to country, but rather by land degradation and, which rather by definition, is the outcome of landuse change

and the inappropriate uses of land resources resultant to the '*diminution or destruction of the biological potential of the land*'. This is a pronounced aspect of the widespread deterioration of ecosystems under the combined pressure of adverse and fluctuating climate and excessive human exploitation. And it is against this background and circumstantial evidence of land degradation in Samoa that a number of crucial contributing and resultant factors are identified as relevant thematic areas to address at best capacity needs of Samoa and to formulate appropriate actions to combat these problems. There are 12 key thematic areas identified as relevant to address capacity needs of land degradation as follows;

- Administrative Management of Resource and Resource Allocation
- Mainstreaming NAP/SLM issues into National Plans
- Land Development Management
- Forest Resource Management
- Management of Agricultural Practices
- Management of Deforestation
- Water Resource Management
- Soil Resource Management
- Management of Drought/Flood Prone Areas
- Rehabilitation of Degraded Lands
- Poverty Reduction and Livelihoods
- Information Management and Sharing

Samoa, at this point in time, has only recently embarked the platform to recognize the issue and the need to effectively address it. Therefore, there are no major achievements so far, in terms of concrete actions, to reflect our commitment. However, efforts have recently been made and already underway to communicate the issue nation-wide especially across-sectors, through published materials, beginning with the UNDP-GEF Capacity Development Initiative (CDI) report on the initial assessment of land degradation in Samoa and the First National Report on account of the status of landuse in the country dated back to the 1980s. The Medium-Sized Project on Sustainable Land Management (MSP-SLM) focusing primarily on capacity building and mainstreaming purposes of the issues raised by the Convention and thus addressed in the NAP has been completed and submitted to the Donor. The SLM upon approval is the implementing mechanism of the actions proposed in the NAP. The NAP also under current formulation is going parallel with meeting the NCSA requirements for UNCCD which recently began with the Stocktaking Phase (1). The primary task of the Stocktaking Phase is to identify all past and ongoing activities/initiatives that have already been achieved and have potential contribution to the effective address of land degradation in Samoa. Section 8.0.1 contains the stocktake of the mentioned achievements against which determine and base the groundwork analysis and assessment of capacity gaps. These in turn provide the basis for the formulation of appropriate actions to address the capacity gaps. The institutional arrangements for implementing the project are already in place with the support of other government implementing sectors and NGOs. Existing legislation and policies also have relative support functions in the enforcement and effective management, through the permitting system and development consent process of land use control, of ongoing projects and related activities which affect the sustainability of land resources range from water, soil, forests to forest ecosystems and including everything terrestrial.

### 3.0 BACKGROUND

Samoa, is a small island nation located in the northern part of the South Pacific Ocean between latitudes 130 25' and 140 05' S and borders the international dateline at 171° 23' and 172° 48' W longitudes. Samoa has a total land area of 2,935 km<sup>2</sup> or equivalent to approximately 285,000ha of land. It consists of two main islands, two other inhabited smaller islands and several uninhabited small islands and islets. The capital Apia is located on the second largest island of which is Upolu and has a population of about 40,000 people. Its climate is tropical and marked by distinct wet (November–April) and dry (May-October) seasons. The average monthly temperature ranges between 22° and 30° with little seasonal variation due to Samoa's equatorial location. The average annual rainfall is about 3000mm with about 75% of precipitation occurring during the wet season. In demographic terms, the latest population census of 2001 records 174, 140 of total population from a 161,296 recorded in 1991. The increase has only been 8% due to dynamics of population movements, mainly influenced by urban-rural and external migrations. The economy on the hand has been relatively stable over the last few decades by having adopted a development path that depends upon income from aids, remittances, tourism and fishery industry to diversification of agricultural produces. However, the economic growth process has often been interrupted by natural disasters such as hurricanes and droughts which periodically destroy vulnerable plantation monocultures and remaining forests; by the neglect of 'unprofitable' land environments and by the inability of Samoa's populations to muster the skills and the political and economic power to counteract the trend.

Samoa islands have a number of characteristics which in essence are derived from the high exposure of the islands' ecologies, economies and its society as a whole to external influences, and the low capacities for adjustment in relatively resource-poor islands. Samoa generally has the following characteristics;

- a narrow economic base;
- economic dependence on larger countries for markets and investment and, most significantly, for sea and air transport;
- geographic isolation within and between countries which can significantly limit economies of scale;
- geographic isolation which, however, can effectively be reduced by proximity to an established sea or air route;
- small populations, and hence a limited pool of skills;
- yet high population densities, and hence high demands on resources
- highly circumscribed space; paucity of natural resources; and, even though productivity is often high, production systems are often highly vulnerable;
- the intimate linkage of all island ecosystems: impacts in one part will affect other parts; a high ratio of coastline to land area, leaving islands vulnerable to marine and climate influences, such as cyclones, hurricanes, storm waves, salt-related corrosion and marine pollution;
- the vulnerability of island ecosystems to other external ecological influences, notably exotic species introduction; and
- in spite of the above, the presence of traditional and/or community-based "subsistence affluence" systems of production, which may be sustainable in the face of many constraints.

Such characteristics are fundamental parameters for Samoa's development as a small island state, yet development has tended to proceed with inadequate information on them.

The potential for Samoa to pursue sustainable development depends upon maintaining the quality of certain, necessarily limited, land-based natural resources. At their most basic, these resources provide essential life-support systems; maintaining water supplies and soil fertility, protecting forests and forest ecosystems including endangered species and terrestrial biodiversity as well as individual islands from coastal erosion. Yet, whilst some traditional practices have been quite sustainable, historically, Samoa has developed a cash economy by liquidating natural capital, a process having its origin in the 'frontier' culture of western economies. As a result, Samoa's natural life - support system has been critically under diminishing process. Even in the few circumstances where it is possible to create substitutes for these systems, the cost is high.

Land therefore, like financial and human capital, is a factor of production, which helps drive economic and social development, generates national income, wealth, jobs, government revenue and local livelihoods as well as subsistence. Land development performed with the ultimate view of attaining sustainability of the land environment, combats poverty, improves the standard of living of all and ultimately entrenches social, ecological and political stability in any country. Land tenure like culture and tradition stands to evolve organically over time in a society. As in all things, changes and solutions have been made and formulated. As such, solutions have to be formulated from within and must reflect national, family and individual needs and aspirations; and changing global, regional, national economic, ecological, social and political dynamics that determine our destiny.

Samoa society is based on the social unit, the *aiga* or extended family. Each extended family is headed by a *matai* who is appointed by consensus of the *aiga*. The *matai* assumes responsibility for the welfare of his/her *aiga* including directing the use of family assets and lands. The collective institution of *matais* constitute the village council or fono which controls the affairs of the village, keep order and provides direction with regard to village development and use of communal land.

As singled out by one of Samoa's admirers, "*land is the keystone in a clan society, because he who controls the land controls those who use it*". Samoan family land, particularly land under customary ownership, is not a chattel to be traded or to be partitioned into shares of individuals. It is a perpetual trust, in joint family ownership, administered by the *matai*, and passing from generation to generation without survey or reference to a registrar or payments to a lawyer.

### 3.0.1 Land Tenure

Traditionally, there exist only three main types of land tenure in Samoa which are systemized as government or public land, freehold land and customary land. Government and freehold lands are predominantly present in the urban area while customary lands dominate the rural lands although all three can be said to be present in both.

#### i. *Customary Lands*

Customary land comprises 81% of land in Samoa. Customary land means land held from Samoa in accordance with Samoan custom and usage and with the law relating to Samoan custom and usage. These lands as they are vested in Samoans in accordance with Samoan custom and usage are primarily managed by a *matai* being the head of an extended family. The *matai* as trustee of land for his family and welfare of the family is responsible for the management and allocation of the land for various uses by family members. Land tenure in rural areas is predominantly customary either owned communally or by individual families. These lands are protected from alienation for sale by the Constitution of the Independent State of Samoa 1960; except by way of lease or license in accordance with the Alienation of Customary Land Act 1965.

#### ii. *Government or Public Lands*

About 15% of land in Samoa is public land which means land vested in Samoa, being land that is free from customary title and from any estate in fee simple. These lands are generally known and recognized as government land and are administered and managed by MNREM through the Land Board, a statutory body constituted under the Lands, Survey and Environment Act 1989. The government through the Land Board is empowered under the Act to manage and lease government lands, develop and exchange government land for freehold and/or customary lands but cannot in any way administer the sale of government land unless authorized by Parliament in the form of an Act of Parliament. An estimated 5% of land in Samoa, also viewed as government land, is managed by statutory corporations of the government such as the Samoa Land Corporation (SLC) responsible primarily for the sale of these lands for commercial or residential uses. The Samoa Trust Estate Corporation (STEC) on the other hand manages government lands under its administration through leasing mechanisms for commercial and development purposes. Government lands as they are public land can be accessed by way of lease or sale by every Samoan citizen whom by constitutional right and statutory mandate is the landowner of these lands.

iii. ***Freehold Lands***

Freehold land takes up 4% of the total land area and these are taken as estates in fee simple. Freehold land means land held from Samoa for an estate in fee simple and landowners independently manage their own lands which can be alienated in any manner desired by the owner be it through sale, gifting, leasing, licensing or exchange. However alienation to non-citizens/overseas residents is prohibited under the Alienation of Freehold Land Act 1972 unless granted consent by the Head of State.

iv. ***Leased Land***

Another emerging form of land tenure that is increasingly noted yet not well-formalized in a legal manner as an extra type of land tenure, is land under lease arrangements between the lessor and the lessee or as commonly known as leased land. All types of land whether public, freehold or customary can be made to lease out to individuals, corporations, community or to private investors. In this regard, leasing can provide a viable option to access the land necessary for private sector growth and it allows for upgrading the socio-economic statuses of individual family with large-scale farming intentions while some for residential purposes. It also provides a mechanism of separating land ownership and the rights to use land. Ideally leasing allows the use of land without alienating it from traditional landowners.

The most commonly leased type of land in Samoa is customary land given the bulk of Samoa's land is under customary ownership. And leasing of customary land is closely controlled by the government; in this manner by the Ministry of Natural Resources, Environment and Meteorology which by statutory mandate in its role as the trustee of customary lands is vested with the power to manage and administer lease arrangements between the landowner (lessor) and the applicant (lessee). The Ministry's involvement in the approval process in land leasing between the two parties ensures firstly, that landowners are protected from entering into inappropriate land deals or making unwise decisions and, secondly to prevent alienation of customary land or ownership from the landowner.

### **3.0.2 Land Resources**

#### **3.0.2.1 *Forest Resources***

Land resources extend from the coastal lowlands to the highest upland peak. Apart from sand and aggregate materials for construction and landfill, the most valuable land resource is *forest* and its *ecological biodiversity*. About a third of Samoa's native forest trees are used commercially for timber, mainly as building materials for houses and general construction works. Certain hardwoods are used for carving traditional handicrafts such as Samoan war weapons and tools. Almost all are used as firewood. Several of these native tree species are of highest quality timbers by international standards. A national grading rule and a guide for specifying timber and wood-based products that were prepared by the Government in the '80 still remained un-enforced let alone promoted.

Since most of the country's native flora and fauna species are found in the rainforests, the depletion of the latter decreases the viability of continued existence of such species. Several endemic birds' species are now believed to be near extinction. Moreover, native rainforests cover the country's major water catchments and their destruction have dramatically reduced water supply and river flows throughout the country. Consequently this is the most common cause of severe flooding and soil erosion during the last two decades of the century.

#### **3.0.2.2 *Biodiversity Resources – Terrestrial & Marine***

Samoa is a country whose biodiversity is significant globally. Its biodiversity is particularly important in the context of the South Pacific. A review of the conservation value of a total of 226 South Pacific Islands (Dahl 1986) ranked three (3) of the islands of Samoa highly, Savai'i at current standing at number 23, the Aleipata islands at 30 and Upolu at 46. The flora is one of the most diverse in Polynesia with about a quarter of the

plants endemic. The importance of the country's birdlife, particularly the proportion of endemic species (23%), and the threat to it have been recognized by the International Council for Bird Preservation (ICBP) who have listed the Samoan Islands as one of the world's 'Endemic Bird Areas' that is in need of urgent conservation attention (ICBP, 1992). Significant declines have been documented among most groups of animals and plants and, unsustainable levels of forest clearance for agricultural or logging have been and continue to be key threats. Like all island countries, Samoa is ecologically fragile and vulnerable to environmental degradation through human-induced and natural factors (e.g. cyclones).

Marine resource base in Samoa is also very fragile. The mangrove, lagoon and coral reefs house an enormous diversity of marine invertebrates, many of which are harvested as food. The *palolo reef worm (the eggs of the coral polyps)*, which rises once or twice a year, also holds a great cultural significance to Samoans. Fourteen (14) threatened species have been identified and these include numerous corals and clams, and the coconut crab (Schuster 2000).

### 3.0.2.3 *Soil Resources*

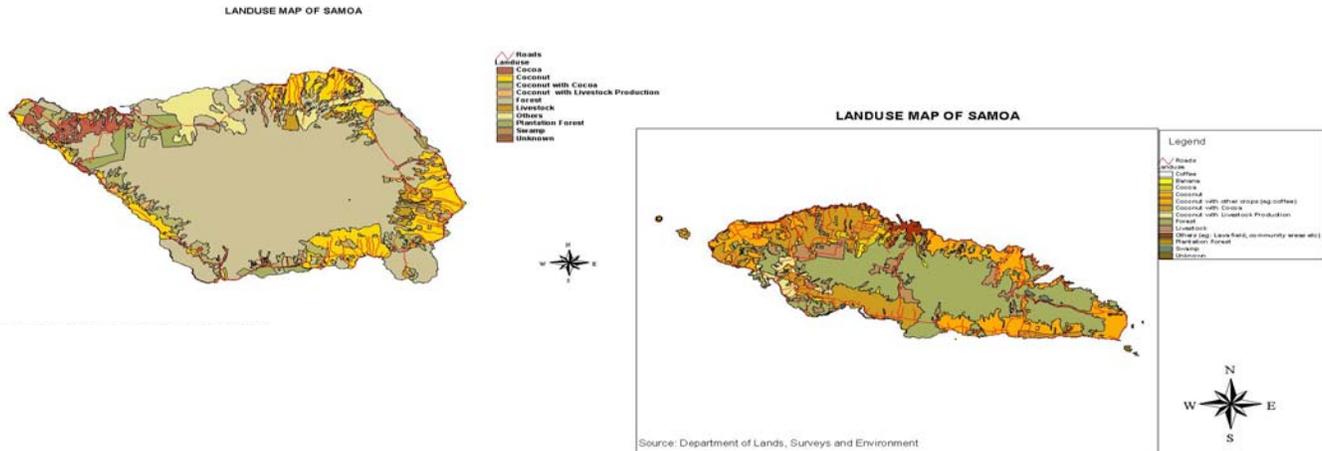
The most extensive soil order in Samoa is that derived from volcanic ash called *andisols* and most are found in upland areas under isothermic temperature regimes. Most soils of Samoa have good structure and sub-soils are not compact. Most soils are friable, and when moistened, are non-sticky and non-plastic, free draining with low water-holding capacity. There are marked differences between the soils of the lowlands and the uplands and between these soils and those of the highlands. There tends to be an increase in thickness of mineral soil with increasing altitude, due largely to heavier ash deposition in the uplands and the highlands. Upland soils are not generally used for cultivation. In general, soils are relatively shallow, stony, and unsuitable for most types of mechanization, and have coarse textural properties resulting in high infiltration rates. Despite a relatively high rainfall, soil moisture deficits can occur especially when considering prevalent soil types and evapo-transpiration rates. This is particularly true for the northwestern parts of both main islands.

### 3.0.2.4 *Water Resources*

Fresh water is a fundamental resource for any small island nation and Samoa is no exception. More than three-quarter of Samoan population has access to piped water. However, there is a high rate of water loss through leakage because of weak infrastructure and wastage as a result of poor conservation measures. The volcanic origin of Samoa has resulted in terrains that have abundant streams and waterfalls. Despite this, the western part of Upolu and the larger parts of Savaii lack any surface water because of the highly permeable nature of soils and the Mulifanua volcanic rocks. Thus, groundwater and rainwater catchments are the common sources of water in these areas. River flows provide the main source of water supply although on Savaii there are many coastal springs. During much of the annual dry season, rivers dried up except during occasional heavy precipitation. In many areas, water supplies are insufficient to meet local demands for drinking water and domestic cleaning.

### 3.0.3 Land use Trends and Patterns

Samoa's land cover has undergone tremendous change and modification since the last two decades of the last century and far more rapidly as we approach the end of this Century's first decade. Traditional land use apart from settlement areas was commonly restricted to forest and agricultural use. However, the current speed with societal technological innovations, in tandem with infrastructural development which is largely dictated by macroeconomic ambitions with the resultant transition from subsistent living to a more commercialized type of living, land use change has become far more pronounced and fast-tracked in rapidly transforming Samoa's landscape to other uses especially influenced by commercial interests. Additional alterations to the landscape are made worse by by-products of natural forces predominantly due to climate variations. The old land use maps of Upolu and Savaii represents land areas that are under current use and the most typical land use reflected, apart from forest, is land under agricultural use.



It is difficult to estimate accurate change to the land cover without using forest surveyed data and approach to reflect at best the transformation of Samoa's land cover to various other uses. Periodically, Samoa's forest resources have been inventoried and studied at various times since 1954 and most recently 2004 using the 1999 aerial photos. The resulting estimates from these various reports are at times inconsistent and do not allow for significant comparisons, but they remain the only data on which to base planning and management.

Earlier in the 1980s, it was recorded that of the total land area of 2, 935 sq. km or equivalent to about 285, 000ha, about half was in forest. And of the 150, 000 hectares (ha) of forests, about 55, 000ha fall under protection forests as National Parks and Reserves and 95, 000ha are regarded as commercial forests, with a small area as reafforested land (Samoa, Dept. of Economic Development, 1985). The ADB report (1985) estimated in the same period the total area under tree crops, mainly coconut and cocoa at 77, 211 ha.

The trend with land use patterns in the 1990s records slightly different with additional land uses and variations observed in the type of land use noted. The following land use tables reflect this variation nevertheless useful to determine almost accurately the situation with land use change to Samoa's land cover

Table 1: *Estimates of Landuse in Samoa, 1991*

Landuse Type	Area (ha) '000	%
Plantation forests	10.7	3.8
Indigenous forests	104.0	36.8
Agricultural Use (Crops & Pastures)	139.2	49.4
Other (lava flows, towns, etc)	28.1	10

NEMS (1994) estimated land use in 1991, as Table 1 shows, under four categories with land under forest cover at 36.8% followed by land under agricultural use at 49.4%. Other land use types comprising the remaining land cover are plantation forests and other which includes some other type of land uses.

Source: NEMS, 1994 p. 34

Table 2: *Estimates of Land Uses in Samoa 1993*

LAND USE TYPE	AREA (ha)	(%)
Merchantable Forest	13,574	4.6
Forest Protected / Village Conservation Areas	3,089	1.1
Watershed Areas	31,992	11.3
National Parks/Reserves	2,880	1.0
Land Available for Reforestation	10,000	3.6
Agriculture / Cropland	98,000	34.7
Recent Lava Fields	11,433	4.1
Unproductive Forest Areas	111,112	39.4
<b>Totals</b>	<b>282,000</b>	<b>100.0</b>

Source: Extracted from Climate Change Synthesis Report 2004

Based on 1999 aerial photos, landuse estimates in Table 3 shows a clearer and more detailed breakdown of landuse types with additional categories, apart from forest and agriculture, to include 'Built up area' and 'Infrastructure' areas under which encompasses a number of other significant uses.

Table 3: *Land-cover categories of Samoa (based on 1999 aerial photos)*

Main Category	Description	Area (ha)		%age of Samoa land area
		Savaii	Upolu	
Forest	Land with a tree crown cover of more than 10% and a minimum size of 1 hectare. Includes man made plantation forests, mangrove forests and other natural forests	118,037	52,406	60.0
Agricultural Land	i. <b>Plantations</b> – permanent agricultural installations, mostly tree crops or continued/repeated planting of e.g. coconuts or bananas (agro-industrial) ii. <b>Mixed Crops</b> – land currently and recently cultivated with a mixture of herbaceous and tree crops such as root crops, taro, yam, cassava, breadfruit etc. This includes areas of current cropping and adjacent areas recently abandoned and now overgrown with secondary shrub and tree species	28,621 ( Plantations - 26,158) (Mixed Crops - 2,463)	34,476 (Plantation - 26,770) (Mixed Crop - 7,706)	22.3
Wooded Land (Scrub)	Areas with dominance of woody perennial shrubs of less than 5-7m height and without a definite crown	15,065	7,000	7.8
Built-up Area	All settlement areas, encompasses continuous developments, industrial or commercial built-up areas and scattered isolated houses including gardens and inner-city parks	1,772	5,292	2.5
Barren Land	All land lacking any vegetation cover except for infrastructure and built up areas	1,973	30	0.7
Infrastructure	All roads (hard surfaced or loose) and infrastructure related facilities (e.g. airports/airstrips, ports, wharves, sports compounds etc.)	32	432	0.2
Other	Includes grass land, lakes, rivers and wetlands	5,379	13,141	6.5
<b>Total</b>		<b>170,879</b>	<b>112,777</b>	<b>100</b>

Source: SamFRIS 2004 p. 13

Table 3 above especially indicates the remaining forest resources of Samoa. The total forest area composed of all major forest types including mangrove and forested wetlands amounts to more than 171,000ha which still makes up for slightly more than 60% of the total land area and therefore larger than earlier mappings assumed or

Table 2 presents further approximate figures for early 1990s of which 34.7% of total hectares is predominantly under agricultural use with merchantable forest and protected forest under village conservation areas at 4.6% and 1.1% respectively. Other landuses which are more or less forest-based comprise the remaining percentages with unproductive forest areas standing exceptionally at 39.4%. The implication is indicative of an unfavorable situation with the land terrain soils predominantly porous and and/or rock-strewn.

predicted. Of the non-forest categories, agricultural plantation area makes up the largest portion with more than 53, 000ha covering almost 19% of the country. While plantation area is almost evenly distributed between Savaii and Upolu, there are clear discrepancies for mixed crops, grassland and built-up area, which all dominate on Upolu. While barren land almost exclusively occurs on Savaii on recent lava flows, landslides on the slopes of the main volcano (Mt. Silisili) have significantly reduced the productivity of those particular sloped areas. The island of Upolu still has a forest cover of approximately 47%, while 69% of the total area of Savaii is still under forest. However, discrepancies become evident when looking at the distribution of forest types. There is virtually no medium forest left on Upolu, with only 402ha situated in northern Upolu. Medium forest on Savaii still covers an area of 72, 150ha. On Upolu, on the other hand, the largest forest category is open forest with more than 33, 000ha.

Consequently, considering the magnitude of the current conversion of the landscape from forest to various other uses, there has been numerous changes in the way land is used in Samoa in the last decade which continues to this century particularly in Apia for an urban area, and land under agricultural development or use in rural areas. Land that used to be under forest cover has been extensively altered to allow for all other uses in particular agricultural expansion. In the rural communities, land remains primarily under customary ownership and a large proportion of it is currently under cultivation more so at the expense of native forests.

### **3.0.4 Land Degradation in Samoa**

Land degradation is a significant, global environmental problem and Samoa, like other islands of the Pacific is not immune from land degradation. In fact, Samoan island ecosystems are especially vulnerable to the problems of land degradation and unsustainable land use because their natural resource base is limited and ecologically fragile. Clearance of the original forest cover for many areas, particularly the lowlands, has typically started the process of land degradation in Samoa. Changes from traditional agricultural practices to more intensive cultivation have since contributed to the problem. In addition, climate conditions such as high temperatures, severe rainfall deficit and droughts contribute to soil infertility and land degradation of drought prone areas, particularly on the North/South West of both Savaii and Upolu.

Soils, land and landuse have been discussed in numerous publications and a significant number of these literatures have either directly or indirectly addressed concerns with land degradation situations in Samoa using a variety of approaches. A commonly used one is sectoral type of approach whereby most landuse analysis focuses mainly on specific sectors that play key roles in managing the types of activities that depend on land for sustained income and livelihood beside other developments which require the use of lands. Discussion therefore on land degradation in this report and context will be drawn from a literature review of a number of publications.

#### **i) *Literature Analysis on Land Degradation in Samoa***

The UNDP-GEF CDI (2000) funded report on the '*Rapid Assessment of Land Degradation*' has been the first attempt by Samoa to identify the most pressing issues of land degradation and to conduct an assessment of constraints and viable options to address land degradation in the country. The CDI report noted the general consensus of opinion that at least at the time there was no widespread evidence of land degradation in Samoa. However, in some well-delineated areas, such as the watersheds and catchment areas around the Apia urban area and in NW Savaii, a variety of factors interplay to produce a situation where land degradation now has become an issue. The findings from this assessment report has discovered that the most pressing land degradation issues in Samoa are; *deforestation* as a result of i) commercial felling/extraction ii) inappropriate agricultural activities and inappropriate land uses which in turn causes the loss of soil fertility as well as; *coastal erosion* as a result of i) extraction of sand ii) destruction of mangroves and iii) inappropriate coastal reclamation. The CDI report further supported views formerly expressed by others that some parts of the country are potentially threatened in terms of the quality of water supply contaminated due to tree felling around catchment areas and deforestation on marginal land areas for both subsistence and commercial oriented agriculture. The First National Report to UNCCD by MNREM (2002) provides a synthesis of landuse patterns from analyzing sectoral activities and their associated impacts on the land including activities for livelihoods by local communities. It forms the initial baseline data for all

landuse types existing, causes and effects of land degradation, and existing initiatives that have potential contribution to addressing land degradation.

A doctoral Thesis by Suluvale (1997) on '*The Role of Contaminants in Altering the Coastal Environment of Samoa*' acknowledged the existence of the problem of land degradation as it affects Samoa's coastal landscape and environment. The findings from his research show that '*in the case of non-urban streams, it is apparent that many streams displayed high turbidity and suspended solid values*'. The main factor contributing to these results is the unregulated clearance of native forests to make way for family plantation expansion (Taulealo 1993). Not only are native forests cleared, but Samoan families actively maintain a weed-free environment, which sometimes promotes the exposure of soils to rain splash action and the resultant movement of particulate matter downslope and downstream. According to Taulealo (1993), clearing forests on steeper slopes can lead to soil erosion and the loss of other environmental treasures. Stednick (1990) noted that the clearance of plantation and forestlands and particularly the practicing of shifting cultivations on steep slopes and riverbanks without buffer zones are for instance common in the Vaisigano Catchment. The sweeping roles of cyclones in clearing forests were also evident during the cyclones of the 1990s.

Tuivavalagi, Hunter and Amosa (2001) on '*Tackling Land Degradation and Unsustainable Land Use in Samoa*' with particular emphasis on the agriculture sector has highlighted in general that monocropping rather than the more traditional systems such as mixed cropping and integrated farming is more likely to result in land degradation via soil erosion due to rainwater. A key factor in the degree of erosion due to rainwater is the amount and nature of ground cover provided under each farming/cropping system. The greatest damage will be caused on sloping land where land is bared/uncovered during times when the soil is being disturbed, for instance, at times of land preparation, planting or harvesting, particularly in the rainy season. The SamFRIS report (2005) has made significant reference that heavy disturbances of natural forest stands are related to periodic occurrence of cyclones, some causing considerable and permanent crown and structural damage. Human activity in the form of slash-and-burn farming, including commercial logging, has over the years contributed significantly to the reduction of forest areas as well as their severe degradation. Changes in agricultural land use patterns and the consequences of the taro leaf blight in the late 1980s had influenced the increase of secondary forests and overgrown agriculture plantations on the major islands of Upolu and Savaii.

Specific land sites have also been contaminated due to persistent organic pollutants (POPs) and persistent toxic substances (PTS) and these pollutants range from timber treatment chemicals, pesticides, heavy metals, high molecular weight hydrocarbons. The land sites identified as being degraded range from timber treatment plants, agricultural or industrial chemical distribution, storage sites, electric transformer dump sites, areas close to major oil/diesel storage sites, sediments in harbor and the list goes on (NIP 2004). Five sites have high levels of POPs contamination and are identified as priority sites requiring remediation. These are the Agricultural Store Corporation's (ASC)'s Vaitele compound, Island Pest Control (IPC) facility in Vaivase, the Samoa Forest Corporation (SFC), Asau decommissioned timber treatment facility, the Electric Power Corporation's (EPC) compound in Vaitele and William Arp estate at Moamoa-tai/ Alafua. Others include marine sediments at the Apia wharf and mangrove margin of the oil tank storage at Sogi and EPC, Tanugamanono.

ii. *Types and Seriousness of Land Degradation in Samoa*

Land Degradation by main component is classified as follows by Douglas (1994) according to its seriousness in Samoa. Table 4 clearly shows that deforestation is perhaps the greatest single threat to Samoa's environment as literature (above-noted) numbering in the tens also supports it.

**Table 4: Types and Seriousness of Land Degradation in Samoa**

Degradation Component	Type of Land Degradation	Seriousness (0-100)
Water Degradation	Eutrophication; Pan formation; Salinization; Subsidence; Terrain deformation; Waterlogging; Wind Erosion	< 5
	Water Erosion	60
Losses to urban and Industrial Development	Crusting/Sealing; Pollution	5
	Urban and Industrial encroachment onto agricultural lands; Agricultural lands covered by volcanic lava flows	5-10
Soil Degradation	Acidification; Compaction	10
	Fertility decline/ Nutrient Depletion	70
Forest/Vegetation Degradation	Deforestation	80

Source: Tuivalalagi et al 2001

For the Samoan situation, land and soil problems according to Tuivalalagi et al (2001) are ranked thus in descending order of importance where '*land pressure*' may be equated with '*deforestation*', as land pressure in this respect is interpreted as a major cause of deforestation;

- *Land Pressure > Soil fertility decline > Soil erosion > Poor soil drainage = Water logging > Drought*

The equation can be interpreted as such that soil erosion due to land pressure has declined soil fertility and with no proper soil drainage, it consequently leads to water logging and subsequent drought.

iii) *Causes of Land Degradation*

Land Degradation has been identified with multiple causes due thus to forces of nature and to a much larger extent induced by human activities. With cyclone frequency and prolonged droughts which mainly are by-products of climate variations and El-Nino events, couple with intense spread of land cultivations for subsistent and commercial agriculture and, in addition to the swift nature of infrastructural development penetrating the interior and coastal lands, degradation of land and its resource base is believed to be almost non-reversible especially in view of severe repercussions on the soil and productivity of the land.

**Table 5: Types and Causes of Land Degradation**

Type of Causes	Actual Causes	Elaborations
a) Natural degradation hazards	- cyclones - droughts - volcanic activities	Samoa is especially vulnerable to natural hazards induced by climate forces and given its fragile resource base; a whole forest ecosystem can either be swept off within an hour of cyclonic wave or be eliminated by fire due to prolonged droughts or vanished in thin air by volcanic activities.
b) Direct Causes of land degradation	- overcutting of vegetation - shifting cultivation without fallow periods - overgrazing - non-adoption of soil-conservation management practices	The proximate causes of land degradation in Samoa are mainly in the range of agricultural methods and practices. It reconfirms the general view and consensus that the biggest threat associated with the degradation of lands is agriculturally motivated. All are to some extent have potential risks associated with the reduction of soil fertility and the loss in production.

Type of Causes	Actual Causes	Elaborations
	<ul style="list-style-type: none"> <li>- extension of cultivation onto lands of lower potential and/or high natural hazards</li> <li>- improper crop rotation</li> <li>- unbalanced fertilizer use</li> <li>- overpumping of groundwater</li> <li>- deforestation</li> <li>- Careless burning of rubbish causing bush fires in forest areas during the dry season;</li> <li>- Uncontrolled land use and mode of land cultivation</li> <li>- Careless spill of toxic wastes and persistent organic pollutants</li> </ul>	
c) Underlying Causes of land degradation	<ul style="list-style-type: none"> <li>- population increase</li> <li>- attitudes</li> <li>- economic pressure</li> <li>- land tenure</li> <li>- land shortage</li> <li>- poverty</li> </ul>	The underlying causes of land degradation are rooted at the toe of the problem. Particular notable of the root causes as perhaps the most predominant driven factors of land degradation are economic pressure, attitudes and poverty. Economic pressure of marketing goods and services has resulted in the transition from subsistent form of living to cash-based economy lifestyle. Poverty elements of Samoan society has significant impacts on the way land practices is fashioned however success with implementation of solutions to land degradation is largely dependent on attitude changing from wasteful practices to adoption of more efficient alternatives. The process of change will obviously involve a change in social and economic attitudes and actions. It will require a change in people's lifestyles and the whole philosophy that guides their lives must therefore change.

#### iv. *Effects of Land Degradation*

Effects of land degradation are grouped as '*effects upon production*' and '*consequences for the people*' and others as shown below in Table 6.

**Table 6: *Types and Effects of Land Degradation***

Type of Effect	Actual Effects	Elaborations
a) Effects of Land Degradation Upon Production	<ul style="list-style-type: none"> <li>- Land is abandoned (where degradation is severe)</li> <li>- Crop yields are reduced</li> <li>- Inputs and costs of production are increased (where farmers attempt to combat reduced yields by increased input)</li> <li>- Responses to inputs are decreased</li> <li>- Flexibility of land management is decreased</li> <li>- Risk is increased</li> <li>- Labor, and technical and financial resources are diverted to reclamation</li> </ul>	Effects of land degradation are significantly apparent in agricultural outputs of production from land. A correlation can be clearly established from this pattern between degraded lands versus crop yield reductions. This consequently led to land abandonment and costly efforts to combat reduced yields. Other resultant factors are noted as increase in associated risks and labor intensive as well as diversion to other uses and artificial means to buffer the impacts
b) Consequences of Land Degradation for the People	<ul style="list-style-type: none"> <li>- Landlessness is increased</li> <li>- Food supplies are reduced or less reliable</li> <li>- Labor requirements are increased; and</li> <li>- Income are decreased</li> </ul>	In terms of impacts affecting people, most are marginalized to the extent of landlessness and sustained food supplies are limited, labor intensive and income generally decreased.
c) Consequences of Land Degradation on the Environment	<ul style="list-style-type: none"> <li>- Reduced vegetation cover to the soil</li> <li>- Reduced return of organic matter</li> <li>- Less biological activity in the soil</li> <li>- Increased pollution from increased use of agrochemicals</li> <li>- Increased land sites contamination due to persistent</li> </ul>	Adverse effects on the environment are more visible and felt, not only would the environment be left with severe scars when soil becomes bare and expose to compaction but land would be discarded as lack significant fertility when there is reduced return of organic matter to the ground.

Type of Effect	Actual Effects	Elaborations
	organic pollutants and persistent toxic pollutants	This consequently lead to less biological activity of the soil and increased land pollution from resorting to agrochemical uses
d) Other	<p>The consequences of <i>Deforestation</i> on the environment includes;</p> <ul style="list-style-type: none"> <li>- top-soil loss</li> <li>- watershed destruction with subsequent water shortages</li> <li>- drinking water contamination</li> <li>- biodiversity loss</li> <li>- coastal flood damage during the rainy season</li> <li>- marine pollution</li> <li>- cultural impoverishment</li> </ul> <p>Other faces of land degradation that are highly pronounced on government and customary lands;</p> <ul style="list-style-type: none"> <li>- degraded lands due to scoria mining and/or excavations of aggregate materials</li> <li>- destruction of the coastal environment resulting from large scale commercial mining of sand,</li> <li>- destruction of mangroves and inappropriate coastal reclamation</li> </ul>	<p>Deforestation has mostly started the process of degraded land areas as being the ultimate tool of land cover clearance for a number of subsistent and economic reasons. This has exerted extreme pressure on land resources and depriving it of sustainable outputs from land, extinction of biodiversity, and affecting also water resources and supply. This is due to top-soil removal during wash-off of the exposed land cover resulting to water contamination and coastal flood damage and marine pollution. All together given close association of the land environment and our cultural identity, degradation of land means degradation also of our cultural treasures.</p> <p>Degradation of land areas by removal of scoria materials and aggregates is another form of practice that is increasingly synonymous with high demands for land development initiatives and infrastructural developments. Coastal degradation are mainly due to the mining and removal of sand and grave and the rising need for reclamation of the sea to either recover significant land loss or that people are being marginalized. Reclamation of the sea impact severely on inshore fishery stocks.</p>

#### 4.0 UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION (UNCCD)

The spirit of the Convention is to come “down to earth” and make a real difference in the lives of the people living in affected areas by ‘*desertification*’ for the dryland regions of Africa and Asia and; ‘*land degradation*’ in the context of the Pacific and the islands of the Caribbean. The most binding requirement is the creation of a National Action Programme (NAP) which shall provide for an enabling sphere of political and legal-policy framework to ensure the sustainability of the current dynamics of society. In practice, the NAP is to be drawn up by a democratic, but complex, process which will require all the actors (foreign donors [both bilateral and multilateral], regional organizations, national and local governments, NGOs and the local people themselves) to work together. The NAP is the main tool to implement the Convention in which shall specify actions for launch to combat land degradation, taking into account the innovative approaches promoted by the Convention.

The Convention is probably the first legally-binding international instrument clearly to stress partnership rather than aid. Up to now, efforts to combat land degradation in the context of desertification like other development initiatives have generally been governed by a series of one-sided relationships. Affected countries seek assistance from developed ones and sometimes affected countries design programmes and projects, and seek finance from them. Sometimes donors insist that they draw up specific action programmes in return for assistance. There are also one-way processes within affected countries where assistance is directed from central government to the affected people, often without consulting them or involving them in the decisions of how it is spent.

The process of ‘participation’ has been current for many years but often it has been grafted onto the old ‘top-down’ approach whereby decisions on programmes have been made elsewhere, and then local people have been invited, or told, to participate in them. Real participation, as alluded to by the spirit of the Convention, is that decisions are made by the people who are to be affected by them, not for them, but giving them power to put what has been decided into practice.

The Convention breaks new ground to enshrine a bottom-up approach in international law. It repeatedly emphasizes the importance of full participation of local populations which specifically underlines the important role of women and NGOs by ensuring that they are involved in the implementation of the Convention.

##### 4.0.1 Convention Obligations

An overview of the Convention’s Obligations is presented in the various articles of the Convention text and the articles most relevant to Samoa are highlighted for purposes of this assessment. Articles 1, 2, 3, 4, and 8 of the UNCCD specify the core aspirations of the Convention for achievement and for the purpose of establishing clearly the position of the Convention to combating desertification as it affects the world as well as Article 5 countries under which Samoa is qualified as a Party. Annex II of the Convention also is quite important for Samoa being part of Asia’s regional implementation and cooperation framework, which in terms of the Convention, affected country Parties are further grouped under Thematic Programme Networks (TPN) with Samoa classified under Asia’s TPNs.

- i. Article 1 - Use of terms
- ii. Article 2 - Main objectives
- iii. Article 3 - Governing Principles
- iii. Article 4 - General Obligations of Parties to the Convention.
- iv. Article 8 - Relationship with other Conventions
- v. Annex II - Regional Implementation Annex for Asia

For the purpose of this Assessment Report, Article 5 obligations as listed in Box 1 will be taken as the basis for groundwork assessment of Samoa's capacity to implement the Convention.

#### **Article 5: Obligations of Affected Country Parties**

In addition to their obligations pursuant to Article 4, affected country Parties undertake to;

- (a) give due priority to combating desertification and mitigating the effects of drought, and allocate adequate resources in accordance with their circumstances and capabilities
- (b) establish strategies and priorities, within the framework of sustainable development plans and/or policies, to combat desertification and mitigate the effects of drought
- (c) address the underlying causes of desertification and pay special attention to the socio-economic factors contributing to desertification processes;
- (d) promote awareness and facilitate the participation of local populations, particularly women and youth, with the support of NGOs, in efforts to combat desertification and mitigate the effects of drought.
- (e) provide an enabling environment by strengthening, as appropriate, relevant existing legislation and, where they do not exist, enacting new laws and establishing long-term policies and action programmes.

#### **4.0.2 Definition Analysis**

Worth noting is the **definition of 'desertification'**, which in terms of the Convention means *land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations and human activities*: **'Arid, semi-arid and dry sub-humid areas'** means areas, other than polar and sub-polar regions, in which the ratio of annual precipitation to potential evapo-transpiration falls within the range from 0.05 to 0.65. The ratio for Samoa is **0.8** which takes us outside of this range in terms of the definition adopted by the Convention. However, our accession to this Convention has enabled us to address the problem of land degradation as it affects Samoa and, every other country outside of this range is classified under the Convention as Article 5 Affected Countries.

A more operational definition of 'land degradation' that is perhaps most applicable in the context of Samoa is *'reduction in land productivity that affects the integrity of an ecosystem through erosion, salinization, loss of soil fertility and the like'*. Prevention and control of land degradation, especially desertification and deforestation, are critical to achieving sustainable development at the national and global environmental levels.

#### **4.0.3 Objectives**

The objectives of the **UNCCD** are;

- to combat desertification
- to mitigate the effects of drought;
- to develop long-term integrated strategies that focus simultaneously in affected areas on improved productivity of land
- sustainable management of land and water resources, leading to improved living conditions, in particular at the community level.<sup>1</sup>

#### **4.0.4 Governing Principles**

- Ensures participation of populations and local communities in decision-making process on the design and implementation of programmes to combat desertification and/or to mitigate the effects of drought
- Ensures that an enabling environment is created at higher levels to facilitate action at national and local levels

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<sup>1</sup> UNCCD Text, Article 2, p8

- Ensures improved cooperation and coordination at all levels in the spirit of international solidarity and partnership
- Allocate financial, human, organizational and technical resources where they are most needed
- Develop cooperation amongst all levels of government, communities, NGOs and landholders in the spirit of partnership, to ensure better understanding of the nature and value of land and scarce water resources in affected areas and to work towards their sustainable use
- Take into full consideration the special needs and circumstances of affected developing countries, particularly the least developed among them.

#### **4.0.5 Relationship with Other Conventions**

Samoa is Party not only to UNCCD but as well to CBD and CC, all of which have commonalities in terms of overlapping issues and concerns and therefore the need for synchronized effort to address and combat these concerns using an integrated approach.

- The Parties are encouraged to coordinate activities carried out under the Convention and are required to synergize efforts with other Conventions particularly CBD and CC in order to derive maximum benefit from activities under the agreement to avoid duplication of efforts.
- The Parties shall encourage the conduct of joint programmes, particularly in the fields of research, training, systematic observation and information collection and exchange to the extent that such activities may contribute to achieving the objectives of the Agreements concerned.
- The provisions of this Convention shall not affect the rights and obligations of any Party deriving from a bilateral, regional or international agreement into which it has entered prior to the entry into force of this Convention for it.

#### **4.0.6 ANNEX II: Regional Implementation Annex for Asia**

UNCCD has developed regional and sub-regional cooperation networks which focus on targeting specific thematic areas for direct address of the concerns and issues of desertification and land degradation. In this regard, issues of land degradation affecting Samoa in the context of desertification are more or less synonymous with thematic areas in the context of affected countries in the Asian region. The sub-regional and regional networks are known as Thematic Programme Networks (TPN) and Samoa normally is lumped under the Asian region for purposes of strengthening its operational responsibility and functional in implementing the Convention at the sub-regional and regional levels.

- Article 1 provides the purpose for this Annex which is to provide guidelines and arrangements for the effective implementation of the Convention in the affected country Parties of the Asian region in the light of its particular conditions.
- Article 2 of the Annex obliged the Parties to consider high proportion of areas vulnerable to desertification and drought with regards to climate, topography, land use and socio-economic systems; the pressure on natural resources for livelihoods; existence of production systems, directly related to widespread poverty, leading to land degradation and to pressure on scarce water resources; impacts of conditions of the world economy and social problems such as poverty, poor health and nutrition, lack of food security, migration, displaced persons and demographic dynamics; expanding yet still insufficient, capacity and institutional frameworks to deal with national desertification and drought problems; and need for international cooperation to pursue sustainable development objectives relating to combating desertification and to mitigate the effects of drought.
- Article 3 is on Frameworks for National Action Programmes which shall be formulated as an integrated part of broader national policies for sustainable development of the affected country Parties of the region. National Action Programmes shall be developed pursuant to articles 9 to 11 of the Convention. As appropriate, bilateral and multilateral cooperation agencies may be involved in this process at the request of the affected country Party concerned.
- Article 4 provides the guidelines for developing the NAPs
- Article 5 and 6 on sub-regional and joint action programmes as well as on regional activities.

#### 4.0.7 International and Regional Frameworks

*Table 7: Governing Frameworks for UNCCD Implementation at the International and Regional Levels*

Institution	Stakeholders Interests/Responsibilities
UNCED	The UNCED of the Rio Earth Summit 1992 provides the overarching framework for implementing the Convention at international, sub-regional, regional and national levels. It promoted a new, integrated approach to the problem of desertification and land degradation from which emphasize actions to promote sustainable development.
UNCCD Secretariat	Established under the UNCED framework, this is the executive institutional strengthening arrangement for implementing the Convention at basically all levels; international, sub-regional and regional levels. The Executive Head Office of the Convention is headquartered in Bonn, Germany. It is also responsible for servicing the COP, including coordination and networking of information, technology, funding and meeting arrangements at the international, sub-regional and regional levels. The UNCCD Secretariat, with co-finance assistance from the Global Mechanism funded the development of the First National Report to UNCCD.
Global Mechanism (GM)	Established under the Convention, the GM is in charge of promoting actions for the mobilization and channeling of substantial financial resources, including the transfer of technology, on a grant basis, and/or on concessional or other terms, to affected developing country Parties. The GM is hosted in Rome by the International Fund for Agricultural Development (IFAD), and functions under the authority and guidance of the Conference of the Parties.
Global Environment Facility (GEF)	Established by the World Bank, UNDP and UNEP in 1990, GEF is the key funding mechanism for environmental programmes at all levels. GEF has recently made Land Degradation one of its focal areas to add to CBD and CC. It became since a financial mechanism for the UNCCD. GEF has already funded some of UNCCD's requirements through its Operational Programme 15 (OP15) on Sustainable Land Management and has co-financed the development of the NAP through UNDP. GEF's involvement has significantly assist Samoa to address some of the pertinent and newly emerging issues of land degradation within the context of the UNCCD. But more importantly to strengthen the linkages between land degradation as a cross cutting issue and other key thematic issues relating to climate change, biodiversity and others.
United Nations Development Programme (UNDP)	The UNDP is the key GEF focal point for the execution of UNCCD in Samoa. UNDP looks at building effective capacities of the Conventions in order for implementation to become more effective. It has a sub-regional office in Apia and has been an active supporter, member and participant in NSC meetings and national consultations on the UNCCD. UNDP oversees the operations of the Country Programme (CP) for the Pacific region thus funded by GEF through UNDP as the executing agency. Under the CP framework Samoa would be able to meet some of its obligations under the UNCCD.
United Nations Environment Programme (UNEP)	The UNEP is the GEF implementing agency for environment programmes which for UNCCD, it is responsible primarily for promoting environmental understanding, and increases public knowledge about land degradation factors and problems for future generations.
Secretariat of the Pacific Regional Environment Programme (SPREP)	Responsible for overseeing the interests of member-countries in the region to the Convention. It is task with coordinating UNCCD activities in the region whereby focal points come together to build capacities, share experiences, and to dialogue and formulate regional action plans. Provides the avenue for regional guidelines and to foster policy advice to member countries in the region. Member of the NSC
Thematic Programme Network (TPN)	These are regional cooperation networks which are established at the regional level by affected country Parties to address specific themes of relevance in the framework of the UNCCD implementation. Samoa has been participating in TPNs for Asia in the recent past where issues relevance for Samoa and other countries of the Pacific are dialogued.
University of South Pacific (USP)	Conducts research into agriculture and soils as deemed relevant to addressing land degradation issues. USP also provides tertiary education to Samoan students, helping to build the skills and knowledge base in this field.

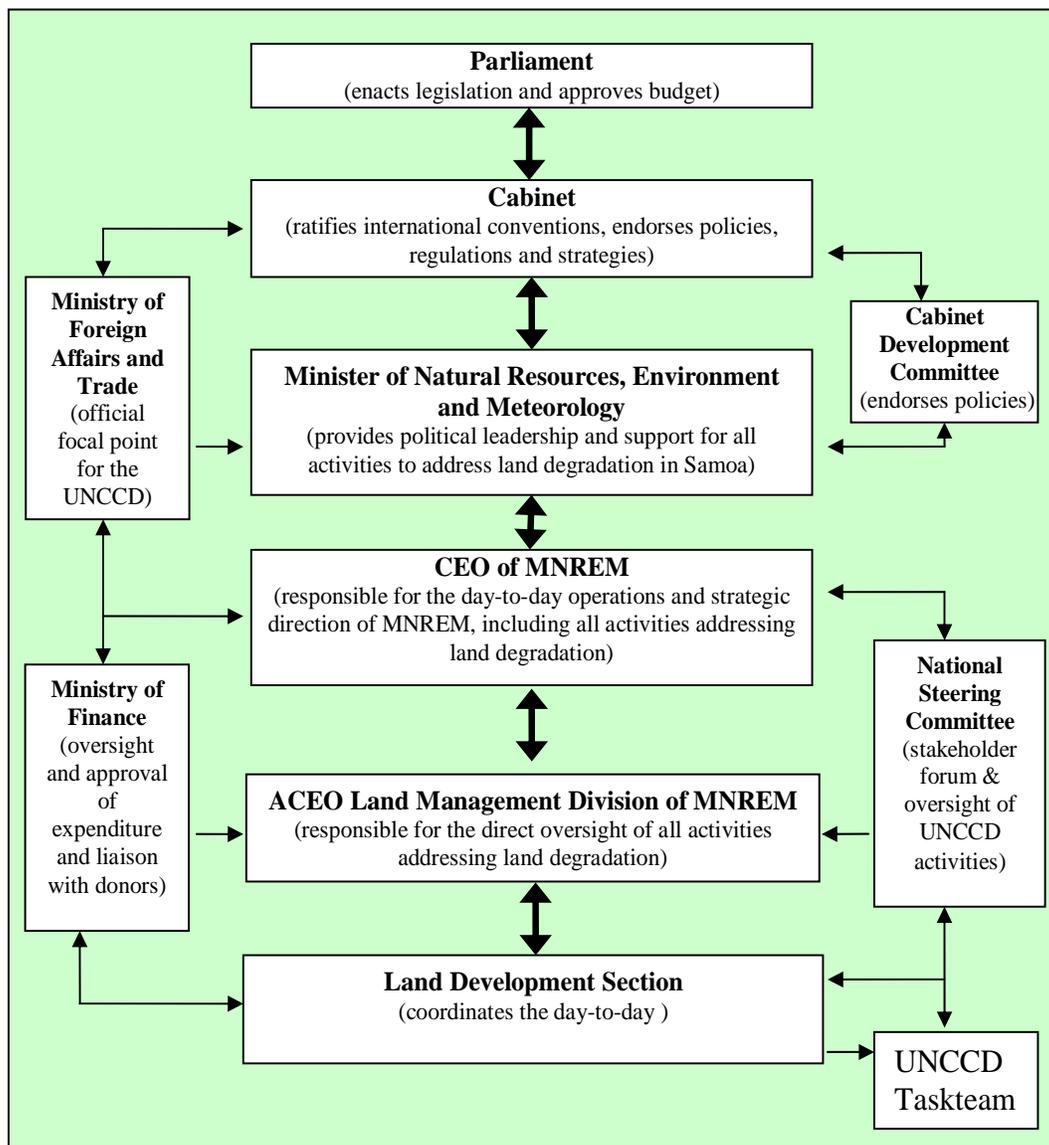
## 5.0 IMPLEMENTATION OF UNCCD IN SAMOA

Samoa acceded the Convention on 20 August 1998, four years after the Convention was adopted in Paris on 17 June 1994, and two years since the Convention entered into force on 26 December 1996. Since then, the implementation of UNCCD in Samoa has continued to advance beginning with the development of the First National Report to the UNCCD (2002), a process which began and completed in late 2002. Other works to meet the obligations had followed suit such as formulation of the NAP, thus witnessed the progressive unfolding of Samoa's effort to venture forth with extra effort to implement the Convention in successive yet currently more paralleled stages.

### 5.0.1 Implementation Framework

The framework for implementing the Convention at the national level comprises political authoritative bodies, government Ministries and high-level national committees with endorsement and advisory roles; each serves different complementary functions to enable the effective administration and management of the Convention in Samoa.

*Figure 1: Framework for implementation of UNCCD in Samoa<sup>2</sup>*



<sup>2</sup> UNFCCC Thematic Assessment Report

## 5.0.2 The Roles and Functions of each Involved Party under the Framework

Apart from the *Parliament* and *Cabinet* which constitutes the political arm of the Institutional framework, being the Legislative Assembly or Law makers of the country and, the Executive Arm of Government for top-level decision-making affecting the whole country by ensuring effective administration and management of Samoa's domestic affairs respectively; other stakeholders holds more or less direct responsibility in the management of the Convention to ensure transparency and accountability and, effective implementation.

The *Cabinet Development Committee (CDC)* is a higher-level committee comprising a mix of prominent government figures mostly those with Ministerial posts and government CEOs. The committee has as its key responsibility the endorsement and approval, upon due considerations, of all official documentations (policies, proposals, reports) required under the Convention

The *Ministry of Foreign Affairs and Trade (MFAT)* is the National Operational Focal Point for all MEAs to which Samoa is party to, including UNCCD. It is responsible primarily for external communications between the National Implementing Agency and the UNCCD Secretariat and Donor Funded Agencies in accordance with solicited international codes of communication for MEAs. It ensures that transparency and accountability for overall implementation of the Convention is maintained at the highest level. Member of NSC.

The *Ministry of Natural Resources, Environment and Meteorology (MNREM)* is the National Implementing Agency for the Convention and it provides for the Strengthening Institutional mechanism for the coordination of the Convention in Samoa. The Division of Land Management (DLM) is officially assigned, as part of the Institutional Strengthening Arrangement, with the administration of the Convention which includes coordination, facilitation and implementation at all levels; local, national and international levels. This assignment is based on a fair recognition of the fact that Land Degradation as it affects Samoa is land-related concern for the Division to manage and take responsibility for. The Land Development Section of the Land Management Division is the designated Coordinating Unit for the Convention. Chair as well as member of the NSC

The *Ministry of Finance (MoF)* is the finance treasurer of the country therefore responsible primarily with channeling funds from external donor sources to implement the Convention and ensures expenditure accounts of these funds are officially audited. The MoF also mediate, through the CDC, endorsement of the Convention's official documentations, policy instruments and proposals. Member of NSC

The *National Steering Committee (NSC)* was established in 2003 and constituted a higher-level representation of Government Ministries, Tertiary Institutions, Non-Governmental Organisations (NGOs) and regional organizations. Its core responsibility include the provision of overall policy guidance for the implementation of the Convention.

The *UNCCD Taskteam (TT)* was instituted by the NSC on 19 March 2004 to spearhead the formulation of Samoa's National Action Programme (NAP) as obligated under the Convention. Membership of the NTT comprises technical persons source from members of the NSC. Since its establishment in 2004, the NTT has significantly expanded to include more stakeholders whose contribution is significantly relevant to formulation of the NAP and other reporting requirements.

### 5.0.3 Other National Stakeholders

Table 8 contains the stocktake of all other national stakeholders that are currently involved in the implementation of UNCCD in their active participation and membership to the NSC and NTT. Also noted are their respective interests and defined roles as relevance to the implementation of the Convention.

**Table 8: Defined Roles of National Stakeholders to the NSC**

<b>Government Agencies</b>	<b>Role</b>
Ministry of Natural Resources, Environment and Meteorology	The MNREM is the key implementing stakeholder involving basically all of its divisions. Each division is represented in the NSC and UNCCD Taskteam.
Ministry of Agriculture and Fisheries	The Ministry is one of the key stakeholders the role of which is the most critical in complementing the effective address and communication of SLM issues to communities through coherent advice and implementation of activities, targeting specifically sustainable agriculture in particular the sustainable management of crop cultivations and livestock farmings. Member of the NSC and TT
Ministry of Education, Sports and Culture	Provides a supporting role in effort to influence the streamline of land degradation concerns and sustainable land management issues and components into educational curricula for purposes of training of primary and secondary school teachers and, awareness raising and self development of students through teaching schemes on land degradation issues as they affect them.
Ministry of Women, Community and Social Development	The Ministry is responsible for promoting the social and economic development of villages through formulation of policies, programmes and guidelines relevant to their needs. Together with MNREM the Ministry promotes programmes that heighten the awareness of the villages about the adverse effects of land degradation. Member of the NSC and TT.
Ministry of Works, Transport and Infrastructure	Responsible for urban planning for landuse and development purposes. Ministry administers the Planning & Urban Management Act (PUMA) 2004. PUMA regulates the use of land through development consents prior to establishment or implementation of a development on land. Member of the NSC and TT.
Office of the Attorney General	Mainly responsible for legislation pertaining to government polices and programs. Responsible mainly for legal matters relating to the implementation of the UNCCD and other Conventions. Member of the NSC.
Samoa Land Corporation	Government Land Agency responsible for the administration of the sale of government lands for commercial purposes as well as residential. Member of NSC and TT.
Samoa Tourism Authority	Main office responsible for the overseeing of activities of the tourism industry including the development of tourist attractions, facilities and infrastructures. Member of the NSC.
<b>Educational Institutions</b>	<b>Role</b>
National University of Samoa	Education, research and training. Member of the NSC and TT
University of South Pacific	Education, research and training. Has strong agriculture research and training program, which is highly relevant to addressing land degradation issues. Institute of Research, Extension Training and Agriculture (IRETA) is part of this campus. Member of the NSC and TT.
<b>Non-Government Organizations</b>	<b>Role</b>
National Council of Churches	To coordinate and foster unity amongst churches to ensure spiritual welfare of the nation and to raise issues that can affect the lives of the people politically, socially and spiritually. Member of the NSC.
Samoa Umbrella for Non Governmental Organizations Inc.	Overarching body responsible for the administration of all non-government organizations and facilitation of non-government donor funded projects and programmes in Samoa. Member of the NSC and TT.
Samoa Farmers Federation Association	Constitutes farmers with the main aim of promoting cropping farms and agro-forestry plantations
Women in Business Development Inc.	Constitutes an association of prominent women with particular focus on promoting organic farmings in the country.

#### 5.0.4 Legal Framework to Combat Land Degradation in Samoa

The powers of the *Constitution of the Independent State of Samoa 1960* also the supreme law of the country over any other Act of Parliament has carefully distinguished Samoan land, under provisions Part IX (101-104), into the three main types of land tenure which up to now still is being recognized officially as customary land, freehold land, and public land. The Constitution also kindly protected the interests of all encumbrances to land from unnecessary encroachment and alienation from the hands of landowners, with particular emphasis on ownership of customary lands. It is from the Constitution that the management of land is carefully guided and manipulated in ways that it can be made to be sustainably developed through the use of various mechanisms (leasing, license and exchange) especially designed to allow for various uses on land whether it be commercial, subsistent or residential. This is, by and large, to support and benefit landowners and largely to contribute to enhancing development of the public and private sectors on which subsequent economic stability and sustainability needs of the country are by and large dependent. A number of other subordinate Acts were enacted to specify and enforce these mandatory functions under the Constitution more effectively such as the Alienation of Customary Land Act 1965, Alienation of Freehold Land 1972, Taking of Land Act 1964, and Land Registration Act 1992/93.

- The Division of Land Management (DLM), also the UNCCD Implementing Unit, of MNREM is provided with the key mandates of enforcing the mentioned legislation (above) including the exercise of powers stemming from the Constitution to facilitate the administration of the land tenure, guide the formulation of appropriate land policies as well as it dictates the daily operations of the division's work, in terms of core functions and responsibilities, in the management of all land matters and land development concerns. The Land Development (LD) section of DLM (also the UNCCD Coordinating Unit) is chiefly responsible for policy development on all land-related matters and issues for the full development of land. Therefore the key role of the section is to provide policy advice to the CEO through the ACEO-LM and it regulates individual and commercial operations on government lands through the permitting system with regards to the extraction and use of land resources (sand, silt, gravel, scoria materials, etc) as well as proposals for sea reclamations. The LD also regulates and administers logging proposals through the licensing system as well as the allocation of temporary uses of land space in the town area and the construction of structures on road reserves.

The *Lands, Surveys and Environment Act 1989* (LSE Act 1989) currently under amendment is the Principal Act of the Ministry of Natural Resources, Environment and Meteorology (MNREM) under which all other pieces of legislation falls. These other statutory mandates expand on specific provisions under which elaborate clearly precise mandatory functions and responsibilities of each MNREM Division for purposes of enforcement and to guide the sustainable development of land and/or management and utilization of land-based resources. The existence of the LSE Act 1989 provides the overarching framework for addressing environmental concerns in Samoa in terms of the need for protection and conservation of environmental resources, which unquestionably all are land-derived, implementing with the view of attaining sustainable development goals introduced since Samoa's involvement in the UNCED Rio Summit of 1992. It is within this legal framework of recognizing the environment component of development that the Division of Environment and Conservation (DEC) was enacted under the LSE Act 1989 to vigorously pursue the sustainable recognition and management of environmental problems affecting the country from what is understood to be mainly human-driven. The existence of the DEC was a milestone achievement by government which has reflected its commitment to operate its development within the framework of sustainable development. For the world as it is for Samoa being signatory to UNCCD, the land degradation matter as an environmental issue is to be counter-attacked within this framework to guide its address and communication for proper and sustainable management particularly on the ground-level.

Other relevant legislation which without their enforcement would not complement the effective implementation of the Convention's obligations is the *PUMA Act 2004*. The PUMA Act 2004 enacted the establishment of a planning mechanism or system for landuse control to address proper landuse planning in the urban and rural areas through the development consent process. This process dictates that all developments carried out on land in particular residential housing, infrastructure, extraction of land-based resources including land uses such as farming, erection of structures on land, regardless of the type of land tenure, must go through the development consent process. In terms of EIA/PEAR requirements, the PUMA has the discretionary mandate to request EIA/PEAR from developers based on initial assessment. A sustainable management plan (SMP) on the other hand is prepared by PUMA to facilitate and improve the efficiency of the development process.

### 5.0.5 Policy Framework to Combat Land Degradation in Samoa

Implementation of the Convention requires both the enforcement of legislation and policies in which shall provide procedural mechanisms to effectively address issues of land degradation and to promote sustainable land management as the mode to fashion the productive use of land in a sustainable manner.

- ***Statement for the Development of Samoa (SDS)***

The overarching policy framework at the national level which shall be seen as the ultimate instrument of government to guide development activities in Samoa and in which issues of importance are streamlined for higher-level recognition and for implementation to be rendered successful is, the Strategy for the Development of Samoa (2005-2007). In the SDS 2005-2007, the key vision is "Improved quality of life for all". The SDS is the official periodic statement by government of its priority intentions for execution during its term of office as well as highlighting actions already taken to meet their set intentions, and measured against the interests and expectations of the country. Prioritizing an issue in the SDS is landmark recognition of its importance and in this regard, issues of land degradation have neither been mainstreamed into the current SDS to reflect any significance nor specifically addressed in most national plans and policies currently existing. All efforts and attempts must focus therefore in the mainstreaming of sustainable land management issues into the SDS for formal recognition in order to eventuate, apart from law enforcement of landuse control, effective compliance of all stakeholders particularly local communities, in not only realizing the impacts of unsustainable practices on land but more importantly be motivated to conform to sustainable practices, in accordance with legal guidelines and in the procedural application of policy tools.

- ***National Environment and Development Management Strategies (NEMS)***

Samoa's National Environmental and Development Management Strategy (NEMS) was developed and launched in 1992. It provides a national framework for Samoa which helps frame a program to achieve ecologically sustainable development which to be practical and implementable, the NEMS was a result of a wide-ranging high-level national and community consultations from the outset. The process began with the preparation of a detailed assessment of the state of the country's environment, including its resource wealth, and the identification of ecologically sensitive areas. All other relevant factors bearing on the formation and implementation of the NEMS were studied including administrative policies and institutional capabilities, legislation and regulations, formal and informal educational processes, and the development activities by both government and private sectors. Ideally the NEMS was an iterative public consultative process to arrive at a consensus on a set of agreed programs and strategies which will require full community involvement to implement successfully. The NEMS highlighted 12 key targeted environmental components for policy development and political commitment was necessary through the development of these policies which focused on promoting sustainable economic growth. Although all 12 policies have been drafted, the government had only succeeded in endorsing four NEMS policy which initiated a positive support towards tackling its environmental concerns. These are (1) Waste Management; (2) Land Use; (3) Water Resource; and, (4) Population and Sustainable Development, all of which have common interests in promoting sustainable development with regards to any type of development that takes place in Samoa, and most importantly minimize any adverse impact on the natural, social and cultural environment.

- ***National Landuse Policy***

The national landuse policy is one of the four NEMS policies that have been approved by Cabinet in 2001, in fair recognition of the need for proper landuse planning and sustainable management of land resources. This policy provides the framework for the establishment of a sound system of landuse control and guideline the development of appropriate landuse practices to address the diverse interests of stakeholders, in particular customary landowners. It seeks to build effective capacities in order to sustainably manage land resources in full recognition of the complexity and delicate nature associated with the customary land tenure system. It is envisaged that only by obtaining a good appreciation of the importance for sustainable development of land resources by the traditional landowners that it will give

them the confidence to cope and enhance their ability to sustainably utilize their land resources for their best interest as well as for the interest of the community, the country and the unborn generations.

- ***MNREM Corporate Plan 2006-2008***

This is perhaps the least considering yet the most important national policy statement by the Implementing Agency of the Convention, with direct affiliation to implementers (staff) and with specific focus on activities necessary for implementation within a time-period of 3 years. The Plan is under constant yearly review to accommodate the ever-changing mandates in terms of additional core functions to the Ministry and the external outsource of internal functions and responsibilities to other government Ministries or the private sector. The Plan has to be formulated within the SDS framework of priority commitment and the key feature of the Plan is the Management Plan of activities by the Ministry to achieve the goals and objectives of the SDS of a designated period. The Corporate Plan can provide an avenue for incorporating SLM focus and activities for implementation. Likewise for other sectoral Plans for instance, Agriculture and Education, can incorporate issues pertaining to SLM and Land Degradation for recognition and for purposes of formulating their actions with focus on attaining sustainability aspects to land resources.

### Other Supporting National Strategies and Policies

- ***National Action Programme (NAP) 2006 (under current formulation) – by requirement of UNCCD***

The NAP shall constitute the conceptual and legal framework for implementing the Convention at the national and local level. Its purpose is to identify factors contributing to land degradation in the context of desertification and the practical measures necessary to combat land degradation and to mitigate the effects of drought. The NAP is part of the national economic, social development and environment protection plans which shall be developed in coherent manner with other environmental strategic and planning frameworks. The Convention indicates that affected countries shall elaborate and implement them with the full participation of local communities and all interested stakeholders. The NAP for Samoa has already existed in draft form by work of the consultant however more work and effort is pipelined to complete the NAP satisfactorily by end of June 2006.

- ***National Biodiversity Strategy Action Plan (NBSAP) 2001- by requirement of the CBD***

Samoa's NBSAP is an integral component of its NEMS. It is the country's foremost expression of commitment to the CBD which it ratified on the eve of the Convention's accession. The NBSAP outlines the state of Samoa's biological resources and actions to curb their degradation and achieve sustainable development. The NBSAP points towards the necessity of the sustainable management and protection of Samoa's biodiversity of both its terrestrial and marine environment as well as its genetic resources. This took into proper account environmental issues outlined in the NEMS and developed detailed activities to address them from the viewpoint of protecting biodiversity. Protection of biodiversity is also concerned with ecological sustainability which is an ecosystem approach for addressing sustainable land management concerns. Progress on NBSAP priority actions was reviewed in 2004. In 2002, Samoa reviewed and assesses its obligation and commitment to UNCED and the Barbados Program of Action in its submission to the Johannesburg World Summit in 2002.

- ***National Action Programme of Action (NAPA) 2005 –by requirement of the CC***

The NAPA document provides opportunities for synergies with other multilateral agreements particularly the Convention on Biological Diversity (CBD), and the United Nations Convention to Combat Desertification (UNCCD) for collaborative and integrated actions in adaptation responses. The NAPA adopts an integrated approach, all the relevant stakeholders (both in government and non-government organizations) have been able to work hand in hand to ensure that those whose livelihoods are most vulnerable to adverse impacts of climate change impart the urgency and immediacy of the adaptation needs. The purpose of the NAPA is to examine Samoa's main environmental pressures within each highly vulnerable national sector, including the livelihoods of communities. These sectors have been developed into project profiles which include issue

statements and provide a summary of the profile's objectives, activities, inputs, outputs and outcomes (see Annex I-1 – I-9) that have been set and agreed to by government, the private sector and most importantly the village communities, using nationally driven criteria. It is intended that the contents of this document will provide the GEF with indications of Samoa's most urgent and immediate climatic adaptation needs. Moreover, it is envisaged that partnerships which Samoa has established with its other development partners will be strengthened to explore additional opportunities and support for implementation of the NAPA.

- ***National Implementation Plan (NIP) for POPS – by requirement of the Stockholm Convention***  
The NIP 2004 provides the national framework for the implementation of actions required to address Persistent Organic Pollutants (POPs) in which incorporated the findings of several studies implemented to assess the presence of POPs chemicals and levels of contamination, areas of significant contamination, the country's institutional capacity to formulate and implement a plan for POPs reduction and elimination, and to finalize an inventory of POPs in the country. Samoa's POP's inventory reveals the presence in the country of 8 of the 12 POPs targeted by the Stockholm Convention and a ninth suspected from the presence in pesticides in which it is a known impurity.
- ***Coastal Infrastructural Management Strategy(CIMS)***  
The CIM Plans are management plans that identify hazard zones and potential solutions for reducing risk and susceptibility in order to improve resilience on community and government infrastructure. Samoa has developed 15 Coastal Infrastructure Management Strategies (CIMS) and Plans (CIMPs) for 15 districts through an Infrastructure Asset Management Project (IAMP). Consultations for the remaining 28 districts are currently underway. The aim of the CIMS is for communities within these districts to be 'adaptive, responsive and quick to recover from natural hazards so that they are environmentally, socially and economically sustainable'. Coastal natural hazards often result in massive flooding downstream of soil particulates and the consequent loss of large tracts of coastal land into the sea. Degradation of coastal land areas is visible in areas of constant erosion of the coast whereby high turbidity levels of coastal waters and exposure of the soil are observed.

### UNCCD Projects and Initiatives

- ***First National Report (FNR)***  
This is the initial reporting requirement by the Convention which as appropriate shall record the country profile, the status with national circumstances of the country in particular the status with landuse patterns and a stocktake of existing initiatives and programmes which Samoa has implemented and contributing either directly or indirectly to addressing land degradation problems in-country.
- ***Medium-Sized Project on Capacity Building and Mainstreaming of Sustainable Land Management***  
The MSP-SLM project is the financial mechanism to implement the NAP or the actions proposed in the NAP being the ultimate tool to implement the UNCCD. In recognition of national and global environmental benefits the overall expected goal of this project is the promotion of effective sustainable land management in Samoa so as to promote ecosystem health, integrity, stability, functions and services. This project is submitted under the LDC-Small Islands Developing States (LDC-SIDS) Portfolio Project and will help achieve the objectives of Operational Programme 15 and Strategic Priority 1 relating to Targeted Capacity Building for sustainable land management. Its objective is to strengthen local and national capacity for Sustainable Land Management (SLM), including mainstreaming into national development strategies and policies, improving the quality of project design and implementation, and ensuring that all relevant stakeholder views are reflected and integrated into the process.

- ***Third National Reporting – Medium Sized Project***

The objectives of the Third National Reporting are to; update the second national report; (ii) provide a country profile; and (iii) report on ongoing activities and report on impacts. However, based on lessons learnt from Africa's Third National Reporting and due to the need by non-African country Parties to build their capacities to provide high quality national reports as well as evaluate the reporting process and products in order to extract lessons learnt for the Fourth National Reports, the scope of objectives for the Third National Report (3NR) has expanded to include (i) building the capacities at the national level to conduct preliminary stocktaking of status and trends in land degradation; actions taken as part of the baseline to build capacities to implement the UNCCD; and to identify further capacity needs (ii) elaborate the 3NR (through co-funding) (iii) build a coalition and consensus around the 3NR, through stakeholder participation and validation both at the regional and national levels and (iv) review the process and products of the 3NR with a view to recommending improvements to the NR process. The Third National Report is now prepared in accordance with GEF support which emphasizes cost efficiencies to build upon ongoing support and initiatives. The idea of Third National Report is now developed into medium-sized project (MSP) which requires the 3NR process to be integrated with the NAP and GEF capacity building processes and to build capacities of countries to conduct ongoing evaluation of the 3NR process so that they can contribute to CCD deliberations on NR processes including recommendations for the 4NR to UNCCD. Samoa's Third National Report is under current formulation by the UNCCD Unit.

- ***Other Projects and Initiatives with Complementary Functions***

Various other projects and initiatives with complementary functions include the (i) *MSP for Conservation and Monitoring of the Upland and Lowland Forests of Savai'i* which is believed to be the last remaining native forest areas in Samoa. A UNDP Fiji-funded project (ii) *Sustainable Management Plan for Vaitele Zone* under current formulation by PUMA Division of MWTI which aims at addressing proper land use by designing a proper sustainable management plan for the Vaitele industrial zone. An EU-funded project which is the (iii) *Water Sector Support Program* has established the Water Resources Division under MNREM to address concerns and key threats to scarce water resources in the country. The (iv) *World Bank SIAM Phase II project* instigated and developed CIM plans for the whole of Samoa to determine the level of their vulnerability to coastal hazards. The SIAM Phase II also addresses the need for effective and efficient system of land administration and land surveys with particular focus on effecting the change and transition from the old system of land registration of which is the (v) *Deeds system to the Torrens system of land registration*. The Torren system registers ownership of land by title. It recognizes only the registered title as the current landowner forsaking all other encumbrances to land and/or any other historical records of previous ownerships. In addition, MNREM through the (vi) *SOPAC project on GIS and Remote Sensing* has conducted a few training courses and awareness raising programs on GIS and remote sensing for relevant stakeholders. Finally, the (vii) *FAO-funded Future Farmers Project* is currently being implemented by the Crops Division of MOA which focuses mainly on promoting organic farming.

## 5.0.6 Status with UNCCD Implementation – Highlights and Lessons Learnt

Following the submission of Samoa's First National Report to the Convention in 2002, the Implementing Agency since commenced with the formulation and completion of its National Action Programme as is required of member countries under Article 9 of the Convention. The National Task Team duly established by endorsement of the NSC with the main objective of formulating head-on of the NAP, began the initial stages of the NAP formulation process. Table 9 gives an elaboration on these developments in detail, in addition to other preceding events and the subsequent development of other complementary requirements.

**Table 9: Stocktake of Activities and Initiatives to implement the Convention**

Year	Activity	Details
1998	Acceded the Convention	- Samoa signed officially into the Convention
2000	UNDP-GEF Capacity Development Initiative – developed through consultancy work	<ul style="list-style-type: none"> <li>- The report is titled 'A Rapid Assessment of Land Degradation in Samoa' prepared by consultant, Vermeulen.</li> <li>- This was the first response to a global call to realize symptoms of land degradation existing in the world and as it affects Article 5 countries including Samoa. This assessment initiative was to establish significant causes and effects of land degradation as well as identified appropriate actions.</li> </ul>
2001-2002	Official assignment of UNCCD implementation to MNREM as the National Implementing Agency. <ul style="list-style-type: none"> <li>- Institutional Strengthening Set-up within the DLM</li> <li>- UNCCD Coordinating Unit assigned to Land Development Section of DLM</li> </ul>	<ul style="list-style-type: none"> <li>- MNREM being the core mechanism to address environmental and natural resource management concerns in Samoa, through the DLM was assigned with the role to coordinate UNCCD implementation</li> <li>- DLM assigned the Land Development Section as the coordinating unit with the task to coordinate and facilitate the implementation of the Convention Obligations</li> </ul>
2002	Formulation of the <b>First National Report to UNCCD</b> began with the receipt of funds of US\$4,625.00 for its development. The following approach was adopted for the development of this Report commencing with the: <ul style="list-style-type: none"> <li>- preparation of the first draft by the UNCCD Unit,</li> <li>- consultation of the first draft,</li> <li>- subcommittee to incorporate changes based on feedback from stakeholders, and</li> <li>- completion of final draft</li> </ul>	<ul style="list-style-type: none"> <li>- The First National Report is the foremost reporting obligation for all country parties. The overall gist of the Report is to provide an overview of Samoa's national circumstances and situation pertaining to land degradation in particular status with landuse patterns.</li> <li>- The first stakeholders' consultation convened in 9 October 2002 to cage feedback and views for further development of the Report was the highlight of the formulation process. The workshop was well-attended by key representatives of relevant government ministries, corporations, NGOs and the general public. The feedback was resourceful in completing the report and all views were accounted for in the Report.</li> <li>- A subcommittee of three comprising just the MNREM staff was appointed to incorporate all stakeholders views and to finalize the production of the Final Draft.</li> <li>- The key features of the report were current status of landuse trends and patterns at the time and national circumstances influencing the type of landuse as well as causes and effects.</li> </ul>
	Submission of the First National Report to UNCCD Secretariat	- The official submission of the First National Report by the National Implementing Agency officially was mid-October 2002.
2003	Constitution of the UNCCD National Steering Committee	- Similar to other project arrangements of MEAs coordinated thus by MNREM, this Committee was arranged as the executive arm of the UNCCD project to provide overall policy guidance and directives to the Coordinating Unit for the implementation of the Convention. It comprises of high-level membership and are fairly representative of all key stakeholders ranging including government agencies, non-government organizations and academic institutions with stakeholder interests in land degradation issues.
2004	Establishment of UNCCD National Task Team	- The Task Team was appointed by the NSC with the key responsibility of spearheading the formulation of the NAP and to execute any other related tasks to the Convention and as appropriate to meet the obligations. Representation of the TT is source from the NSC technical members and other individuals with technical expertise as appropriate with advancing the appropriate address of land issues.

Year	Activity	Details
2004-2005	<p><b>National Action Programme (NAP);</b></p> <p>Initial stages of <b>NAP formulation</b> by NTT through:</p> <ul style="list-style-type: none"> <li>- Discussion of NAP content</li> <li>- Drafting action plan component of NAP</li> <li>- Consultation of Action Plan Component</li> <li>- data collection by NTT</li> </ul> <p><b>NB.</b> Progress with the NAP development came to a pause due to funding delays from UNCCD Secretariat and the Global Mechanism (GM)</p>	<ul style="list-style-type: none"> <li>- Initial discussions were initiated through NTT meetings to deliberate on the content of the NAP</li> <li>- UNCCD Unit developed an Action Plan matrix for the NAP.</li> <li>- A National Stakeholders Workshop was conducted to consult and further develop the Action Plan matrix which contained priority issues and actions to be reflected in the NAP.</li> <li>- The NTT conducted an initial stocktake of existing relevant literary resources containing information required for the NAP.</li> <li>- Due to circumstances beyond our control Samoa was unable to secure funds from the UNCCD Secretariat for the NAP.</li> <li>- Activities to further the development of the NAP in particular consultative processes came to a temporary halt until the funds arrived.</li> </ul>
2005-2006	<p><b>GEF-funded Sustainable Land Management Medium Sized Project</b></p> <p>Process for Development of Project Document</p> <ul style="list-style-type: none"> <li>- Receipt of PDF-A funds</li> <li>- Recruitment of Consultant</li> <li>- Stakeholder Consultations for First Draft</li> <li>- Technical Working Committee established</li> <li>- Final Draft submitted to UNCCD Unit</li> <li>- Revised by UNCCD Unit</li> <li>- Official Submission to UNDP-GEF</li> </ul>	<ul style="list-style-type: none"> <li>- The Sustainable Land Management Project is GEF's portfolio approach to addressing land degradation challenges and thus taken as the ultimate tool to implement the NAP in which proposed actions necessary to combat identified land degradation problems in Samoa. Countries party to the Convention with completed NAPs as well as those with NAPs under formulation were required as well as eligible to access \$US500,000.00 to enable the design of a medium-sized project with the goal of building national capacity to implement actions and to mainstream sustainable land management into national plans and goals with a view to complement the existing UNCCD Framework.</li> <li>- The invention of the medium-sized SLM Project and Proposal was required for submission at the time when progress with the NAP was at a stall and was therefore timely to focus all efforts in developing the SLM Project Document proposal in lieu of the NAP until the funds for the NAP is secured.</li> <li>- The UNCCD Unit was required to access the Development Fund of \$US25,000.00 as part of the \$US500, 000 through the submission of a proposal to extract funds for the preparation of the Project Document proposal.</li> <li>- Development of the Project Document Proposal commenced with the recruitment of consultant, Bonin to develop the Final Draft however the final product in terms of satisfactory completion and review of the draft was the tireless effort of the UNCCD Unit working in close collaboration with the UNDP reps.</li> <li>- The final SLM-Project Document was officially submitted to UNDP-GEF through the MoF to the CDC committee for final approval and, by letter of endorsement by the MFAT to formalize approval by Government of Samoa of the SLM proposal.</li> </ul>
	<p><b>NAP Formulation Process Continued</b></p> <ul style="list-style-type: none"> <li>- received funds at value of \$US8,000.00 from UNDP through SPREP for NAP formulation</li> <li>- NTT was resurrected to continue discussion on the approach and way forward for the NAP</li> <li>- NAP Development continued through consultancy work</li> <li>- current deadline has been extended to end of June 2006</li> </ul>	<ul style="list-style-type: none"> <li>- The activities to resume NAP Formulation process recommenced with the funding received from UNDP-PSRC through SPREP as well as provision of technical support backstopping services.</li> <li>- NSC and NTT reconvened and established the way forward for the development of NAP. The NAP Content was revamped as well as the process for the development of the NAP Draft</li> <li>- Consultant, Bonin was again contracted to produce the NAP Draft</li> <li>- The draft was consulted at a combined forum of the NSC and NTT for a feedback.</li> <li>- The Consultant was required to incorporate comments from the feedback after the consultation.</li> <li>- Final Draft submitted by Consultant to UNCCD Unit on 4 April 2006.</li> </ul>
	<p><b>Third National Report</b></p>	<ul style="list-style-type: none"> <li>- The Third National Report provides an update on progress with implementing the Convention with particular emphasis on the NAP formulation process. This report is to be submitted in the third cycle of national reporting and is currently under preparation by the UNCCD Unit for submission of the First Draft in May 2006.</li> </ul>

Year	Activity	Details
	<b>Other pending NAP Activities;</b> - National Stakeholder Workshop - Consultation of the NAP draft to local communities (2 each for both Savaii and Upolu)	<ul style="list-style-type: none"> <li>- The UNCCD TT will resume or take over as its key responsibility the process of completing the NAP after submission of the draft by the Consultant</li> <li>- A major stakeholder Workshop will be held to workshop the final draft submission by the Consultant in details. The workshop will be well-represented by all national key stakeholders at a higher level.</li> <li>- The outcome results produced of the workshop will be incorporated into the NAP draft by the UNCCD Taskteam</li> <li>- The NAP draft will be taken out to a few communities selected as samples for their input and feedback</li> <li>- The UNCCD TT will go on a retreat to incorporate the feedback in particular to institute the proper write-up of the NAP</li> <li>- The TASKTEAM to present the final NAP draft before the NSC for their final comments and approval</li> <li>- NAP will be officially submitted to UNCCD Secretariat with copies to Donor Agencies</li> <li>- The NAP to be launched at end of the year 2006 as an official document providing the overall national policy framework and core instrument for implementing the UNCCD in Samoa.</li> </ul>
Ongoing	<b>Quarterly Reports</b>	<ul style="list-style-type: none"> <li>- The quarterly reports are basic requirements by the Convention to communicate the progress of Samoa's implementation of the Convention. This includes reporting on financial expenditure of the project on how funds have been spent on a quarterly basis.</li> </ul>

### 5.0.7 Major Challenges of Implementing UNCCD

At the outset, implementing the UNCCD has been faced with numerous challenges even severely restricted in the face of limited resources and capacity at the individual, institutional and systemic levels. Implementation of UNCCD is perhaps the most recent of all Conventions which Samoa has been foremost and renowned for in the Pacific and other islands of the Caribbean in its commitment and subsequently, well-ahead in advance of its rivals in implementing the obligations of all MEAs that is Party to in particular the renowned CBD and CC.

In retrospect, Samoa signed the Convention in 1998 yet only began implementing its obligations 4 years later in late 2002. Some of the rationales behind the delay are rather mentioned as follows;

- There was consistent delay in the consideration process of Samoa's eligibility like other island nations as affected countries in the context of desertification as it applies to dryland regions of Africa and Asia. The more affected countries which are literally synonymous with the desertification process have been well in advance with implementing the UNCCD and as always are given priority consideration with the bulk of fund allocation.
- Constraints with human resources and limited capacity have delayed the initiative to set up the administrative machinery within the DLSE (now MNREM) to undertake the necessary work for the coordination of implementing the obligations of the Convention.
- Lack provisions of existing legal and policy frameworks as well as lack enforcement of the mentioned tools to address land degradation in Samoa
- The other major setback with Samoa's implementation can only be explained in financial terms in view of the persistent delay with the channeling of funds from the Global Mechanism (GM) and the UNCCD Secretariat to begin the drafting of the First National Report (FNR) to UNCCD and to formulate the NAP. While the fund for the FNR was funded by the GM and the Secretariat, the funding arrangement for the NAP on the other hand due to some instrumental difficulty was re-divert to UNDP-GEF for co-financing the NAP.
- Land degradation in the context of desertification is a newly emergent issue in Samoa therefore often construed in meaning by a variety of factors which as a process is driven mainly by human and sectoral competing interests. Hence it can only be clearly understood by assessing sectoral interests, initiatives and activities at both national and local levels.

*Profound challenges in the Implementation Process are found in the;*

- Lack of baseline data and accurate information on which to draw coherent decision-makings and to base planning and management. The extent of land degradation problems in Samoa is yet to be ascertained in any specific study and this remains to be a challenge to address as evidence of land degradation can only be made at this stage empirically.
- Formulation of the NAP is perhaps the most challenging task the Taskteam has been confronted with and it is a process which had been fused with constraints while attempting to move forward its development. The most prominent of the constraints was the consistent delay in the procurement of funds to speed up the process in addition to difficulty of obtaining relevant data and information from relevant sectors and collaboration from key stakeholders.
- Consequently, the NAP could not be completed on time whilst already nagged from behind is the looming deadline for the development and submission of other complementary requirements in particular the SLM proposal. Other reporting requirements as well such as the Third National Reporting and the NCSA Stocktake and Thematic Assessment Reports on UNCCD capacity needs had been simultaneously high on the demanding list for submission. All together these technical requirements would help meet various obligations to the Convention. These constraints and the build-up in the parallel process of submitting these requirements alongside each other have constrained the process of edging forward the NAP. The major challenge now is to produce all such requirements simultaneously in a parallel process using an integrated approach in caging the information through collection of basic data and information and consultation processes targeting key stakeholders through seminars, workshops and other necessary forums but more pressing are the write-ups to be completed on time as all are required for submission by the end of June 2006.
- A more challenging task yet most rewarding so far that the UNCCD Unit had recently faced with was the re-write up and completion of the MSP-SLM Project Document after final submission from the Consultant. Not only it had helped build the capacity and expanded on the knowledge and skills of the UNCCD coordinating team but it had been an experience of tireless effort of revamp, research, synthesis and analysis of information and this could not have been attained without substantive expert advice and collaboration from UNDP staff of the Environment Division. As mentioned, the SLM is the implementing mechanism as well as the finance tool for implementing the proposed actions of the NAP, and was supposed to materialize after the NAP is in place, however the process now has been reversed with the SLM existing first and the NAP still under current formulation due to the late receipt of funds. It is also worth mentioning that the primary objective of the SLM project is the completion of the NAP as it is appropriate and therefore necessary to formulate it with the inclusion of activities and focus of the SLM already existed.
- The success factor in implementing the Convention and remains still the most significant task and priority for the Implementing Agency and NSC is Mainstreaming Land Degradation issues and/or Sustainable Land Management issues into national policies and plans targeting especially explicit mention by and integration into the next SDS of the ruling government.

## 6.0 THE NATIONAL CAPACITY SELF ASSESSMENT PROJECT (NCSA) AND REQUIREMENTS

The objective of the National Capacity Needs Self Assessment Project (NCSA) for Samoa is to carry out an assessment of Samoa's capacity to address global and local environmental issues, and to develop a plan for implementation of key activities to address capacity building needs identified, particularly in relation to the United Nations Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD). For UNCCD, the focus will primarily be on the assessment of Samoa's capacity to implement the objectives and obligations of the **Convention**, by which identification of capacity gaps is made simple and uncomplicated a process under each identified land degradation thematic area as noted in the introductory chapter.

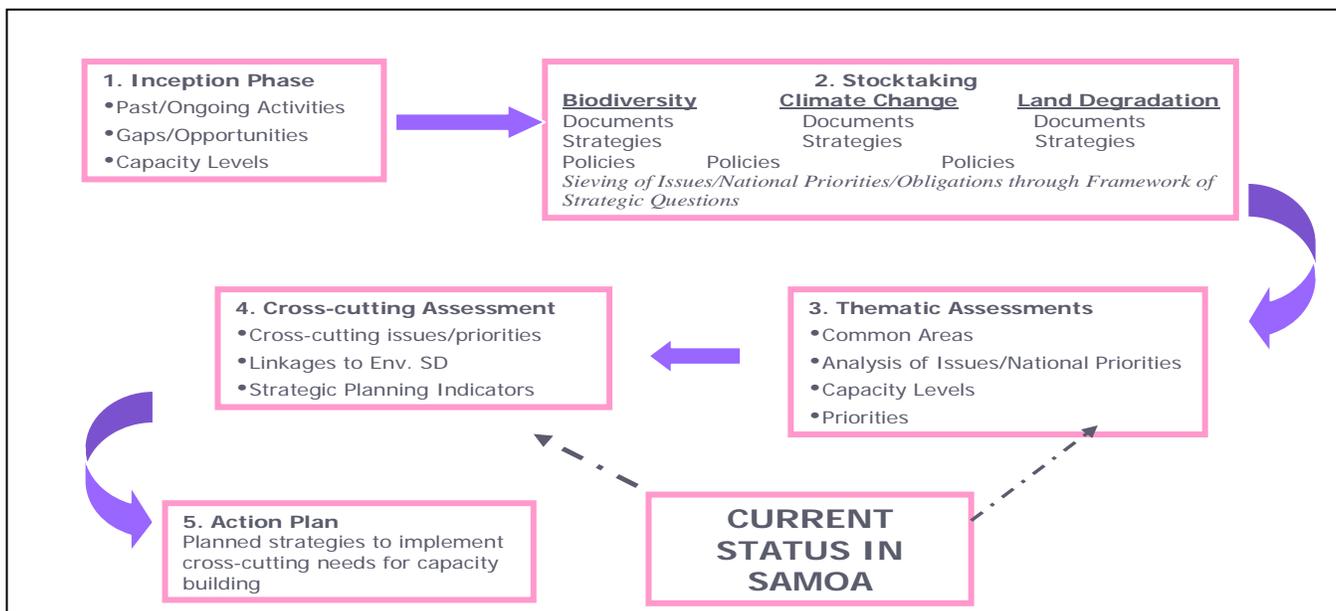
The self-assessment involves:

- a determination of Samoa's obligations under the Convention;
- raising public awareness about these obligations;
- assessing existing stakeholder capacity to meet obligations;
- identifying strengths and weaknesses of stakeholders;
- development of a plan of action to meet capacity building needs of stakeholders; and
- support for a high level coordinating body to have oversight for the implementation of the NCSA Work Plan.

### 6.0.1 NCSA Process

Figure 2 below shows the process Samoa has adopted to conduct the NCSA and the expected outputs for each phase of the Project.

*Figure 2: Steps of the NCSA Process*



#### i) *Inception Phase*

The Inception Phase produces the initial preparatory stages of the NCSA project which includes the setting up of the Institutional Arrangement structure to provide an enabling environment for the strengthening of implementation of the NCSA obligations and objectives. Other setups were institutionalized simultaneously to provide executive support in terms of overall policy guidance and advice to operations of the Project such as the NCSA-PMU and the NCSA-NSC. A national coordinator of the NCSA was simultaneously appointed. An inception workshop was conducted to commence officially the activities of the project to introduce the goals and objectives of NCSA prior to further involvement of NCSA on to various other stages through the NCSA process.

ii) ***Stocktaking Phase***

The main objective of the Stocktaking Phase is to collate and compile all existing information relating to past and ongoing capacity development implemented to address land degradation in Samoa. This process provides a basis to review and analyze activities Samoa's progress and current capacity to meet Convention Obligations and associated national initiatives to combat land degradation. Stocktaking of all relevant information was carried out by the UNCCD Unit and Task Team through literature reviews of existing information, consultation processes, and workshops with relevant stakeholders. The final output of this Phase was a Final Draft of the Stocktaking Report and its findings are highlighted in Section 8 of this Report.

iii) ***Thematic Assessment Phase***

The objectives of the TA Report are to:

- a) provide a detailed and comprehensive overview of the progress made by Samoa in implementing UNCCD;
- b) highlight Samoa's key capacity gaps to meet UNCCD Obligations and achieve national objectives to combat land degradation;
- c) analyze capacity gaps and identify their root causes; and to
- d) Identify actions to address capacity gaps at individual, institutional and systemic levels.

## 7.0 METHODOLOGY AND PROCESS ADOPTED FOR THEMATIC ASSESSMENT REPORT

The Thematic Assessment Report is developed using the four step process in Table 10, each with a corresponding objective outlined in *Section 6.0.4*. However there were variations in the methodology adopted by the UNCCD Taskteam from the ones adopted by the CBD and CC.

*Table 10: Thematic Assessment Steps*

	Activity Details	Output	Methodology
STEP 1	An analysis of all information collected for stocktaking report to provide an indication of Samoa's current capacity to meet UNCCD Obligations and national objectives to combat land degradation under each Thematic Area.	Inventory of on-going activities	<ul style="list-style-type: none"> <li>▪ Literature Reviews</li> <li>▪ 1 Major Stocktaking Workshop</li> </ul>
STEP 2	Identification of capacity gaps under each thematic area based on situational analysis completed above.	Identification of Capacity Gaps	<ul style="list-style-type: none"> <li>▪ 1 Major Thematic Assessment Workshop</li> </ul>
STEP 3	Problem Analysis which involved the identification of root causes of capacity gaps within each Thematic Area	Analysis of Root Causes of Capacity Gaps	<ul style="list-style-type: none"> <li>▪ Task Team Consultations</li> <li>▪ 1 Task Team Mini-Workshop</li> </ul>
STEP 4	Objective Analysis to devise actions to address identified root causes and subsequently capacity gaps under the 12 Thematic Areas. These actions were assessed at the individual, institutional and systemic capacity levels.	Construction of Actions to address Capacity Gaps	<ul style="list-style-type: none"> <li>▪ Residential Retreat for Write Up of Report</li> </ul>
STEP 5	Refined and Finalized by UNCCD NTT and submitted to NCSA Project Management Unit		

The UNCCD TT in its meeting of 1 March 2006 required the UNCCD Unit to produce the first draft of the Thematic Assessment Report to initiate developing the idea and to begin the process of putting together the report by the UNCCD TT. This draft was consulted before the Taskteam for a feedback and a mini-workshop was held the next day to confirm and assess the validity of the information as well as to workshop the draft in detail, through working group sessions. The workshop participants were tasked with 4 exercises (refer Annex 1) to extract the relevant information and, the process took place in the following order;

- i) Reconfirming thematic areas followed by a stocktaking exercise to reconfirm past, current and existing activities and initiatives that had been identified in the Stocktake report
- ii) Identification of capacity gaps under each thematic areas for assessment purposes
- iii) Identification of direct and root causes of capacity gaps
- iv) Reconfirm and identify additional actions to address the causes of capacity gaps under each Thematic Area

The outcomes of the workshop in terms of views and comments were incorporated back into the draft. A residential retreat was planned by the NCSA-PMU in the weekend of the same week which was committed for the write-ups of Thematic Assessment Reports by each Convention's Taskteam. The retreat had served very useful and productive in producing active teamwork participation and fruitful discussions. Substantive information had been generated and noted by which made easier the task of the write-up of the UNCCD Thematic Assessment Report. The TA reports are planned for presentation before the NCSA National Steering Committee in a week's time from now and in a NCSA regional workshop to be hosted by SPREP from 1 – 4 May 2006.

## 8.0 IMPLEMENTATION EXPERIENCES – CAPACITY BUILT AND SUSTAINABILITY CHALLENGES

This and the following chapters provides descriptive analysis and synthesis of implementation experiences and elaborate on the outputs that were generated and extracted from intensive discussion and deliberations of the UNCCD Task Team not only during a series of meetings and workshops held but from few consultations of the TA Draft.

Each thematic area is identified according to relevance in achieving the corresponding obligation. Table 11 identified and elaborates on the 12 key thematic areas which are drawn from consensus views of technical members with relevant expertise in own field of work and experience. The consensus views were exercised during prolonged group discussions and deliberations held at different consultative forums. Technical members each represent various implementing sectors with direct responsibilities and actions which affect the sustainable management of land and land-based resources. The up-front aim for this arrangement was to enable formulation of thematic areas in the spirit of collaboration from key sectoral stakeholders. That is, formulating the thematic areas with a sane view that each sectoral stakeholder shall become more pro-active in addressing and promoting the need for incorporation and streamlining land degradation issues into own sectoral plans and goals and, whilst implementing their sectoral activities.

**Table 11: Convention Obligations and Land Degradation Thematic Areas**

UNCCD CONVENTION OBLIGATIONS	LAND DEGRADATION THEMATIC AREAS	THEMATIC AREA ELABORATIONS
(a) Give due priority to combating land degradation and mitigating the effects of drought, and allocate adequate resources in accordance with their circumstances and capabilities;	Administrative Management of Resource and Resource Allocation	Addressing priority actions to combat land degradation and to mitigate the effects of drought requires first of all the strengthening of individual and institutional capacities for the effective administration of functions within an institutional strengthening structure and all other institutional set-ups at both national and local levels to ensure effective coordination and implementation of activities as they are most appropriate to address land degradation in Samoa. This will also contribute to the efficient management and allocation of resources to coordinate activities and the subsequent address of land degradation issues.
(b) Establish strategies and priorities, within the framework of sustainable development plans and/or policies, to combat land degradation and mitigate the effects of drought;	Mainstreaming objectives of UNCCD and NAP priorities into National Plans	Mainstreaming is the ultimate goal of the Convention through the NAP design to enable high-level recognition and successful implementation of the actions taken on the grounds to reverse the degradation of lands and the subsequent conditions harmful to the fertility of soils.
(c) Address the underlying causes of land degradation and pay special attention to the socio-economic factors contributing to land degradation processes;	Land Development Management	The selection of these thematic areas is based on the most pressing issues that have been identified as most synonymous with land degradation in Samoa. Due to the encompassing nature of addressing land degradation as it affects and is affected by practically almost every type of human induced activity on land, identification of thematic areas to meet this obligation stand to range from land development which without proper sustainable measures would affect the management of forest resources, influence agricultural activity focus and the need for managing deforestation activities which impacts severely on water and soil resources and being notable consequences of multiple human-related actions. Other areas which worth taken note of are drought/flood prone areas which mainly are influenced by climate factors and together, human and natural factors combined to give effect to the spread of degraded land areas. The sustainable management of these thematic areas will contribute significantly to poverty reduction and provision of alternate livelihood options. While poverty is far from endemic in Samoa, there is a growing number of vulnerable groups facing hardship which together with a paucity of opportunities, can lead to vulnerability to poverty and this situation is given emphasis on in the current SDS which has as its theme the creation of opportunities for all.
	Forest Resource Management	
	Agricultural Management Practices	
	Management of Deforestation	
	Water Resource Management	
	Soil Resource Management	
	Management of Drought/Flood Prone Areas	
	Rehabilitation of Degraded Lands	
Poverty Reduction and Livelihoods		

UNCCD CONVENTION OBLIGATIONS	LAND DEGRADATION THEMATIC AREAS	THEMATIC AREA ELABORATIONS
(d) promote awareness and facilitate the participation of local populations, particularly women and youth, with the support of non-governmental organizations, in efforts to combat land degradation and mitigate the effects of drought;	Information Management and Sharing	There is increased realization of the need for data management and information sharing given in particular the fragmentation of access to relevant information in a timely manner and the lack of baseline information on landuse in Samoa
	Education, Training and Public Awareness	These two thematic areas are by and large cross-cutting and were therefore not specified as separate thematic areas as both are reflected under each thematic area component.
(e) provide an enabling environment by strengthening, as appropriate, relevant existing legislation and, where they do not exist, enacting new laws and establishing long-term policies and action programs.	Legal and Policy Framework	

### 8.0.1 Stocktake of the Past, Current and Ongoing Mechanisms, Programmes and Initiatives to address each Thematic Area

The following provides the stocktake of all existing capacity in Samoa through the identification of mechanisms and initiatives already implemented and achieved to address each thematic area as affect land degradation in Samoa. The activities/initiatives are identified by groupings under various capacity levels for purposes of clear determining of capacity gaps that are yet to be addressed and need building accordingly to complement the successful implementation of the Convention.

- **Individual Level** – refers to the process of changing attitudes and behaviors-imparting knowledge and developing skills while maximizing the benefits of participation, knowledge exchange and ownership.
- **Institutional Level** – focuses on the overall organizational performance and functioning capabilities, as well as the ability of an organization to adapt to change. It aims to develop the institution as a total system, including individuals, groups and the organization itself.
- **Systemic Level** – emphasizes the overall policy framework in which individuals and organizations operate and interact with the external environment, as well as the formal and informal relationships of institutions.

#### **Thematic Area 1: ADMINISTRATIVE MANAGEMENT OF RESOURCE AND RESOURCE ALLOCATION**

##### *Institutional Capacity*

###### At the national level:

- MFAT is the National Operational Focal Point for the UNCCD in its role as the mediator for external communications of MEAs between the Implementing Agency and the Head Offices of Conventions, International and Regional Organizations and Donor-funded Agencies for projects such as GEF and the Global Mechanism
- MNREM is the National Implementing Agency for the UNCCD Convention in its role as the core mechanism for addressing environmental and natural resource management concerns in Samoa
- DLM is provided with the key mandate to administer all land matters with regards to the management and control of all government-owned lands, through the Land Development (LD) Section which serves as the UNCCD National Coordinating Unit responsible primarily for coordinating the implementation of the Convention.
- The LD section is a recent establishment under the DLM of MNREM as the core mechanism to address environmental concerns associated with land development activities and its existence signals firsthand recognition of the importance to address land degradation problems in Samoa.
- UNCCD National Steering Committee is the executive advisory mechanism for the UNCCD project and is constituted by higher-level representatives of key sectoral government ministries and NGOs
- UNCCD Task Team (TT) was established as the main tool to spearhead the formulation of the National Action Plan (NAP) as well as responsible for other formulation of technical reports on an ad-hoc basis, as required under UNCCD. The Taskteam comprises

technical members of the NSC and selection of membership was based on technical expertise and knowledgeable experiences on respective field of work.

- MOF is the national mechanism through which funds for the implementation of the Convention are channeled as well as responsible to the UNCCD Executive Secretariat through MNREM for audited accounts of expenditure.
- CDC is the higher level executive committee currently chaired by MoF and comprising CEOs and Ministers of various relevant Government Ministries. As is with national protocol and procedures, every project proposals and policy instruments for the implementation of the Conventions is channeled through this committee for approval/endorsement on behalf of the GoS, prior to official submission to Head Offices of Conventions and Donors for consideration.
- The MWCSO through the Pulenu'u (village mayor) System serves as the interface and/or the first point of contact between the GoS and local communities.
- *In terms of resource allocation*, MOF is the first point of contact and entry for all financial resources for the implementation of UNCCD from donors and UNCCD Secretariat through either UNDP or SPREP in their role as executing agencies for UNCCD at the national level
- MNREM as the implementing agency for the project access the funds direct to MOF and upon disbursement through the MNREM Accounts Section, UNCCD Unit can access it for implementing the project. Funds normally are allocated for operations of the NSC & TT, Consultancy works on producing technical reports and project proposals as well as national consultations and with communities.

#### At the local level:

- The village social structure has been highlighted in the SDS 2002-2004 as the key factor for achieving and maintaining social harmony within the Samoan Society and is a valuable source of social security for providing cohesion in the community, and therefore requires strengthening.
- The social structure is organized administratively in a hierarchical manner with the Village Council comprising the 'Pulega a Alii ma Faipule' as the paramount hierarchy which clearly reflects the order of command in a village structure. Therefore it serves as the executive body for decision-makings and ensures that law and order are sustained and maintained within the community.
- The 'Aumaga' or untitled men implements the decisions made by the Village Council
- The Women's Council (faletua ma taus) plays a vital role in addressing health, education and family wide issues.
- The 'Aualuma' comprises untitled women and it exists in subordination to the Women's Council where major decisions affecting women and children are concerned.
- Women groups/committees source from both the Women's Council and Aualuma are vital components of the village structure to promote village sector development through awareness raising, capacity development and income generating activities.
- Youth groups in villages are church-bound initiatives that encourage youths to participate vigorously in church activities and to contribute to the development of communities.
- In terms of resource allocation to community, protocol prevents resource in actual money terms to filter direct to communities. Financial resources are managed from the national level to implement community-based projects, the only type of resources communities receive are technical support services through awareness raising and demonstration of piloted projects with the view that the benefits generated from implementing the project would be theirs.

#### *Individual Capacity*

- The personnel for implementing the Convention is sourced from MNREM staff with the CEO as the Overall Manager, ACEO-DLM as the Project Manager, the Principal Officer of the LD section as the Project Coordinator and the rest of the LD staff provides assistance to the management of the UNCCD project.
- There have not been specific trainings undertaken to raise awareness and build capacity of the personnel implementing the Convention however through participation by invitation to COPs and high-level meetings of the UNCCD which often typically attended by the CEO and ACEO-DLM as well as MFAT and MOF representatives have thus far, contributed largely to the awareness and built-up of capacity of the mentioned four on the Convention. Awareness and capacity building for the personnel manning the National Coordinating Unit has, for the most part, been through participation by invitation to regional and national workshops and from hands-on experience with coordinating UNCCD-NSC & TT meetings, national and small-scale workshops and, stakeholder consultations specific to the Convention and through formulating processes of technical reports, actions plans and similar reporting requirements under other Conventions.
- The UNCCD NSC & TT members through involvement in meetings, workshops, formulation processes of reporting requirements and consultations at the national level have helped raised their awareness and fueled their capacity on the Convention and on land degradation issues as well as recognizing also their substantive contributions to policy related discussions etc
- Community village mayors in their role as the interface between the government and local communities have had introductory seminars on the Convention in 2003.
- The general public mainly students, government officials, representatives of NGOs and academic institutions, as well as the private sector have gained some awareness on the Convention and land degradation issues during national day commemorations of other environmental issues and during the annual environment week and information dissemination through the media particularly newspapers.
- In terms of resource allocation, the UNCCD coordinators have had their capacity built by preparation of financial statements and from being involved in the management of the project. The staff of MNREM Accounts Section has adequate capacity based on experience and academic learning while some through informal trainings.

- The responsible officers of MOF are expert in the finance field as their recruitment is based on academic credentials
- The community locals have had trainings through hands-on experiences of implementing projects except short of managing the finance.

#### *Systemic Capacity*

- The DLSE Act 1989 currently under amendment and known as the MNRE Bill is the Principal Act of the MNREM from which stems the powers of the MNREM to address environmental protection needs and conservation of its natural resources.
- The Public Service Amendment Act 2002 which enacted institutional public sector reforms have resulted in name-changed of the Implementing Agency from DLSE to MNREM to reflect the expansion of its mandate with resultant additional functions and conducive to further highlight and strengthening of its role as the watchdog for sustainable management of environmental and natural resources.
- Institutional Policy of MNREM dictates the rearrangement of divisional and sectional components of the Ministry, the realignment of the focus and core functions to reflect additional responsibilities, increasingly had been oriented towards the sustainable development of environmental and natural resources through adoption of best practices to address proliferation of resource degradation.
- The Village Fono Act 1989 recognized traditional and village management systems for the control of village resources.
- The MOF has the key mandate to manage external resources for project implementation in-country.

### **Thematic Area 2:**

### **MAINSTREAMING OF UNCCD NAP INTO NATIONAL PLANS**

#### *Institutional Capacity*

- DEC was initially established in 1989 as an extra division of the DLSE, enacted primarily under the DLSE Act 1989 with the mandate to address and promote conservation and protection of the environment and in the context of land degradation as an environment issue, DEC plays a major complementary role in highlighting land degradation concerns sectorally, at the community level and in the political sphere for enhanced recognition.
- DLM is the initial attempt by GoS to recognize the need for a separate body to administer all land matters in the country however the transitional period during which DLSE was renamed MNRE saw the expansion of its core functions to encompass environmental significance to land and land-based resources for sustainable management to ensure sustainability of land productivity and resources.
- The PUMA Division was enacted under the PUMA Act 2004 as the mechanism for proper landuse planning for urban and rural areas which further highlights the GoS' commitment in addressing sustainable development of land resources.
- The MoF, which is the central planning unit responsible for the SDS – gives recognition of their critical role in mainstreaming UNCCD into national development plans
- The MAF has the mandate for agricultural development activities, which is one of the key issues/threats to land management

#### *Individual Capacity*

- Mainstreaming efforts often take the top-down approach and therefore stems at the higher level for consideration and/or round the table discussion at the cabinet level.
- The top management of MNREM comprising the CEO and ACEOs provides policy advices to the Cabinet on issues pertaining to the nature of work carried out within the Ministry to assist the Cabinet with sound decision makings.
- The Principal Officers with assistance from the officer level are mainly responsible for policy formulation and research
- Sub-committees source from staff members with relevant technical backgrounds, on ad-hoc basis, are often appointed to initiate formulation or review existing policies

#### *Systemic Capacity*

- The Constitution of the Independent State of Samoa 1960 clearly specified under provisions, Part X (100-104), divisions of the land tenure system which demarcates the nature of ownership to land as customary, freehold and public land. The Constitution also clearly provided for the protection of customary land from alienation in terms of sale and/or having customary land made freehold to become estates in fee simple except by way of lease and licensing. It also specifies clear demarcation of boundaries between government-owned land and customary/freehold lands *whereby subject to the provisions of any Act, all land lying below the line of high water mark shall be public land.* And public land under statutory mandate are government-owned land thus includes foreshores which by definition are rivers, lakes, swamps, creeks, mangrove areas and the sea.
- DLSE Act 1989 is the Principal Act of old for DLSE and symbolic of the GoS' initial attempt to legalize the empowerment of a responsible authority with the mandate to address environmental concerns in the country however has weak and vague provisions specific to addressing land degradation issues under the environmental component of the Act
- MNRE Bill is currently under formulation to amend the DLSE Act 1989 in order to reflect institutional changes, additional functions and strengthening of the core focus of MNREM towards enhanced sustainability of environmental and natural resources
- SES 2000-2001 saw the integration of environmental component into economic development strategy of Samoa in recognition of the importance of sustainable development of environmental resources. The same SES period saw the simultaneous enhancement of the private sector development as the main engine for economic growth and a vital component for this growth focused on

improving the availability of land for utilization particularly the prominent drive by GoS to bring customary land under some sort of collateral use via the Development Bank of Samoa.

- Preliminary Environment Assessment (PEA) and Environment Impact Assessment (EIA) existed during the SES periods as environmentally-friendly tools to assess the feasibility of development on land.
- Evolvement from SES to SDS 2002-2004 saw further commitment by the GoS to establish a landuse planning mechanism to address the environmental component of developments on land.
- SDS 2002 – 2004 culminated in the enactment of the PUMA Act 2004 under which provides the regulatory framework for the sustainable development and protection of natural resources acting in collaboration with other agencies and the community.
- Urban management and environment protection were recognized as some of the priority issues to address under the 'Improvement of Infrastructures and Services' component of the SDS 2002 – 2004.
- SDS 2005 – 2007 heavily emphasized and highlighted government momentum to bring land under utilization for development purposes and particularly their pursuit of bringing customary lands under collateral uses.
- The Code of Environmental Practices provides a policy guide to ensure procedures are strictly followed by all stakeholders with regards to sustainable development purposes.
- SOE 1993 is a national report that gives testimony to the state of the environment of Samoa for the past decades and is subject to periodic reviews.
- NEMS policies targeting 12 key environmental components and as it stemmed from Samoa's involvement in the UNCED 1990s further highlighted the commitment of the GoS to address environmental concerns under the framework of sustainable development at the national level.
- The National Landuse Policy, Sustainable Forestry Management Policy, Water Policy, Climate Change Policy, Sustainable Development and Population Policies all significantly provides complementary national policy frameworks for operating UNCCD more effectively. Though some have not approved by government but all are currently operational to guide sustainable implementation works of the responsible Ministries and NGOs
- NBSAP outlines the state of Samoa's biological resources and actions to curb their degradation and achieve sustainable development.
- CIMS Plans sets the scene for promoting sustainable land management of coastal assets and infrastructures. It identifies potential coastal hazardous zone areas as well as projected flood-prone areas and potential scales of erosion on coastal areas of Samoa.
- First National Communication to UNFCCC 1999 is the first attempt by GoS to stocktake the inventory of greenhouse gases in the country as part of fulfilling UNFCCC binding requirements.
- CBDAMPIC is the Canadian-funded project to support adaptation initiatives in Pacific Island Countries and so far has piloted two communities (Lano & Saluafata) to implement adaptation activities.
- Climate Change Synthesis Report 2004 documents the vulnerability of various sectors to climate change and variability, adaptation strategies in place and resultant recommendations. Sectors covered include Agriculture and Food Security, Water, Forest, Urban Planning and Development, Biological Diversity and etc.
- NAPA identifies the risks and vulnerability of Samoa and to design actions with project profiles to enable communities to adapt to adverse impacts of climate change in order to address the most urgent and immediate adaptation needs.
- NAP is in its final stages of completion and will be operational within 6 months after official submission to UNCCD Secretariat and Donor-funded agencies for consideration by the end of June 2006. The NAP would be the core instrument to implement UNCCD in Samoa and would be a living document subject to periodic reviews.
- Educational curricula at all levels (primary, secondary & tertiary) have incorporated environmental components into its teaching schemes.
- NCSA project aims at addressing capacity development needs of the Convention and is envisaged as the mechanism to promote awareness and build capacity of the key stakeholders involved at the national and local levels for this Convention.
- GEF-funded SLM Medium Sized Project has identified various actions for the implementation of mainstreaming SLM into MDG processes, SDS, NEMS, NAPA, NBSAP, NIP, and Corporate Plans for relevant Ministries as well as other applicable national plans.
- National Implementation Plan (NIP) deals with the management of already degraded land sites due to various kinds of pollutants such as organic and toxic pollutants.

### Thematic Area 3:

### LAND DEVELOPMENT MANAGEMENT

#### *Institutional Capacity*

- MNREM through its DLM in its role as the trustee of all land tenure in Samoa has the key mandate to administer, manage and control the allocation of government-owned land and uses of all land-based resources.
- MWTI through PUMA Division are mandated to prepare plans and policies for land use planning and development and regulate any developments in the urban and rural areas of Samoa.
- Lands and Titles Court is the legal mechanism for resolving disputes on titled issues with customary land ownership in Samoa.
- SLC is a government land agency responsible for the selling of government lands to the public.
- STEC is solely responsible for the management of lands under their administration to ensure proper utilization for development purposes.

- The Land Board enacted by the LSE Act 1989 serves as the executive decision making body for the administration, management, development, alienation, settlement, protection and care of government land and to undertake control, and carry out all negotiations for the purchase of land by the government, and the performance and completion of all contracts of purchase so entered into by the government.
- The Planning and Urban Management Board is responsible for the approval of developments in rural and urban areas valued at above 1 million Tala or any development with perceived significant impacts on the environment.
- The Land Commission Unit under DLM of MNREM serves as the secretariat for all land matters under dispute, particularly customary land ownership issues associated with indefeasible title to land, in close collaboration with MJCA.
- The Land Leasing Committee, a newly established initiative by the GoS, as was highlighted in both SDS was set up to facilitate the leasing of traditional land for tourism development investment.
- The private sector as the engine of growth for Samoa being the key stakeholder with interests pertaining to developing land and extraction of land-based resources for commercial purposes
- The village councils with the key role of authorizing community developments on land and project initiatives affecting communal lands and some individual family lands. The role of village councils is paramount to instituting effective control on the use of land resources and by ensuring maintenance of social harmony in the community.
- The church (Catholic, EFKS, Methodist, Mormons) also is the landowner of up to thousands acres of freehold land in the country and their role is important by ensuring that their lands are protected from encroachment and unsustainable practices

### *Individual Capacity*

- The staff of DLM manning various responsible sections (Land Administration, Land Development, Land Registry and Land Valuation) whilst some having gained relevant tertiary education at the graduate level, most of the staff have had knowledgeable experiences on the job based on long service and informal trainings.
- The PUMA staff has all been recruited based on tertiary credentials and relevant qualifications.
- Lands and Titles staff through long term services and through both formal and informal trainings has had some knowledgeable experiences where land matters under title disputes are concerned.
- SLC operates a Staff Development Scheme to build capacity of its employees through scholarships at local education institutions as well as in-country trainings implemented by PSC.
- The Land Board chaired by MNREM Minister comprises high level representation of relevant Government Ministries at the ACEO and CEO levels as well as representative of local village community members the recruitment of which are sourced from village councils based on profound experience, prudence and foresight to land particularly land under customary ownership.
- The Planning and Urban Management Board comprises community members, NGOs, representatives of private sector, and high-level government officials at the CEO level from MWTI, MNREM, MWCSO, MOF, and Police and Prisons.
- Land Leasing Committee comprising only STA, Samoa Tourism Industry Association, MCIL, MWCSO, Ministry of Justice and Courts Administration membership.
- The private sector stakeholders are well-aware of adverse effects of developing land without sustainable measures by requirements for EIA submission to accompany their development proposals but they see the role of MNREM as impeding plans of their development intentions
- Village councils often are well consulted through awareness programmes on adverse effects of land development without sustainable measures however they would only take heed short-term if incentives are provided especially money terms.

### *Systemic Capacity*

- Constitution of the Independent State of Samoa under which derives the powers of the Land Board to ensure that customary lands are not made freehold except through leasing and licensing mechanisms
- LSE Act 1989 established the Land Board which clearly stated its mandatory role and core functions.
- PUMA Act 2004 under which empowered the PUMA Division recognizes the need for proper landuse planning to ensure sustainable landuse management of all development taking place on land.
- Lands and Titles Act 1981
- Land for Foreign Purposes Act 1992/3 empowered the Minister of Lands (currently MNREM) to grant to any foreign State or organization a lease or license to occupy such freehold or public land as he may deem appropriate in their circumstances.
- Taking of Land Act 1964 provides the government with the mandate to compulsorily take land regardless of the tenureship for public purposes.
- Alienation of Customary Land Act 1965 ensures primarily protection of customary land from alienation as freehold land except through lease and licensing.
- Alienation of Freehold Land Act 1972 ensures primarily protection of freehold land from sale to foreigners
- Land Registration Act 1992/3 empowers the registration of public and freehold lands in Samoa through the Deeds System of Land Registration.
- Torrens System Bill 2006 under current formulation would be a legal mechanism to formalize the pending existence of the Torrens System of land registration from the Deed system.
- EIA Bill and Regulations would empower the formal use of environmental impacts assessment as a tool to ensure sustainable practices and implementation of development on land.
- Policy on leasing government lands to government ministries and corporations 2000
- Policy on leasing customary lands to government ministries and corporations 2000

- Policy on managing applications for lease of government lands by village communities 2000
- Reclamation Policy is a procedural mechanism for the administration and management of reclamation proposals and formalizing procedures of leasing arrangement between the GoS (lessor) and the proponent (lessee) of proposed reclaimed lands.
- Sandmining Policy is a procedural mechanism for the administration and management of sandmining proposals to ensure sustainable viability of sandmining operations.
- National Land Use Policy 2001 provides the framework for the development of appropriate land practices and is a mechanism for the sustainable utilization of land resources.
- The need for EIA/SIAs for all proposed investments will be enforced to alleviate the adverse impact on the environment. The Planning and Urban Management Agency (PUMA) within MNREM will be charged with the responsibility of monitoring compliance with EIA/SIA requirements.
- SDS 2005 – 2007 has implemented the set up of a LLC to be responsible for conducting negotiations with landowners to ensure a fair return to the landowners while at the same time negotiating for the needs of the investor. Also highlights further enhancement of the private sector as the engine of growth
- Report of the Commonwealth Pacific Regional Workshop on Land and Development 2003 which was implemented to facilitate the sharing of country experiences and lessons learned in relation to land policy, reform and laws, and formulation of national land policies.
- The Land Acquisition and Resettlement Framework is currently being developed as part of Phase 2 of the IAMP funded by the World Bank and implemented through MNREM. The Framework will accommodate existing land ownership and use patterns and practices (including traditional and customary values and GoS policies, legislation and procedures on land acquisition and resettlement.

#### **Thematic Area 4:**

#### **FOREST RESOURCE MANAGEMENT**

##### *Institutional Capacity*

- MNREM through the DLM is mandated with authorization of logging activities through the leasing and licensing mechanisms.
- Forestry Division as it were formerly under the Ministry of Agriculture was mandated to sustainably manage the country's forest resources and ensure the sustained flow of benefits to Samoa's economy and people depending on those resources. It was therefore responsible for the development (logging of licensed indigenous forests) and conservation of forest resources (establishment of exotic forest plantations) as well as monitoring of logging and forest activities
- The resultant shift of the Forestry Division from MAFFM to MNREM due to institutional public sector reforms saw the consequent shift in its focus from commercially-oriented significance of forests to a more holistic balanced view and arrangement in alignment with MNREM's vision and activity-oriented mission of sustainable development of resources in order to sustain the future of forest resources for the coming generations while simultaneously attaining better quality of life for all.
- NGOs provides mainly technical assistance and serve as advisory mechanisms to community based forestry management
- Community-based forest management often manned by members of the Village Council is responsible primarily for issuing directives to its subordinates in the village for implementing forest projects.
- The *aumaga* provides sources of collective robust efforts to implement on-the-ground rehabilitation works through reforestation and reforestation programmes to improve degraded forest areas to the benefits of the community.
- DEC of MNREM also has a role on forest resource from a natural resource conservation perspective i.e CCAs, National Parks and Reserves etc

##### *Individual Capacity*

- The Forestry personnel have had both formal and informal trainings to build and upgrade technical and institutional capacity as well as through active involvement in the implementation of a number of forest management programmes and demonstration pilots on both government-owned lands and communal forests.
- The management staff of the Forestry Division is currently manned by officers with tertiary and academic backgrounds to forestry and/or related fields while some gained wealth of experiences based on longevity at the job and seniority.
- The officer level personnel similarly have had tertiary level education whilst some attained only secondary level education however based on long-term services at the job.
- The rest currently manning the most obscure yet most significant arm of the Forestry Division as the main machine of forestry ground work being the very hands and foot for the Division are wage workers as casuals.
- NGOs staff as in the Faasao Savaii and OLSSI are mainly involved as sources of technical support and advice to communities for the sustainable management of their forest resources at piloted sites such as Uafato and Falealupo.
- The staff of DEC also have sufficient capacity on resource management of forests through specific trainings and having attained tertiary environmental education

##### *Systemic Capacity*

- DLSE Act 1989 is mandated with authorization of logging activities through the leasing and licensing mechanisms
- Forests Act 1967 provides Forestry Division with the mandate for the development (establishment of exotic forest plantations) and conservation of forest resources (logging licenses of indigenous forests) of logging and forest activities

- SDS highlights sustainable forestry development as a national priority specific to promoting commercial investment and it includes the development of a community forestry program as an income generation alternative and would also be consistent with environment considerations, with the logging of native forests to be closely regulated.
- Code of Logging Practices is a policy tool to guide appropriate methods of logging with less impacts on forest resources.
- Watershed Management Regulations provides for the protection and management of the five (5) watercatchment areas in Samoa.
- National Forest Conservation Policy provides the framework for the protection, conservation, sustainable use and management of Samoa's forest resource and ensure the sustainable management of deforestation and utilization of forest resources.
- SamFRIS by FAO project produced an inventory of forest cover and monitoring of variations in forest cover using GIS software.
- Four sources of comprehensive forest resources information in Samoa (Terrestrial Mapping 1991, Ecological Survey 1991, Ecological Survey 1997 and SAMFRIS 2004).
- PIB is the AusAid-funded project tasked with redefining community forestry to enable and empower communities to be responsible forest managers in order to accommodate the shift in focus from commercial to environmental sustainability.
- MSP Project/Native Forest Conservation (upland and lowland) for Savaii by AusAid provides complementary role to PIB.
- Togitogiga and Fuluasou are the first two declared National Parks and Reserves but there are more forested areas being proposed to be declared as National Parks (managed by MNREM) beside many other small areas now under reserves. These areas are banned for logging.
- GTZ/SPC (Pacific Indigenous Forest Management Programme) is for sustainable utilization of indigenous forests.
- Exotic forest plantations established in communal lands (Saanaapu, Lefaga, Tiavea, Vaiaata Gataivai, Puapua, Falelima, Asau and Aopo).
- The conservation of mangrove forests in certain areas of Samoa are being managed by various agencies including DEC through its Marine Protected Areas Programmes, the Fisheries Division, Meteorology Division and NGOs.
- Reafforestation Programs have been implemented by the Forestry Division and are on going which includes community forests.
- CIM Plans addresses the significance of mangrove forests for conservation and protection from potential threats such as firewood sources, clearance and reclamation purposes. It also offers recommendations on sustainable forest management however implementation of these Plans remains a major challenge.
- Community forest programmes such as the Preservation of the Falealupo Low-lying Ecosystem funded by Seacology Foundation and the conservation of Tafua Peninsula Coastal Ecosystem funded by the Swedish Foundation for Nature Conservation were established purposefully to address the need for conservation of forested areas in order to protect their rainforest resources
- CDI Report records the rate of forest depletion in both Savaii and Upolu between 1977 to 1992 to be 47% (merchantable forests) and 27% (non-merchantable forest) and the rest of non-mechantable forest in Upolu near complete depletion.
- NBSAP also re-examines the development of biological resources including forest ecosystems and action changes that are necessary to reverse environmental degradation and the need to achieve their sustainable development.
- The Beekeepers' Association of Samoa Inc., (BASi) and WIBDI advocate conservation of native forests in that communities may harvest their forests through bee-hives or Apiaries established on very small areas of forest land and or on the edges of non-productive land areas.

## **Thematic Area 5: Agricultural Management Practices**

### *Institutional Capacity*

- MNREM in its role as the watchdog for environment protection serves as a complementary mechanism responsible primarily for the promotion of sustainable practices and development of agriculture to ensure the use of sustainable practices and methods in the conduct and management of agricultural activities.
- MOA is the main provider of expert assistance to improve the performance and output of the primary production sector (Crops and Livestock) without compromising the protection and conservation of Samoa's natural resources.
- Crops Division conducts research, provides technical advice and demonstrations, and makes available improved planting material to achieve increased quantity and quantity in agricultural and horticultural production for both domestic and export markets.
- Animal Production and Health Division promotes greater self-sufficiency in livestock production through research, provision of technical advice, and control of economically important animal diseases to improve subsistence and commercial production.
- PUMA Division of MWTI is provided with the mandate to dictate proposed development on land and inclusive of agricultural activities which requires submission of certain requirements such as sustainable management plans as a pre-condition for consideration prior to issuing development consent for initiation purposes of agricultural activities and/or development on land.
- MWCSO assist in providing and fostering strong cooperative linkages between the MOA and relevant organizations in village communities.
- Communities are key players in implementing community-based agricultural activities often by initiatives of the MOA and NGOs
- Samoa Organic Farming Association (SOFA) works in close partnership with MOA on marketing efforts and down-stream processing of organic products to effectively promote agriculture.
- NUS and in particular USP are the main research institutions in Samoa which conduct exclusive study and research into the various arts of agriculture to determine potential crop yields production in relation to soil
- Agriculture Store Corporation is responsible for the sale of agricultural chemicals and hardware equipment and materials for agricultural use.

### *Individual Capacity*

- The staff of MOA from management to officer level are recruited on the basis of relevant tertiary achievements whilst some have earned significant capacity through relevant informal trainings specific to agriculture and hands-on experiences through demonstration pilot projects
- The completion of the MOA-ISP has significantly raised the capability and capacity of MOA to clearly articulate its corporate objectives and appropriate strategies to achieve those objectives. This has helped streamline the capacity required to support agricultural development.
- Other relevant Ministries with complementary roles such as MNREM and PUMA have gained significant awareness and knowledge on effects of unsustainable agricultural practices through learning and participation in related workshops, relevant informal trainings and awareness programs.
- NGOs such as WIBDI and SOFA, in close partnership with MOA and other donors under contractual arrangements have gained significant capacity through demonstrations of organic farm piloted sites and through informal trainings and workshops.
- Community awareness have largely been through demonstration pilots and seminars at the local level and awareness programs.
- Farmers through the Future Farmers Project by FAO have helped raised awareness and relevant capacity of farmers through participation in the implementation of the mentioned FAO-funded project.
- Capacity Building in Agribusiness, Marketing of Agricultural Project is implemented to improve rural household livelihoods and overall national food security through enhanced farming marketing and agribusiness activities of young farmer groups in Samoa.

### *Systemic Capacity*

- The mandated roles and responsibilities of MOA are defined in The Agriculture, Forests and Fisheries Ordinance 1959; Plants Act 1984; Animal Ordinance 1960; Fisheries Act 1988; as well as Various Acts for the control of specific noxious weeds, pests and diseases.
- SDS 2005-2007 clearly highlighted Agriculture Development as a key priority for implementation under the period with the core focus of Accelerated Agriculture Growth' first to promote food security through enhanced agricultural activities, and secondly promoting commercial agricultural investment through large scale commercial farming and diversification of crop production into new high value crop with a key aspect of diversification accorded high priority to promoting organic farming.
- SDS 2005-2007 also specified Livestock Development as a key national priority for promoting as an import substitution strategy to be intensified. The importation of tropical sheep is expected to enhance meat production for local consumption.
- SDS 2005-2007 specified as its national priority the Strengthening of the MOA in areas of market access and research and MOA management through enhanced research and extension services.
- SBEC provides farmers with lending opportunities through its credit services system to enable small scale agriculture for income generation purposes.
- EU-funded regional program under implementation through the Secretariat of the Pacific Community (SPC) called the Development of Sustainable Agriculture in the Pacific (DSAP) and the MoA through the Crops Division is participating in the implementation of this programme known also as the Future Farmers project focusing on promoting organic farming.
- Nonu Production is a newly emerged industry which is currently popular with village communities as having a significant income earning capacity.
- CIMS Plans which looks at infrastructural development of the coast takes into consideration marginal steep coastal areas that are typically farmed by individual landowners yet projected under the CIMS Plan as having greater potential for flooding downstream.
- Taro Revitalization Project implemented to provide long term strategy for food security within the country through taro breeding and evaluation programme.
- Various organic trials on spices and vegetables to improve the overall organic farming system.
- CDI Report highlights agriculture as the key cause of land degradation due to intensifying deforestation even on marginal areas

## **Thematic Area 6:**

## **MANAGEMENT OF DEFORESTATION**

### *Institutional Capacity*

- MNREM under mandate to issuing logging licences and leasing of government-owned and customary lands has undertaken the leading role in addressing deforestation as an environment threat to the increasing loss of native forests.
- Division of Forestry of MNREM as the implementing and monitoring mechanism of logging activities is solely responsible for the management of some key forested areas under degradation through national and community rehabilitation programs of degraded forest areas.
- MoA through its Crop and Livestock Divisions is nation-wide responsible for the management and implementation of agricultural activities on land which relatively associated with the deforestation issue as the main tool for agricultural expansion into forested areas.
- PUMA Division of MWTI is provided with the potential mandate to bring deforestation which often used as a tool of forest clearance for logging and agricultural activities under some form of sustainable control. Communities and individual landowners are responsible for granting consent to lease land under customary ownership to proponents for development purposes.

### *Individual Capacity*

- There has been awareness raising and trainings for the staff of each responsible Ministries specific to own field and area of responsibilities to effect appropriate management of land-based activities.
- Community awareness on adverse effects of deforestation has mainly been through media support and publicity of environmental issues and programs and seminars with the Forestry division

#### *Systemic Capacity*

- All national parks and reserves are banned from logging activities.
- Capacity Development Initiative Report on Land Degradation, a GEF-funded report, almost single-handedly specified deforestation as the main drive behind the spread of degraded land areas due to agricultural expansion and clearance of watershed catchment areas.
- Surveys carried out in the early to mid-1990s make evident the extent of forest clearance for agriculture and other activities in watershed areas.
- National Policy for Combating Deforestation provides the framework for sustainable management of Samoa's forest resources with emphasis on severe impacts of deforestation on the environment.
- Eco-tourism of mangrove forests were implemented under the SPCBP and a complementary component under IUCN Marine Protected Areas as a local income-generating activity
- Reafforestation and replanting programmes have been ongoing initiatives by the Forestry Division and in close partnership with local communities

### **Thematic Area 7:**

### **WATER RESOURCE MANAGEMENT**

#### *Institutional Capacity*

- Forestry Division of MNREM is responsible for protection and conservation of water resources and management of watershed areas.
- Samoa Water Authority is the national service provider of water supply and more recently for sanitation and wastewater treatment. SWA provides services to about 80% of the population and further 15% of water supplies are provided by independent Village Water Committees and the remaining 5% rely on rainwater harvesting and local springs. They also monitor their own water supply systems.
- The newly established Water Support Sector Programme (WaSSP) funded by the EU is a three (3) year contract programme with the focus on improving public health through the development, management and conservation of its resources and disposal of waste water in the framework of sustainable development of Samoa's economic and social environment.
- MOH plays a role in the assessment, testing and monitoring of water quality.
- Meteorology Division of MNREM deals with hydrology and hydro-geological investigation and is also responsible for collecting and making data available on water resources.
- International Waters Project addresses freshwater management.
- MWTI is responsible for the management of storm water drainage services particularly in the urban areas.
- EPC develops water for hydro electricity generation.
- Independent Village Water Schemes targeted water sources found predominantly on individual customary lands or land under communal ownership. The management of these water sources are primarily the responsibility of communities.
- Water supply quality and distribution has been improved through construction of new infrastructure under the Rural Water Supply project, which was completed in 2003; chlorination of water supplies; and installation of water meters (7,225 by April 2004). The 5-year ISP in the Samoa Water Authority was completed in January 2004, and has produced a new legislative framework and an improved policy, planning and management capacity. Further EU assistance is being provided to formulate an integrated water resource management plan for the whole country. Policies and regulations for protection of water catchment areas have been formulated and jurisdiction for this task transferred to MNRE.

#### *Individual Capacity*

- FAO initiated staff and community training in 1991 to address watershed management with the Forestry Division (formerly under the Ministry of Agriculture)
- MNREM continued to upgrade staff capacity when the watershed management section was transferred from MOA.
- The staff of the newly set-up Water Division under MNREM is sourced mainly from SWA and MNREM especially the current staff manning the watershed section of the Forestry Division. The recruitment of the management personnel to the officer level is based on the relevance of academic backgrounds to water issues and long-term experience.
- Implementation of community-based water programmes have helped generate community awareness, appreciation, built their know-how and to develop own sense of ownership of the resource which facilitates encouragement and be motivated to uphold the significance of their sources of water through realizing the need for proper and sustainable management of own water resources

#### *Systemic Capacity*

- Water Act 1965

- PUMA Act 2004 mandates the environmental screening and impact assessment of all water-related developments to ensure minimum adverse impacts, identification of mitigation measures and establishment of monitoring mechanisms.
- The 2002 – 2004 SDS is built on an over-riding objective to provide opportunities for all and to promote economic growth that is equitable and sustainable and improves the health, education and well-being of everyone.
- The current SDS 2005-2007 also builds on these trends with a strong emphasis on good governance, a stable macro framework, efficient and effective service delivery, and sustainable natural resource management.
- The Water Sector Plan and Framework for Action for the SWA highlights water, health and MDGs ie, access to safe water supply, basic sanitation and hygiene promotion as the three critical factors in achieving improved public health
- Rural Water Supply and Sanitation Study 2004 which provides appraisal of options for the sustainable delivery of safe water supply and basic sanitation services.
- Pacific Region Action Plan on Sustainable Water Resource Management 2002 – prepared in preparation for the 3<sup>rd</sup> World Water Forum held in Japan 2003 and politically endorsed through a Ministerial Declaration
- National Water Resource Master Plan Study 1996 a comprehensive assessment of water resource, challenges and responses
- The National Water Resources Policy overall goal is to reduce poverty and hardship in Samoa by ensuring community access to water of a suitable quality and appropriate quantities to meet all reasonable health, environmental and economic development needs. The NWRP was endorsed in 2001 and reviewed in 2004 to be consistent with policies of the international development community.
- IWP is a regionally based pilot community project to manage freshwater resources. Apolima Island and Lepa are the two trial community led catchment sites as a means to improve quality water supplies.
- Watershed Regulation 1992
- Ramsar Project is responsible for wetlands conservation which also addresses encroachment issues of watershed areas affecting the management of wetlands.

## Thematic Area 8:

## SOIL RESOURCE MANAGEMENT

### *Institutional Capacity*

- MNREM through the Geology Section of the Meteorology Division has a complementary role to soil property surveys. It has recently developed the capability to undertake sedimentary analysis, focusing mainly on the physical sedimentary properties of sediments. Analytical capability has not quite eventuated with respect to biochemical sedimentary, which would be fundamental in determining soil productivity.
- MNREM through the Mapping Section is responsible for producing landuse classification and soil maps.
- USP's School of Agriculture and Food Technology (USP-SAFT) and NUS are educational institutions that utilise soil resources for educational purposes, the former as a means of sustainable food production and the latter as a biological resource
- MoA also has interests in the soil department primarily in the use of soil as a medium for sustainable food production.

### *Individual Capacity*

- MNREM has personnel in land, environmental, geological, hydrological and forestry issues as they pertain to soil and land degradation whom needs further trainings
- MOA has advisory and research scientists also dealing with soil
- The USP-SAFT school has a highly trained academic staff to provide formal training in agricultural and soil sciences but at the same time are also additionally contracted to provide technical assistance outreach to member countries through IRETA.

### *Systemic Capacity*

- An organic farming organisation has been formed to promote organic agriculture with the aim of using the soil to sustainably produce food in terms of nutrient replenishment through organic matter thus avoiding inorganic fertilizers, water retention, soil erosion control and improvement to soil fertility and structure by enhancing the growth of beneficial soil micro-organisms.
- USP participated in the regional IBSRAM project which researched erosion on sloping lands due to continuous cropping. This project was implemented in the mid-1990s and ended due to lack of funding.

## Thematic Area 9:

## MANAGEMENT OF DROUGHT/FLOOD PRONE AREAS

### *Institutional Capacity*

- The Meteorology Division of MNREM holds the key responsibility for maintaining Samoa's national climate and rainfall network, and is also responsible for the production of climate seasonal forecasts of up to 3months through the PICPP and drought forecast are possible through determining rainfall patterns and distribution
- With respect to floods, the Meteorology Division currently issues flood advisories based on satellite imagery analysis.
- The Meteorology Division is also developing an 8 km resolution weather forecasting model in collaboration with AMSAT in Australia, which would enable more accurate predictions of floods to be made, as well as their likely impacts. (The disadvantage

however lies in the resolution of the satellite images used; that is, 200 km resolution. This makes it difficult to determine exact locations of where rain may fall, and consequent flood prone areas.)

- Hydrology section of Met Division through the Water Sector Support Program looks at expansion of the hydrographic network and collection of daily data to improve flood forecasting
- Disaster Management Section of Met Division is responsible for emergency plans for adaptation purposes in the event of prolonged drought periods.
- Forestry Division of MNREM holds the key responsibility for the management of water- catchment areas and has own equipment (rain gauges) to measure flooding, temperature, sedimentation and turbidity levels in watershed areas
- Water Resources Division of MNREM will have a key complementary role in addressing impacts of prolonged periods of drought on water resources in relation to quality and quantity.
- SWA role lies in working closely with the Water Resources Division of MNREM in ensuring consistent supply of water to households during drought periods.

#### *Individual Capacity*

- The staff of every responsible division of MNREM and other Ministries has had trainings and relevant educations on areas specific to their own field of expertise and work, and learning through implementation of various related projects.
- Training has been on the development of local seasonal climate outlooks based on statistical methods incorporating local historic climate data.

#### *Systemic Capacity*

- One of the activities under the FAO project currently being implemented includes the expansion and upgrade of the real-time hydrographic network. This will enable the collection of real-time hydrological data down at the Meteorology Division headquarters; a fundamental component in flood monitoring and predictions.
- EDF8 project is currently developing a flood model of the Vaisigano catchment area, which would also enable more accurate predictions of flooding in the Apia area.
- The Pacific Islands Climate Prediction Project (PICPP) has enabled the Meteorology Division to produce seasonal climate forecasts up to 3 months lead time.
- The analytical software is called SCOPIC (Seasonal Climate Outlook for Pacific Island Countries). These seasonal forecasts use sea surface temperature (predictor) to predict the estimated amount of rainfall for the succeeding three months. It is through these rainfall predictions that enable a probabilistic drought forecast to be made. That is, if the prediction indicates that there would be a strong chance of receiving less than average rainfall for the succeeding three months, the prediction may be interpreted as indicating rainfall deficiency months; that is, a drought.
- Partnerships through bilaterally funded regional projects with regional meteorological institutions have resulted in some transfer of basic technology related to seasonal forecasting.
- EU EDF8/9 deals with flood modeling of the Vaisigano River as the basis for a model to be applied to all areas
- Watershed management with Letogo as case study for flooding
- Drought-prone species are promoted by the Forestry Division on drought prone species
- Sedimentary analysis (Shaun)
- Land Use Maps/ Soil Maps
- Current Capacity and facilities of Fire Department, Disaster Management and Forestry Division to control fires during drought periods
- EU Projects on Water Tanks in Aopo has alleviated this drought-prone area to cope with rainfall deficit throughout the dry season.
- IWP looks at protection of water catchment areas
- Accuracy with climate predictions rely heavily on the reliability of data (both historical and current) to determine past trends to date

### **Thematic Area 10:**

### **REHABILITATION OF DEGRADED LANDS**

#### *Institutional Capacity*

- DLM of MNREM through its Land Development Section has as its core regulatory function the sustainable management of land development activities and the uses of land-based resources through the permit system upon which solicited terms and conditions of proposed development on land requires mitigation and preventive measures to be provided by the proponent.
- Forestry Division of MNREM, through implementation of replanting and reforestation programs on government lands, watershed areas as well as on communal lands through community based forest programs, has undertaken the leading role in addressing degraded forest areas due to logging activities.
- DEC through implementation of a number of environmental conservation programs has contributed significantly to the prevention of biodiversity ecosystems from degradation. DEC also through its Waste Management Section is responsible for implementation of the NIP which addresses organic and toxic pollutants.

- PUMA Division of MWTI is primarily responsible for proper land use planning through review of EIAs and sustainable management plans of proposed development plays a key complementary role in ensuring the integrity of the environment in the consideration process of proposed development.

#### *Individual Capacity*

- The staff of each responsible Division are self-sufficient with experiences and knowledgeable in the application of own expertise to address and promote restoration of degraded land areas.

#### *Systemic Capacity*

- LSE Act 1989 outlines that developers have to provide mitigating/rehabilitative measures to address impacts on land.
- PUMA Act 2004 has the mandate to issue development consents which is reflective of the nature with which the environment is strictly guarded from overexploitation to prevent degradation of resources.
- Every development on land requires the conduct of EIAs to ensure potential environmental threats are addressed through provision of mitigation measures by the proponent during construction and implementation phases of proposed developments.
- The NIP for POPs has identified a list of prioritized activities to address these and other issues and one of the priority activities is rehabilitation of the identified contaminated sites. Issues of an infrastructure setup for managing chemicals has been addressed in the NIP

### **Thematic Area 11:**

### **POVERTY REDUCTION AND LIVELIHOOD**

#### *Institutional Capacity*

- MNREM through implementation of all environmental programs to address environmental concerns as they affect the integrity of the environment to sustain itself for the livelihood benefit of the current without comprising the future of the forthcoming generations.
- DLM of MNREM in particular responsible for the coordination of the UNCCD Project which specifically addresses land degradation as a prominent priority issue to be addressed plays a key role in the success of reversing land degradation situations in the country.
- MWCSO plays a mediating role between communities and government and its involvement is crucial in accessing loyalty, cooperation and collaborative efforts from local communities to adopt and conform to sustainable practices of resource use and to encourage sustainable alternatives of income generation activities in order to alleviate poverty.
- MOA's role to accelerate agriculture growth is critical in the development of rural areas and improving livelihood of all Samoans. In addition food security is a priority area through community agriculture production, and in line with MDGs.
- SDS aims to strengthen the social structure of Samoan which has historically provided a safety net against absolute poverty and guaranteed personal safety.
- Water Sector Support Program aims to reduce poverty and hardship through the provision of access to safe drinking water for all Samoans.
- Samoa Water Authority aims to ensure supply of safe quality water for all to alleviate poverty.

#### *Individual Capacity*

- MWCSO staff plays a leading role in addressing social issues associated with poverty and in promoting viable options to counter-attack prevailing problems of poverty through adoption of livelihood alternatives at local institutional structures.
- The staff of MNREM on the other hand is addressing poverty issues through land improvement with particular emphasis on soil and water resources as well as tasked with addressing constraints of land tenure and other administrative land functions to allow for ample promotion of sustainable measures.
- The staff of MOA provides technical support services to communities focusing on promoting in particular viable methods to sustain income generating activities from agriculture of local communities.
- Implementers of community-based projects and individual landowners have had their capacity built from having participation in workshops and demonstration of pilot projects by the MOA and NGOs.

#### *Systemic Capacity*

- Samoa is classified as a LDC mainly because of its vulnerability to natural disasters and to external economic and trade developments over which it has no control.
- Forestry Division of MNREM provides sustainable alternatives to timber production i.e. bamboo
- Fisheries Division of MOA provides income generating alternatives to land-based cultivation and production.
- Food Insecurity and Vulnerability Information and Mapping System (FIVIMS) is a planning tool set up to improve information available on vulnerable groups and food insecure members of the population to guide implementation of programs aimed at reducing food insecurity and associated poverty.
- TALAVOU Programme aims to generate income and increase opportunities for urban and rural young people in formal and non-formal sectors by 2008.
- National Policy on Youth 2001 focuses on economic empowerment of youth.

- Ministry of Womens Affairs Act 1991 and Ministry of Women Affairs Amendment Act 1998.
- MWCS D implements community programs particularly women to build their own capacity to be self sufficient and economically viable in sustaining their livelihoods.
- UNDP Human Development Report ranked Samoa 70<sup>th</sup> out of 175 countries in both the global Human Development Index and Human Poverty Index.
- Report of the Commonwealth Pacific Regional Workshop on Land and Development, Samoa 2003 emphasized the strong link, access to and ownership of land and development, and poverty reduction whereby it recognized that as a finite resource land must be used productively for the current generation at the same time preserved and protected for future generations.
- ADB survey found that the percentage of population under the national poverty line has dropped from 35% to 20%.
- Income from remittance is an important source of revenue from many families, particularly low-income groups, in both urban and rural areas.
- Future Farmers Project promotes sustainable community-based woodlots
- Communal sharing of resources (cultural aspect)

## **Thematic Area 12:**

## **INFORMATION MANAGEMENT AND SHARING**

### *Institutional Capacity*

- MNREM has a central library of environmental publications on numerous researched topics and students access this library for environment information. However each division has own large volumes of published materials and data which are kept as either confidential matters and/or release upon charged fees especially land information such as aerial maps, policies, survey plans and land lease information to mention a few.
- MNREM website also provides a more efficient source of accessing the information in a timely without cost and in the use of the official email network of the Ministry to share and circulate required information amongst users.
- Relevant information on sectors is acquired upon payment of fees such as statistics on national circumstances of the country and so forth.

### *Individual Capacity*

- The responsible staff of MNREM has had trainings with database software which has catalogued every resource material in the library. The staff in general has been trained with the know-how on accessing information on the website and the users of MNREM's official email network

### *Systemic Capacity*

- SDS 2005 – 2007 clearly articulates the priority strategic areas that will guide Samoa's development for the 2005 – 2007 period and the implementation of which would ensure the achievement of Samoa's MDGs.
- MNREM Website is a dissemination mechanism that enables the sharing of information with all stakeholders to boost awareness and collaboration between users.
- GIS and GPS are mechanisms being used by National Mapping Section to extract geographical data and produce maps.
- 1999 Agriculture Census provides information about the agricultural sector in Samoa with 100% coverage and the Census is conducted every 10 years. However, follow-up reports are produced annually but at a 10% coverage rate of the agricultural sector.
- The Statistics Act 1971 requires the conduct of the Population and Housing Census every five years. It is a vital source of statistical information relating to social, economic and demographic characteristics of the total population.
- SamFRIS contains forest inventory
- Land Use and Soil Maps
- Meteorology/climate related data
- Watershed information
- Economic Performance Reports
- Social Development Reports
- Establishment of ICT in Government Ministries and across sectors and Assessment Reports of Development Progress
- Institutional Policy Reforms and MDGs Report and MEAs

## 9.0 THEMATIC ASSESSMENT OF CAPACITY GAPS AND THEIR ROOT CAUSES

Identification of Capacity Gaps under each Thematic Area is individually detailed in Annex 2. It is found that under each Thematic Area more than a couple capacity gaps can be traced and a summary of the capacity needs are provided for in this chapter together with their identified root causes.

### 9.0.1 Thematic Area 1: Administrative Management of Resource and Resource Allocation

#### 9.0.1.1 *Summary of Capacity Gap*

Addressing land degradation issues requires enormous effort of effective coordination and networking of relevant institutions at the national and local levels by which involves the interplay of crucial factors to eventuate success. This includes addressing capacity needs of focal points responsible for coordinating the Convention and key sectoral stakeholders through specific trainings. The level of commitment and collaboration of key sectoral actors including NGOs is essential yet a pronounced lack in the full representation of relevant stakeholders during dialogue and consultation forums is often noted. The lack of resource availability to undertake a more systemic approach in taking awareness raising and consultation to local communities on the Convention and issues affecting sustainable land management continues to be a problem. And there is the notable gap of not having a specified day for national commemoration of Land Degradation Issues like other Conventions, in view also of the fact that there is a World Day commemoration for UNCCD. Existing legislation also lacks specific provisions to address MEAs Obligations under which implementation of UNCCD Objectives would have become more effective. In terms of resource allocation, there is an obvious gap in the channeling of funds which having often perched at the national level do not filtered down to communities so to strengthen appreciation and sense of ownership of locally-owned resources and to encourage the land users and landowners to be responsible managers and, to ensure transparency and accountability flow of managing the resource is maintained from at the national to the local level.

#### 9.0.1.2 *Root Causes*

- Lack of effective dialogue between the Government and village institutions due to shortage of staff and most dialogues and awareness are restricted to project implementation;
- Lack of clear defined roles of all stakeholders involving communities and sectors;
- Low priority and visibility of strategic sustainable development goals at the national level;
- Competing sectoral interests and objectives have hindered commitment and collaboration from key stakeholders;
- Limited training, human, technical and financial resources;
- Land degradation issue is a low keyed consideration at the national level and consequently local level;
- Unclear protocols and procedural mechanism to ensure access of local institutions to resources as well as for monitoring and evaluation of resource uses by key stakeholders.

### 9.0.2 Thematic Area 2: Mainstreaming UNCCD into National Plans and Initiatives

#### 9.0.2.1 *Summary of Capacity Gap*

Land issues involving the development of land and land-based resources with commercial significance are clearly noted as having mainstreamed already into national plans and initiatives as key priority areas. Conversely, sustainable land management is kept as a low-keyed issue which has not yet accorded any significant recognition by government for streamlining into national goals and objectives as well as educational curricula.

#### 9.0.2.2 *Root Causes*

- Lack of proactive awareness in promoting recognition of land degradation concerns at all levels;
- Competing government and sectoral interests and, conflicting operational principles;
- The National Action Programme (NAP) which being the high level policy strategy to combat land degradation at the national level as well as crucial mechanism to drive government recognition for mainstreaming sustainable land management issues is yet to be completed and therefore not fully realized;
- Lack high level commitment and decision making often involves political influence.

- Lack of information on the economic costs of (i) ecological value of the loss of land and (ii) rehabilitating degraded land as opposed to commercial benefits from the development of land

### 9.0.3 **Thematic Area 3: Land Development Management**

#### 9.0.3.1 *Summary of Capacity Gap*

Land Development issues as indicated explicitly as a priority area in the SDS 2005-2007 are now typically favorite topics of public debate, curiosity and discourse involving a web of complex factors. This does not imply that people are aware of sustainable land management issues but more so out of curiosity as to the dilemma involving prospects of ownership aspect to land especially customary lands if the new Torrens system of land registration materialize. Aside from talks on the switch from the Deeds System of Land Registration to the Torrens System, others range from land tenure focusing on customary land for tourism investment and development purposes to increased government attempts at intensifying agricultural growth and enhanced forest developments as main sources to generate income and livelihoods for land owners. These ambitious intentions by government have led to the existence of more than one land agency and invention of new committees without land mandates and transparent Terms of References. These committees lacks full representation of relevant stakeholders due to government either operating in secrecy or preferably not law abiding, particularly crucial as a member to these committees is MNREM with the key mandate to administer and manage land at sustainable levels. The resultant capacity gap is political in nature as well as fragmentation of national mandates and fractured coordination to manage land development issues within the framework of sustainable development as the current focus involves mainly commercial interests. In addition, there is the lack of reference to the need for proper landuse planning to guide the sustainable uses of land for development purposes and restrict the transfer of productive arable land to other uses. It implies the need to promote enforcement of appropriate and sustainable landuse standards and codes of practice such as land zoning, and land use capability and enforcement of EIA on all landuse developments to ensure standards and codes of practice are complied with.

#### 9.0.3.2 *Root Causes*

- Competing sectoral interests and macroeconomic stability focus;
- Increased government efforts to bring customary lands under collateral uses;
- Continuing enhancement of private sector development;
- Vigorous pursuit of privatization programmes;
- Limited involvement of MNREM in promoting commercial sustainable use of land due to its role as the watchdog for the environment.

### 9.0.4 **Thematic Area 4: Forest Resource Management**

#### 9.0.4.1 *Summary of Capacity Gap*

The management of forest resources has undergone dramatic changes to its focus from a commercially-oriented approach to a more balanced view of the need to sustainably manage forest resources. This is due to high recognition of limited forest resources available due to unsustainable logging and clearance for agriculture. This resultant change in focus has been re-enforced by the physical shift of the Forestry Division from MOA to MNREM in 2005. However the most consistent capacity gap lies in the ineffectiveness of the Forest legislation (Forestry Act 1967) whereby the roles and responsibilities of the Forestry Division while under MOA and the DLSE (now MNREM) in the management of forests is noted to be vague and unclear. DLSE's role as was then as the designated trustee of customary land through its Division of Land Management was carried through to the management functions of both agencies of the government. This has complicated the process of allocating and managing logging licenses. Therefore communication and collaboration between the two Divisions is extremely poor whereby there were instances of forestry licenses and leases being issued without the consent and knowledge of the Forestry Division and vice-versa. This inconsistency remains not between the two government agencies any longer but within one Ministry. Other notable gaps apart from the logging of forests are inadequate effort to empower communities to sustainably manage their own land forest resources as well as limited support to promote sustainable livelihood options from the use of forest resources.

#### 9.0.4.2 *Root Causes*

- Overlapping mandates and the current conflicting divisional responsibilities in the authorization and implementation of forest-based activities

- Limited resources in terms of human, technical and financial resources.
- Competing mandates, sectoral and divisional interests
- Limited capacity to implement sustainable income-generating activities that are forest-based

### 9.0.5 **Thematic Area 5: Agricultural Management Practices**

#### 9.0.5.1 *Summary of Capacity Gap*

Agriculture is perhaps the most commonly practiced form of livelihood activity for the majority of Samoan households and remains still the backbone of Samoa's economy. The current SDS is bent on accelerating agricultural growth promoting in particular large scale commercial farming (crops & livestock) and diversification of crop productions into new high value crops and products. Food security is also a priority area to ensure local consumption is sustained and by referencing to organic farming as a key aspect of diversification, it is at least encouraging. However, much can be gauged from the way agriculture is promoted in this SDS period with a more vigorous commercially driven focus and without much consideration of consequent impacts of such actions on the land environment. The most pronounced capacity gap is traditional practices of cultivating the land are no longer operational while technological innovations to agriculture is rapidly on the increase due to the shift from small-scaled subsistence farming to larger-scale plantation agriculture. Therefore, there is limited effort to adopt sustainable measures to farming land and this has been made worse due to lack of enforcement of existing legislation with mandates to curb unsustainable landuse practices as well as narrow efforts to incorporate environmental concerns into the existing Agriculture legislation and national policies.

#### 9.0.5.2 *Root Causes*

- Limited recognition and dialogue on the need for sustainable practices of agriculture
- Agricultural activity is highly driven by commercial interests.
- The traditional land tenure system particularly customary land ownership is based on customs and usage which by traditional practice, customary land acquisition is centered around the clearing of virgin forest
- Existing regulatory mechanism not reviewed;
- Sustainable agriculture not addressed and recognized as a priority issue at the national level;
- Limited awareness and appreciation of beneficial elements of sustainable agricultural practices;
- Increased mechanization of agricultural practices and reliance on chemicals for soil fertility;
- Traditional methods of agriculture are considered inefficient and time-consuming.
- Lack planning management of the use of land areas under cultivations
- Competing sectoral interests, philosophies and mandates

### 9.0.6 **Thematic Area 6: Management of Deforestation**

#### 9.0.6.1 *Summary of Capacity Gap:*

Deforestation serves a dual purpose first as an activity and secondly as a tool employed by all stakeholders. It is a cross cutting issue which has been the culprit for much of the blame on land clearance and penetration of human activities into the virgin forest for logging and agricultural purposes. The management of deforestation is not a responsibility specific to one individual or a responsibility of a single national agency. It is however an activity that is practiced generally by many including farmers, loggers, developers, and residents of newly settled areas. Thus, the management of such requires a synchronized effort. Consequently, the most notable capacity gap is the absence of a specified national mechanism to manage issues specific to deforestation and to coordinate appropriate advice across sectors and to local communities. Such responsibility can be allocated to one of the relevant existing national mechanisms to manage the issue more effectively and to bring the activity under sustainable control. The Forestry Division or the Division of Land Management with the key mandate to issue logging license and lease customary lands could take responsibility for addressing deforestation. In addition, what is required is the strengthening of enforcement of the existing planning mechanism role to legitimize forest clearance in areas where they represent an obstacle and to legitimize land uses and promote conservation and protection in other areas wherein forests play an essential role. Little (or none) in the way of awareness raising and dialoguing deforestation issues to communities has any significant contribution to landowner's appreciation of own forest resources and the much needed effort to eventuate sustainable methods of logging and felling for agriculture pursuit. There is also the lack of enforcing the village council's authority in the management of communal forests in contrast to its current role in resource management whereby it is widely evident in the management and protection of coastal and marine resources such as in regulating sandmining and reclamations and banning of destructive fishing methods such as dynamites and fish poisoning. The same role

should be encouraged and supported in the management of village lands to ensure forests are used sustainably and watersheds protected.

#### 9.0.6.2 *Root Causes*

- Land tenure particularly the use of land under customary ownership is by discretion solely of landowners and by which government has limited control;
- Weak mandates and where legislation exists with key mandates to bring deforestation under control is found to be non-effective in terms of enforcement;
- Lack of mandatory replanting of deforested areas;
- Competing mandates, interests, principles and philosophies;
- Lack enforcement of village by-laws in limiting the clearance of forests
- Emergence of a cash-based economy which inevitably led to the need for increased income and to the scaling up of agricultural production from subsistence levels
- Pricing policies for indigenous sawlogs also contributed to the rapid rate of deforestation in licensed areas
- Commercial logging and impact of government policy promoting forestry sector development underpinned by macro-level objectives such as rural development, employment and foreign exchange accumulations
- Traditional practice of customary land acquisition where one can claim 'ownership' of newly cleared native forest areas for agricultural or livestock purposes
- Technological factors by means of the shift from small-scaled subsistence farming to larger-scale plantation agriculture are a technological innovation driven by export market demands.

### 9.0.7 Thematic Area 7: Water Resource Management

#### 9.0.7.1 *Summary of Capacity Gap:*

Land degradation affects the quantity and quality of freshwater supplies. The management of water resources has been over the years relatively fragmented into various government institutions. SWA however, was the only notable authority taking the lead in the management of water in terms of ensuring access to and supply of water to all Samoan households, both rural and urban sectors. Other aspects of water with environmental significance for protection and conservation had been addressed through multiple environmental programmes by MNREM while protection of water sources mainly watershed catchment areas have always been the responsibility of the Forestry Division while with MOA. This fragmentation with water management is largely conducive to a number of concerns which centered on the need to address water quality to ensure public health sanitation and the treatment of wastewater in view of scarcity of the resource. The newly established Water Resource Division funded by WSSP will enable effective address of these concerns. This would mean, enormous effort in terms of resources will be dedicated to wide-range awareness raising and in building the capacity of the newly recruited staff. This effort must however be extended to addressing governance issues at the community level whereby management of water sources and catchment areas involves differing type of land ownership which often are rife with heated disputes. In addition, infrastructural set-ups and sophisticated technology needs transfer to enable effective quality management of water resources with focus on sanitation and treatment of waster water.

#### 9.0.7.2 *Root Causes*

- Lack of coordination and collaboration amongst all agencies responsible for management of water resources;
- Fragmented ownership of water resources and local governance of same involves varying type of land ownership or a communal issue involving more than one village community;
- Expensive issue which requires enormous investment effort and state of the art treatment of waste water.
- Limited capacity of staff and local communities to appreciate the value of water resources
- Lack people's participation and their involvement in the process of planning and decision making and the training of community groups and individuals towards their self-reliance and managerial capability
- Shortage of staff which forced limitation of activities to only part of the watershed which naturally create conflicts.
- Low priority on local governance issues

### 9.0.8 Thematic Area 8: Soil Resource Management

#### 9.0.8.1 *Summary of Capacity Gap*

The management of soil as a national resource is fragmented into institutions and individuals whose work and interests are soil related. Under the auspices of GoS, MNREM considers soil from the environmental and forestry perspectives and MOA from that of food production but both prioritize the prevention of land degradation in order that the utilisation of soil resources are sustainable according to their individual mandates. USP's School of Agriculture and Food Technology (USP-SAFT) and NUS are educational institutions that utilise soil resources for educational purposes, the former as a means of sustainable food production and the latter as a biological resource. At the local level, individual landowners/farmers make decisions and undertake activities to exploit what they understand as personal owners of soil resources. The overarching capacity gap is the lack of multidisciplinary approach to the use of soil in the production of goods and services with the view of preventing land degradation. This has made worse by the absence of a national coordinated mechanism specific to soil research and conservation of soil resources and for rehabilitating purposes of degraded land soils due to valuable top-soil erosion and the consequent loss of soil fertility.

#### 9.0.8.2 *Root Causes*

- Low priority given to the significance of soil as the basic ingredient for the productivity of land and the subsequent sustainability of food production
- Continued use of destructive methods of cultivations for agricultural purposes
- Limited capacity of resource users and the technical know-how of sectoral staff responsible primarily for project implementation of agricultural-based activities.
- Customary land tenure can also be a hindrance factor in government initiatives to promote sustainable management of soil and in the application of conservation measures
- Limited awareness raising and knowledge-based of communities and individual land users
- Lack legal framework under which shall empower control and provide for an enabling national environment to address impacts of unsustainable practices on soil.
- Lack of funding to sustain research into soil properties and resources
- Lack of hard data on soils

### 9.0.9 Thematic Area 9: Management of Drought/Flood Prone Areas

#### 9.0.9.1 *Summary of Capacity Gap:*

Drought and Flood events are induced mainly by factors of climate variability, the management of which requires reliable information, good facilities and monitoring system and softwares to allow for prediction and forecast to be as accurate as possible. Climate variations can strongly affect drought (and rainfall) patterns and there is limited awareness and coping capacity of vulnerable communities to adapt to onset of a drought whereby incidents of fire spread and scarcity of water are often the predominant issues due to acute rainfall deficiency especially during the dry season. Communities also have limited capacity to cope with flooding events and where farmed steeplands are notably vulnerable to top-soil erosion, there is not only poor drainage system but limited effort to realize the impacts and provide for soil protection measures. Often this result in downstream runoffs contaminating coastal waters and degrade land areas along the path.

#### 9.0.9.2 *Root Causes*

- Inadequate information to address drought and flood prone issues;
- Lack of effective early warning systems;
- Not a top priority issue due to national focus on development with or without regard for the environment;
- No early response plans to adapt to drought events and coping strategies for flood events;
- Ignorance factors and limited resources
- Lack adequate capacity of vulnerable communities to cope with onset of droughts and flood events

### 9.0.10 Thematic Area 10: Rehabilitation of Degraded Lands

#### 9.0.10.1 *Summary of Capacity Gap:*

Degraded land areas are visible in and around the country yet not highly recognized by the SDS as a priority issue to be addressed. Interior land both flat and steep suffer from excavations for land-filling and construction purposes and the latter from rainfall splash on cultivated lands resulting to erosion of top-soils which without much trouble made significant deposits into the coastal sea environment generating high turbidity levels and impact on inshore fishery. Coastal land areas are visibly degraded from aggressive acts of coastal wave actions which can penetrate 200m of solid land at a time of storm surges. This represents the greatest threat to loss of significant

lands into sea and reduced the land cover statistics over time. A significant gap is that there is limited coordinated effort at the national level to enforce any significant control over the use of land resources and with the government focus on infrastructural development, application of control can be seen as impeding development intentions. Deforestation is the most notable driver behind which started the process of land degradation and this practice needs to be strictly controlled. Not much effort is accorded to this department of degradation especially on neglected land after use for aggregate extraction and steep lands also are not protected with significant mitigation structures to prevent it from soil erosion. Treatment of pollutant chemicals from organic and toxic wastes lack the infrastructure to coordinate efforts and manage these concerns well.

#### 9.0.10.2 *Root Causes*

- Land tenure system of customary lands is by right, the allocation of the use of land is of the discretion of the landowner himself/herself unless the owner agrees to involve the government in mediating the use of his/her land resources by other interested stakeholders
- Lack enforcement of key Legislation
- Limited resources to instigate measures to rehabilitate lands
- Livelihood based activities relying on the use of unsustainable practices such as slash and burn/shifting cultivations as well as for infrastructural development purposes.
- Government focus on developing the private sector.
- Competing interests and lack of priority given to rehabilitation measures.

### 9.0.11 Thematic Area 11: Poverty Reduction and Livelihoods

#### 9.0.11.1 *Summary of Capacity Gap:*

Poverty reduction would highly dependent on sustained food security for the local populations and while poverty in Samoa is rather interpreted in terms of hardship and/or poverty of opportunity, it is highly noticeable that Samoan society is strategized in ways that have resulted in limited access to equitable social services, lack of employment opportunities and cripple in the ability to attain economic assets. This has inevitably force the majority especially local communities to face social exclusion and political marginalization. Another key feature associated with poverty and hardship is inequity and unfairness arising from the system of customary land administration as well as there is fractured recognition and coordination of poverty issues from the national to local level institutions. It is increasingly noted also that macro-economic growth and stability could not help reduce poverty and income inequality except it is creating and expanding the current gap between rich and the poor. Hence there is a need to increase attention on poverty issues through awareness and increase designed programmes to assist the poor or for planners and policy-makers to target the poor for poverty alleviation programme implementation.

#### 9.0.11.2 *Root Causes*

- Cannot mortgage customary lands in accordance with provisions of the Constitution due to complexity of ownership associated with customary lands
- Poverty of opportunity due to limited access to social services, employment opportunities and ability to attain economic assets
- High cost of living due to macroeconomic focus and external trade relations notwithstanding limited external markets for local produces
- Lack of people-oriented policies that address the interests of the grassroots level while continuing emphasis by government on enhancing private sector growth resulting to expanding yet subtle gap between the rich and the poor.

### 9.0.12 Thematic Area 12: Information Management and Sharing

#### 9.0.12.1 *Summary of Capacity Gap:*

Information particularly land information is extremely vital as a viable asset upon which based informed decision-making affecting all key stakeholders. What is considerable lacking is up-to-date information on the sectors for specific analysis of land use patterns to determine the extent of land cover removal as well as degradation of land resources. There are numerous literatures on land components of the environment including advanced land information database of which access to however is relatively fragmented into various institutions and individuals. A considerable gap in this respect is the absence of a central repository and coordinated mechanism for all land related information to enable easy access and information sharing in a timely manner. This set-up will also enable the development of a strategy to allow meaningful data to be collected and relevant

information to be presented to the people. The opportunity for making this happening is beckoning as for instance, the appropriate GIS land mapping technology is now existing in the Forestry Division which used to be under MoA and the Mapping Division of MNREM and the critical data for key land uses in forestry, watershed and land management and nature of conservation already exist and are under the administration of other divisions of the same Ministry except for information about other sectors and research on soils and related land components that are institutionalized in academic institutions. A substantial part of this mapping and planning have been carried out separately by Forestry and the Mapping Unit while operating under the auspices of separate Ministries but now both are housed in one Ministry of which is MNREM, integrating them should be easily achieved without inter-agency issues that often constrain efforts of this kind.

#### 9.0.12.2 *Root Causes*

- Low priority consideration of a central mechanism for coordination and efficient networking of information for advisory purposes and easy access due to lack of willingness and financial resources to implement it more effectively
- Limited individual and systemic capacity as well as costly
- Low level cooperation and collaboration amongst owners of information as well as sectors because they see information as a power tool and because sectors work in silos with no real incentives for cooperation
- Absence of hard data on land degradation problems in Samoa.
- Lack legal and policy recognition of the need to organize proper information in a central repository

## 10.0 ACTIONS REQUIRED TO ADDRESS CAPACITY GAPS

The necessary actions to address the capacity gaps are drawn from the root causes which are turned into positive actions. The proposed actions are assessed under the three capacity levels to ensure that all issues are well-reflected and actions are to be undertaken under these levels.

### 10.0.1 Theme 1: Administrative Management of Resource and Resource Allocation

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Strengthen the capacity of the focal point coordinating unit through trainings and exposure to high-level meetings for confidence building</li> <li>▪ Build the capacity of local communities through awareness raising on the Convention and educational programmes to raise general appreciation of the cause promoted by the Convention and to ensure there is absence of a silent majority</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review and strengthen existing institutional arrangement for the effective coordination of dialogue of issues and services between the government and local institutions</li> <li>▪ Sectoral and local institutions to be made aware of national initiatives related to sustainable land management for integration into corporate plans</li> <li>▪ Develop local institutional authorities into effective mechanisms of control through active participation and involvement in higher-level decision makings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop clear policy mechanisms to ensure access to resources are possible and properly controlled</li> <li>▪ Develop a scheme of plan for stakeholder involvement and participation in the management of land resources with clearly defined roles to reflect their ownership of the work effort.</li> <li>▪ Develop community management plans for the sustainable use of land resources with a view of promoting sustainable land management</li> <li>▪ Designate a national day of Sustainable Land Management commemoration to highlight land degradation issues for production of wide-range awareness yearly on the Convention for the public and using a participatory approach for local populations.</li> <li>▪ Develop an effective system of resource allocation from national to local institutions to ensure communities can also access funds and be responsible managers for the use of own resources sustainably.</li> </ul>

### 10.0.2 Theme 2: Mainstreaming UNCCD into National Plans

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Build high-level confidence of responsible staff to lobby without reservations SLM interests to the Ministry management and to be allowed access to the political level.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish an integrated system of sectoral approach to sustainable land management to ensure SLM issues are recognized in sectoral management plans.</li> <li>▪ Develop media and communications strategy to increase exposure and awareness of land degradation issues to local communities</li> <li>▪ Appoint a sub-committee off the NSC to be allocated with the key responsibility of mainstreaming SLM issues to the highest order of government through high-connections in lobbying effectively SLM interests.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review existing legislation and policies to provide for specific mention of the need to operate development within the framework of sustainable land management</li> <li>▪ Seek participation in higher-level forums mainly political level to lobby effective recognition of sustainable land management issues in the next period of the SDS</li> <li>▪ Complete the NAP and strengthen national ownership of NAP across all sectors, including communities, into SDS and other relevant national development plans</li> <li>▪ Develop a bottom-up system of approach for provide for easy access to policy decision-makers without having to maintain bureaucratic protocol.</li> </ul>

### 10.0.3 Theme 3: Land Development Management

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Conduct awareness raising on land development issues to ensure transparency and accountability for developments on land that are done without consideration of sustainable management measures</li> <li>▪ Build capacity of responsible sectoral staff on the specific issues and mandates of other land agencies to ensure clear understanding and avoidance of duplication of powers and activity plans.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Seek membership of MNREM to new land committees which looks at possibilities of leasing customary land to potential investors for commercial purposes</li> <li>▪ Strengthen the existing Land Development Section of DLM through legal provisions as the core mechanism with the key mandate to control developments that operate without due consideration of impacts on land resources and to act as the central coordination unit that foster and network appropriate advice on land development issues to key stakeholders</li> <li>▪ Integrate environmental, social and economic issues into institutional land use plans for land development purposes at the national and local levels.</li> <li>▪ Strengthen the role of MNREM to manage landuse and implement the landuse policy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review existing legislation and policies to ensure elements of fragmentation of mandates are removed but integrated into a central authority to enforce and administer control over the overexploit of land resources for development purposes</li> <li>▪ Develop an integrated system which combined land ownership and samoan culture into national plans. That is, it shall clearly define and incorporate traditional land ownership claims into national landuse plans.</li> <li>▪ Enact new laws or enforce existing laws and sustain the application of environmental tools (EIA) to support the sustainable use of land and restrict the transfer of productive arable land to other uses.</li> <li>▪ Develop a national landuse framework to coordinate landuse utilization and management and overall promotion of sustainable land management practices</li> <li>▪ Incorporate sustainable land management issues into educational curricula as teaching subject areas at all levels.</li> </ul>

### 10.0.4 Theme 4: Forest Resource Management

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Develop appropriate approaches to educate village communities who continue to clear the remaining native forests for timber, agriculture, or another use for their social and economic development</li> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop support for the Forestry Division in current efforts to replant forests through plantations on government land and through community and family owned forest woodlots</li> <li>▪ Devise a system of efficient coordination and monitoring follow-ups between the Forestry Division and Land Management Division of MNREM to ensure complementary functions of authorizing logging licenses and advisory/monitoring role of the Forestry Division do not overlook or outdo one another.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Encourage communal income-generating activity in the forest in the form of eco-tourism that is sustainable without inducing damage to forest ecosystems.</li> <li>▪ Take immediate and decisive action to protect strategically important forest areas and amongst these are watersheds, areas designated as national parks and reserves and, areas prone-to erosion, drought and flood events.</li> <li>▪ Develop and promote value-added products from primary forest produces</li> </ul>

### 10.0.5 Theme 5: Management of Agricultural Practices

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Conduct educational programmes of all kinds (formal, informal and non-formal) to ensure indisputable effective ways to change attitudes, values and approach to land cultivations and land use management.</li> <li>▪ Increase public awareness of unsustainable agricultural practices</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen institutional research and extension services at the national level and build effectiveness of local institutions to manage agricultural activities at sustainable levels</li> <li>▪ Strengthen technical support services of MoA to local communities to ensure sustainable practices of land cultivation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adopt the use of traditional and cultural landuse systems and practices as they are sustainable in working the land</li> <li>▪ Apply the use of proper landuse planning in agricultural activities to systematically assess the physical, social and economic factors in such a way to encourage and assist landusers in selecting options that increase their productivity.</li> <li>▪ Encourage the use of organic farmings as sustainable alternate substitutes to mono-cropping cultivations</li> <li>▪ Encourage the practice of diversified farming systems which is more sustainable of land management. initiatives such as<sup>3</sup> ;               <ul style="list-style-type: none"> <li>- practice agroforestry</li> <li>- practice corridor clearing (where corridor or strips of forests rather than the whole forests are cleared</li> <li>- increasing the intensity and/or effectiveness of current farming/cropping practices to reduce the need for more clearing</li> </ul> </li> </ul>

### 10.0.6 Theme 6: Management of Deforestation

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Implement wide range community consultations for awareness raising on the need to control the clearance of forest from an environment standpoint as they stand useful as major sources for carbon sinks.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen the role of village councils as traditional authority over communal forest lands as they are able to influence the allocation of users rights amongst village members through passing and enforcing village by-laws to limit the cutting and clearing of riverbanks and steepplands that are erosion-prone, and the clearing for agriculture within catchment areas</li> <li>▪ Strengthen the roles of NGOs as they remain useful in promoting forest conservations, as they were previously accredited with successful conservation projects of Uafato, Tafua etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop as well as adopt an integrated landuse planning initiative to ensure optimal allocation of land resources and the effective management of all lands for all legitimate purposes including watersheds, forests of high biodiversity value, agriculture, land for settlements, tourism.</li> <li>▪ Replant forests and trees in what ever design is feasible including plantations, community wood lots, hedge, or boundary plantings</li> <li>▪ Enforce village by-laws to limit the emerging practice of land profiteering from forest clearing that is increasingly resulting in the inequitable access of village people to communal lands.</li> <li>▪ Establish a national coordinated mechanism or strengthen a unit of the Forestry Division to address the deforestation issue and to foster and network collective sectoral advice to landusers</li> <li>▪ Review existing Forestry Act to empower communities to appreciate their forest resources and to re-examine the Forestry Division's role in co-managing the logging of forests with the Division of Land Management of MNREM.</li> <li>▪ Strict enforcement of the sustainable Code of</li> </ul>

<sup>3</sup> Source: Tuivavalagi et al 2001

		Logging Practices and the Sustainable Forest management policy
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### 10.0.7 Theme 7: Water Resource Management

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Impart substantive and considerable awareness of water resource issues and the need for collective efforts to conserve the resources at sustainable levels from the point of view of locals valuing water sources and resources as life-support system</li> <li>▪ Build effective capacity of the newly recruited staff through specific trainings on the management of wastewater treatment and sanitation issues</li> </ul>	<ul style="list-style-type: none"> <li>▪ Effect institutional realignment of appropriate sections within the Water Division to effect proper management of water issues within the framework of sustainable development</li> <li>▪ Develop local institutions and individual landowners with co-management plans of water resources to ensure developing of their sense of ownership of the resource with the view of building appreciation and resolving potential disputes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a system of effective monitoring and conservation of the five water catchment areas to ensure damage-free environments from forest clearance for agriculture</li> <li>▪ Strict enforcement of the Sustainable Forest Management Policy and legislation which regulate the clearance of trees and forest areas</li> <li>▪ Review existing Water Act to legalize the enactment of the newly established mechanism to effectively address water resource issues and implementation of related activities and to accommodate expansion of its functional mandate</li> <li>▪ Develop a new policy which shall be procedural in nature to effect implementation of sustainable measures and to resolve disputes of governance and resource ownership issues</li> <li>▪ Pilot a project on a water catchment area with differing land ownership and governance issues through reforestation and replanting</li> </ul>

### 10.0.8 Theme 8: Soil Resource Management

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Build the capacity of responsible coordinating staff through involvement in planning and decision-making processes</li> <li>▪ Extensive awareness on soil significance for conservation and as the basic ingredient and determinant of land productivity</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen national academic institutions through financial support in the conduct of soil researches</li> <li>▪ Institutionalize the management of customary land soils into national and local authorities and government plans and initiatives to ensure effective surveys of land soils and to enable informed decision-makings with particular emphasis on sustainable agricultural use.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establish a national coordinated mechanism specific to soil research and conservation of soil resources and for rehabilitation purposes of degraded land soils</li> <li>▪ Review existing legislation to accommodate specific provisions for the need to protect soil resources</li> <li>▪ Conduct a technical survey assessment in relation to soil type, fertility and other biophysical characteristics of land</li> <li>▪ Produce soil maps based on the technical survey of soils</li> <li>▪ Conduct a trial of soil protection measures through rehabilitation of degraded land areas</li> <li>▪ Tackle fertility decline and nutrient depletion through the<sup>4</sup>; <ul style="list-style-type: none"> <li>- use of organic (composts, prunnings, farmyard manure) and inorganic inputs</li> <li>- intensive fallowing (which includes application of lime, planting of legumes, etc. on fallow lands to quicken rejuvenation of degraded lands);</li> <li>- practice agroforestry, particularly with the use of nitrogen-fixing trees such as <i>Erythrina specieles</i> or <i>gatae</i></li> <li>- Crop rotation using nitrogen-fixing plants (such as peanuts etc) in the rotation; and</li> </ul> </li> </ul>

<sup>4</sup> Source: Tuivavalagi et al 2001

		- Liming where appropriate (ie. Especially where pH<5.5)
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10.0.9 **Theme 9: Management of Drought/Flood Prone Areas**

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Build coping capacity of local communities</li> <li>▪ Implement considerable awareness of communities using the media and practical consultations</li> <li>▪ Conduct capacity building of responsible staff with specific trainings in the use of sophisticated softwares</li> <li>▪ Build capacity of responsible staff responsible for chemicals as well the Chemical Unit staff through specific trainings and workshops.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen vulnerable communities to droughts and flood events with adaptation measures</li> <li>▪ Scale-up efforts to strengthen the role and capacity of the Meterology Services Division with good facilities and enhanced softwares for issuing early warnings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Undertake assessment studies of drought/flood prone areas in order to accord priority for proper allocation of resources</li> <li>▪ Trial a drought-prone area with sustainable agriculture through implementing organic farmings and planting with drought-resistant crops</li> <li>▪ Develop an effective system of managing climate data for prediction purposes</li> <li>▪ Establish effective early warning systems to ensure adequate time for communities to adapt</li> <li>▪ Develop early response plans for sectors and communities to prepare in advance with coping strategies to mitigate the effects of droughts and impacts of flood events especially communities residing in lowlying areas.</li> <li>▪ Encourage the build of individual family tanks for water storage</li> <li>▪ Set up a Chemicals Management Unit within MNREM to manage the chemicals well and to ensure that importation of these pollutants are well monitored</li> </ul>

10.0.10 **Theme 10: Rehabilitation of Degraded Lands**

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Build capacity of local communities through demonstration of rehabilitated measures and awareness raising</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen the role of MNREM to address the issues of land degradation through the review of legislation and policy frameworks to enable strict controls on the overexploits of land-based resources.</li> <li>▪ Strengthen the role of village institutions using village by-laws to enforce regeneration of degraded lands on customary lands.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify all degraded lands and take immediate actions to protect and conserve these land areas for regeneration</li> <li>▪ Regenerate degraded land areas with replanting initiatives and organic farmings</li> <li>▪ Revamp weak legislation dealing with landuse control to empower effective administration of land resources with penalty measures and with requirements to put in place sustainable measures by operators whom are granted with rights to access or use the land</li> <li>▪ Reverse degraded land areas due to soil erosion through practice of the following<sup>5</sup>; <ul style="list-style-type: none"> <li>- agroforestry, consider planting of trees and shrubs along the contours</li> <li>- practice bench terracing where appropriate;</li> <li>- plant grassy strips</li> <li>- contour ploughing and/or planting</li> <li>- Conservation (minimum/zero) tillage; and</li> <li>- consider introducing vetiver grass if not found locally to effectively control erosion</li> </ul> </li> </ul>

#### 10.0.11 Theme 11: Poverty Reduction and Livelihoods

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Conduct wide-range awareness programmes for local communities on ways to reduce poverty</li> <li>▪ Build capacity of persons manning coordinating units at the national and local levels through trainings and workshops.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen the role of MWCSO to effectively coordinate participatory approach of local institutions to implement their development activities with views of reducing poverty elements of local populations</li> <li>▪ Strengthen the roles and active participation of all those affected especially groups that have often been excluded such as women, youth and children to ensure that land use plans are consistent with the aims and purposes of local and national authorities and based on a wider perspective of community's needs, aspirations and current possibilities.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Develop a National Land Administration Policy that will be an encompassing initiative linking it all to land related issues and building on the current National Landuse Policy and extend to cover all other areas of land administration important to Samoa and such a policy shall be formulated in a way to reduce poverty and to create opportunities for all</li> <li>▪ Re-examine the whole system of customary land administration with a view to removing inequities and to ensure that the system will work for the benefit of all beneficial landowners and not just the titleholders and their immediate beneficiaries.</li> <li>▪ Undertake a survey to measure trends over time and to assess the impact of growth on the disadvantages in Samoa and to look into vulnerability and empowerment with reference to the MDGs</li> <li>▪ Instigate a poverty mapping to give a visual presentation of intensity of poverty incidence by geographic area in order to</li> </ul>

<sup>5</sup> Source: Tuivavalagi et al 2001

		<p>help planners and policy-makers to easily detect the most poverty affected areas and to allocate more resources to alleviate poverty.</p> <ul style="list-style-type: none"> <li>▪ Encourage women's and youth groups' participation in livelihood activities that are sustainable and environmentally friendly</li> </ul>
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10.0.12 **Theme 12: Information Management and Sharing**

Actions at the Individual Level	Actions at the Institutional Level	Actions at the Systemic Level
<ul style="list-style-type: none"> <li>▪ Build sufficient capacity of responsible staff in this area through training attachments and practical learning</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strengthen the role of MNREM with an institutional structure to coordinate an effective information network involving the extensive use of land use information and research services through the employment of Knowledge Based Systems (KBS), GIS and other relevant technical services in the same manner being the repository mechanism for all environmental information including sectoral and national data on economic and social issues.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Creation of a central repository for all environmental and related information to be collected from the relevant government sectors etc in particular a central mechanism for</li> <li>▪ Creation of a mechanism for coordinating all land use information and research services that focuses on the sustainability of ecological systems and livelihood to ensure effective information network and to obtain maximum and appropriate uses in landuse plans at national and local levels.</li> <li>▪ Build effective systems of dialogue and cataloguing information into databases for easy searches, retrieval and dissemination of information</li> </ul>

**11.0 CONCLUSION**

Land, forms the integral part of the natural life-support system that serves to sustain human survival, preserves heritage and culture and function as source of family pride and identity. Land is undeniably the heart of a family, community and a nation; a core asset of a family around which every other thing would matter. Yet in view of current demands that are economic in nature, land is becoming a thing of the post-modern era that is predominantly characterized by materialist views and consumerist attitudes because land upon usage, many dreams and aspirations are fulfilled. Samoa no longer is unique in that regard as we also, have been swept along with the tide of development which calls for massive transformation of the landscape regardless of the nature of the use and suitability of the use, often without proper planning and sustainable management plan and coherent strategy.

NCSA provides the vacuum for cleaning and eliminating the inability of society at the individual, institutional and systemic levels to cope with the deposits of upsets on to the land system. NCSA recognizes that land requires to be reformed in a way that it would be able to support life long-term into the next and the next and, forthcoming generations. Apart from natural factors, NCSA realizes that human actions in particular have adverse effects on land through the common use of unsustainable practices. Farmers in particular, use customary practices of slash and burn, monocropping systems and shifting cultivations without fallow periods, to cultivate the land. The common use of chemical fertilizers has substituted the manpower for weeding. While on the other hand, the practice of deforestation to clear the land is particularly noted as the main factor of threat to the survival of land-based ecosystems and such a tool is most commonly used by landusers, developers, farmers and locals to develop land for livelihoods, commercial and development purposes. The removal of the forest cover especially native trees to allow for the expansion of agriculture and logging activities has fashioned the mode of attaining ownership of land particularly on customary land. Samoa, despite having no significant mineral resources, sand and aggregate materials for development and construction purposes are increasingly on high demand. The excavation activities

often results in sizable ground openings and; the loss of land, small business strategic attraction to the coast as well as expanding coastal appeal for tourism have increased the need for reclamations of the coastal seas which impact significantly on the quality of the coastal sea environment and inshore marine ecosystems. Therefore, mineral extraction such as scoria materials, sand and gravel in addition to timber removal, infrastructure and establishment of plantation crops and livestock have all led to the most significant anthropogenic transformation of the land environment which by and large attributable to 'deforestation' as an activity and as the main tool for transforming the landscape, driven largely by the pursuit of commercial and macroeconomic interests.

Consequently, deforestation is particularly noted as the typical process having significant impacts as;

- logging of valuable hardwoods and secondary growths of forests
- replacement of natural forests by erosive and pest/disease-prone plantation agriculture;
- soil exhaustion and plantation epidemics;
- market or price collapse for plantation products;
- plantation collapse and the subsequent marginalisation of poor people to upland forests;
- upland deforestation by displaced people;
- consequent upland erosion, and hence further appropriation of the island's natural ecosystems - and subsequent further degradation;
- economic disinvestment of the degraded land interior in favour of coastal development or,
- where environmental degradation leads to collapse of life-support systems, more clearance of the interior land or other marginal areas preferably the coast and steeplands;
- extreme lack of investment in managing the ever-diminishing forests; and
- high dependence on remittances from migrant labour, aid and foreign investment.
- Clearance of water-catchment areas affecting quality of water resources

Despite having established or resort to systems of control through the permitting and licensing systems as well as in particular through the development consent process to curb illegal and indiscreet use of land and land-based resources, there will continue to exist elements of inadequacy with the management of these activities due to the lack of strict law enforcement, financial and human resources especially the national economic power to counteract land degradation trends and sustain effective systems to manage them more effectively. As well, there is the lack of the integration of ecological aspects of land development into national planning initiatives and made even worse by the absence of mainstreaming sustainable land management issues into sectoral plans and the SDS. However, the NCSA framework foresees these problems and in formulating solutions it requires building effective capacities at all levels to implement them more convincingly within the framework of sustainable development and in line with the goals and aspirations of MDGs. It is anticipated that the implementation of appropriate actions as proposed in this report would at the most strengthen Samoa's ability to meet UNCCD Obligations of which foremost, to tackle land degradation in order to reverse unfavorable conditions to land.

The stocktaking exercise, in section 8.0.1, of all the past, current and ongoing activities has clearly reflected substantial efforts by Samoa to address environmental concerns of development. Numerous setups of enabling environments for coordination and implementation of diverse projects and initiatives at the national and local levels, as well as through memberships to almost all MEAs are indicative of Samoa's commitment and recognition of human and natural impacts on the land environment. It has certainly re-confirmed the fact that Samoa has been renowned for its effort and commitment to addressing environmental concerns in advance of other island states in the region at the national level, targeting in particular local communities as they are most affected by actions of their own hands and by natural factors.

However, while Samoa has experienced progressed over the past 15 years through awareness programmes and implementation of its environmental programmes at the national level; advocating for the sustainable management, protection and conservation of the environment and its natural resources, there exists a number of factors restricting the advance of achieving fully its environment goals and aspirations for a better quality of life. Samoa's small size exemplifies the limited natural resources it possesses; such as scarce land resources which leads to

difficult land use decisions, shortage of freshwater resources, and the increase vulnerable status of the country's coastal low land areas to adverse impacts of climate change and climate variability that could have drastic consequences to 70 percent of the country's coastal settlements and cultural heritage. In addition the impacts of natural and environmental disasters are inevitable elements that can contribute to the tremendous damages on biological, human and cultural resources, especially when the country lacks capacity to respond to and recover from such events. The effect of all these constraining factors can have severe repercussion on other sectors of the country such as health, agriculture, water, forest and marine resources.

To conclude, **'Without land, no soil, no trees, no forest, no water, no land resources; Without land resources, no productivity, Without productivity, no food; Without food, poverty blooms; With poverty, people are deprived; When deprived, people are marginalized; When marginalized, civil strife; When civil strife, people die'.....**

Therefore, **"WITHOUT LAND, WITHOUT LIFE!** It is simple as that!

## 12.0 WAY FORWARD

With the completion of the Thematic Assessment Report on Land Degradation the next steps in the NCSA Process are;

- **Crosscutting Assessment.**

The underlying objective of the Crosscutting Assessment is to identify opportunities for synergy and cooperation between the three Rio Conventions (i.e. UNCCD, UNFCCC and CBD). It involves the in-depth analysis of the three Thematic Assessments to identify capacity constraints/gaps that are common to all the three Conventions which are then prioritized. For instance, the analysis may identify a capacity constraint that is affecting all three Conventions and the removal of such would have a three-fold impact and should therefore be a priority. The overall output of the Assessment is a Report providing detailed analysis of prioritized crosscutting capacity issues and constraints based on the Conventions' respective Thematic Profiles.

- **Action Plan**

The Action Plan is to be constructed with the view of identifying concrete activities, projects and initiatives to be executed to address cross-cutting issues to eliminate capacity constraints identified through Steps 1- 4 of the Methodology section and will also indicate how these 'actions' can be integrated into existing national plans.

## 13.0 ANNEXES

### 13.0.1 ANNEX 1: Workshop Exercises 1 - 4

#### **THEMATIC ASSESSMENT WORKSHOP - WORKING GROUP SESSIONS**

<b>Convention Obligations</b>	<b>Thematic Areas</b>	<b>Working Groups</b>
a) Give due priority to combating land degradation and mitigating the effects of drought, and allocate adequate resources in accordance with their circumstances and capabilities.	1. Institutional Capacity	Group 1
b) Establish strategies and priorities, within the framework of sustainable development plans and/or policies, to combat land degradation and mitigate the effects of drought	2. Mainstreaming UNCCD Objectives into National Plans	
c) Address the underlying causes of land degradation and pay special attention to the socio-economic factors contributing to land degradation processes	3. Forest Management and Deforestation	Group 2
	4. Agricultural Management Practices	
	5. Rehabilitation of Degraded Lands	Group 3
6. Management of Drought Prone Areas		
d) Promote awareness and facilitate the participation of local populations, particularly women and youth, with the support of non-governmental organizations, in efforts to combat land degradation and mitigate the effects of drought	7. Education, Training and Public Awareness	Group 4
e) Provide an enabling environment by strengthening, as appropriate, relevant existing legislation and, where they do not exist, enacting new laws and establishing long-term policies and action programs	8. Legal and Policy Framework	

#### **Instructions:**

- i) Each group must select a Facilitator, a Note Taker and a Presenter
- ii) Each group presents for 10 minutes
- iii) Discussion and questioning time follow suit immediately after each presentation for 10 minutes

**EXERCISE 1: Identify and elaborate past, current and on-going programs/activities addressing the individual Thematic Areas (refer Column 3)**

**Objectives**

- i. To determine the level of Samoa's current efforts to address the Thematic Areas related to land degradation
- ii. To determine the level of Samoa's current capacity from the implementation of programs/activities to address the Thematic Areas

**Expected Outputs**

- i. An inventory of all past, current and ongoing programs/activities related to UNCCD Thematic Areas
- ii. A narrative explanation of the focus, status of implementation and the main outcome of each program/activity.
- iii. To give a clear idea of Samoa's current capacity and effort in addressing land degradation issues

**Guiding Questions**

- a) Are programs/activities (past, current and ongoing) really working in contributing to addressing/reversing land degradation problems and mitigating effects of drought?
- b) Are existing institutional and individual capacities sufficient coping mechanisms to address land degradation issues under each Thematic Area?
- c) Are there areas or gaps which need strengthening that identified programs and activities have not quite captured?
- d) Are the programmes and activities contributing to community livelihoods and poverty alleviation?
- e) Are thematic area coverage capturing all issues that need address under land degradation, if not, suggest others that would enable achievement of the corresponding Convention Obligation
- f) What level of Samoa's current capacity to meet this obligation

**EXERCISE 2: Reconfirm and elaborate capacity gaps under each Thematic Area identified in the Stocktaking Report**

*(For Exercise 2, the Task Team had already identified a capacity gap for each Thematic Area during the Stocktaking Workshop, please refer to Reference Materials attached)*

**Objectives**

- i. To reconfirm and identify additional capacity gaps, if any, under each Thematic Area
- ii. To elaborate on capacity gaps

**Expected Outputs**

- i. An inventory of confirmed capacity gaps under each Thematic Area
- ii. A narrative explanation/justification for each capacity gap identified

**Guiding Questions**

- a) Are capacity gaps already identified the real issues and/or hindrance factors with achieving the corresponding Convention obligation?
- b) Are there other capacity gaps beside the identified one in the matrix that are more pronounced and fitting in the context of this Thematic Area to meet the corresponding obligation?
- c) Could there be room for improvements on these capacity gaps and how?

**EXERCISE 3: Reconfirm and identify additional direct and root causes of capacity gaps identified in Exercise 2**

*(For Exercise 2 the Task Team had already identified direct and root causes of each capacity gap under each Thematic Area during the Stocktaking Workshop, please refer to Reference Materials attached)*

**Objectives**

- i. To reconfirm and identify additional direct and root causes of capacity gaps identified under each Thematic Area
- ii. To elaborate on direct and root causes

**Expected Outputs**

- i. An inventory of confirmed direct and root causes under each capacity gap
- ii. A narrative justification for the existence of the direct and root causes identified

**Guiding Questions**

- i. Are the identified direct and root causes factual and conducive to the existence of these identified capacity gaps
- ii. Can there be more causes than the ones already identified?
- iii. Are root causes if addressed contribute to sustainable land management and poverty reduction?

**EXERCISE 4: Reconfirm and identify additional actions to address the causes of capacity gaps under each Thematic Area**

*(For Exercise 2 the Task Team had already identified direct and root causes for each Thematic Area during the Stocktaking Workshop, please refer to Reference Materials attached)*

**Objectives**

- i. To reconfirm and identify additional actions to address the capacity gaps
- ii. Provide a narrative justification for each actions taken

**Expected Outputs**

- i. An inventory of confirmed actions to address capacity gaps under each Thematic Area
- ii. Narrative explanation justifying actions identified

**Guiding Questions**

- i. Are the proposed actions to address each capacity gap under each thematic area if implemented would contribute to achieving the corresponding Convention obligation
- ii. Are the proposed actions sufficient to reverse land degradation situations in Samoa and to mitigate the effects of drought?
- iii. Are there any other actions not yet identified yet deemed extremely appropriate to address land degradation and contribute to sustainable land management

### 13.0.2 ANNEX 2: Summary of Individual Capacity Gaps by Thematic Area to address Land Degradation

LAND DEGRADATION THEMATIC AREAS	CAPACITY GAPS	LEVEL OF CAPACITY		
		Institutional	Individual	Systemic
Administrative Management of Resource and Resource Allocation	i. Low level of cooperation and collaboration from sectoral and other relevant stakeholders at the national level	√		
	ii. Weak coordination and networking of the Convention's resources and information from the national to the local level	√		
	iii. Limited opportunity provided for members of the UNCCD committees on specific trainings about the Convention and on sustainable land management issues.		√	
	iv. Limited resources to undertake a more systemic approach in terms of awareness raising and consultation involving local communities except on ad-hoc basis.		√	√
	iv. Lapse in the enforcement of existing regulatory frameworks to effect proper management system for land resources in a coordinated manner at both local and national levels			√
	v. Lack provisions under existing legislation to empower communities to be involved and well-informed of high-level decision-makings on issues that are intended to pass into law as they affect them.			√
	vi. Limited efforts in educational and awareness campaigns to communities on UNCCD obligations and adverse impacts of land degradation			
Mainstreaming NAP/SLM issues into National Plans	viii. Land issues as they consequently affect and impact on community livelihoods and sustainability of land productivity are far from recognized or given priority consideration in the SDS nor in any other national plan.			√
	ix. The top down approach are restricted at the higher level management therefore does not provide for effective communication and participatory access to sound decision-making by the lower rank of government officials and in particular the grassroots level.			
	viii. Very narrow efforts specific to streamlining sustainable land management issues into existing national policies and relevant legislation			√
Land Development Management	ix. Fragmented national mandates and coordination of land development issues			√
	x. Invention of new land committees and dialogue through these committees lack full representation of all relevant stakeholders.		√	
	xi. Policy dialogue and focus on land development issues is predominantly geared towards bringing land under commercial use and for tourism investment purposes without much regard for its impacts on the environment.			√
	xi. Narrow capacity and awareness of responsible sectoral staff on the mandates of other land agencies across sectors therefore knowledge and specific know-how of staff is limited only to own area of work in dealing with land matters		√	
	xii. SDS only highlights the commercial value of land for development while overlooking its sustainable significance.			√
Forest Resource Management	xiii. Fragmented institutional arrangement at the national level for the management and monitoring of forest operations			√
	xiv. Inadequate efforts to empower community to appreciate and sustainably manage their own land-based resources	√	√	
	xv. Limited efforts to promote sustainable livelihood options from the use of forest resources by local communities	√		
Management of Agricultural Practices	xvii. Very narrow incorporation of environmental concerns into the existing mandate and agricultural policies to regulate agricultural practices at sustainable levels		√	
	xviii. Limited effort to explore, adopt and practice sustainable measures by landowners and village communities		√	

LAND DEGRADATION THEMATIC AREAS	CAPACITY GAPS	LEVEL OF CAPACITY		
		Institutional	Individual	Systemic
	xix. Traditional practices no longer operational			√
Management of Deforestation	xx. Absence of a centralized coordinated mechanism to integrate and foster collective advice from responsible sectors to landusers and users.			√
	xxiii. Dialoguing of adverse effects of deforestation for awareness purposes of local communities lack effectiveness between the government and village institutions.			√
Water Resource Management	xxiii. Fragmented infrastructural mechanism to address water resource issues			√
	xxv. Statutory mandates to regulate water bodies lacks effective enforcement			√
	xxvi. Existing coordinating mechanism responsible primarily for solving disputes and local governance issues is non-proactive			√
	xxvi. The staff of the newly set-up Water Division would hardly be highly skilled and conversant with water resource issues therefore require specific trainings and awareness on water issues.		√	
Soil Resource Management	xxvii. The lack of a multidisciplinary approach to the use of soil in the production of goods and services with the view of preventing land degradation.			√
	xxviii. The lack of research and appropriate action taken to consider soil properties with respect to land cultivation.			√
	xxix. Absence of a national coordinated mechanism specific to soil conservation and rehabilitation interests to protect unsustainable use of soil.			√
	xxxi. Limited resources and capacity of responsible staff to produce coherent data for update of soil maps.		√	
Management of Drought/Flood Prone Areas	xxxii. Vulnerability and adaptation factors to drought not readily available or clearly reflected as a priority in existing national programmes of action.			√
	xxxiii. Limited capacity of communities to adapt to drought related events particularly residents of drought prone areas.		√	
	xxxiv. Manual collection of data has made data hardly reliable and accurate therefore correlation is difficult to be made between climate data and other sectors such as agriculture.			√
	xxxv. Limited capacity of forecast technology to determine exact locations of rainfall and the consequent drought and flood prone areas.			√
	xxxvi. Limited effort to identify and promote protection of steepland and water catchment areas from flooding and top soil erosion.		√	
Rehabilitation of Degraded Lands	xxxvii. Limited coordinated effort to address the spread of degraded areas from land based excavating activities of scoria mining for land filling purposes, agricultural fallowed land and deforested areas.			√
	xxxviii. Narrow government effort to discourage and rehabilitate degraded government lands on which scoria and aggregate materials are extracted for development purposes at the same time lacking in stepped-up efforts to promote attitude changes and take awareness to communities on adverse impacts of degraded lands unless through ad-hoc project implementation involving only a few piloted communities.			√
	xxxix. Low priority given to consideration, by government of forthcoming land development initiatives affecting government and customary lands, within the sustainable development framework so long as its highly viable for economic returns.			√
Poverty Reduction and Livelihoods	xl. Inequity and unfairness arising from the system of customary land administration.			√

LAND DEGRADATION THEMATIC AREAS	CAPACITY GAPS	LEVEL OF CAPACITY		
		Institutional	Individual	Systemic
	xli. No strategy to deal with landuse or land reforms on the basis of demographic changes occurring in Samoa.			√
	xlii. Poverty of opportunity for the disadvantaged of Samoan society			√
	xliii. Poverty issues are well-buried under the impressive infrastructural outlook of development in Samoa.			√
	xliv. Fractured recognition and coordination of poverty issues from the national to local institutions.			√
	xlv. Income generating activities are often done in an unsustainable manner at the expense of land resources.			√
	xlvi. Lack of overseas markets for local agricultural produces as incentives to cultivate land with care of soil fertility loss.			√
Information Management and Sharing	xlviii. Absence of a central repository and coordinated mechanism for all land related information including surveyed data, published materials and maps for easy access and sharing purposes in a timely manner			√
	xlix. Limited resources especially finances to disseminate information to key stakeholders upon requests and when required to impart appropriate awareness on a crucial land issue.			√

### 13.0.3 ANNEX 3: References

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