



BARBADOS PROGRAMME OF ACTION  
(BPoA)

NATIONAL ASSESSMENT REPORT

SAMOA 2003

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## List of acronyms used

CBD:	Convention on Biological Diversity
CIMS:	Coastal Infrastructure Management Strategy
CMS:	Convention on Migratory species
COP:	Conference of the Parties
CRDAMPIC	Convention on the development of Adaptation Measures for Pacific Island countries
DEC :	Division of Environment and Conservation
EIA:	Environment Impact Assessment
EPC:	Electric Power Corporation
FAO:	Food & Agriculture Organisation
GEF:	Global Environment Facility
GHG	Greenhouse Gases
GOS:	Government of Samoa
IAMP:	Infrastructure Asset Management Project
IUCN:	International Union for the Conservation of Nature
LDC	Least Developed Country
MAFFM:	Ministry of Agriculture, Fisheries and Forestry & Meteorology
MEA	Multilateral Environmental Agreement
MNRE	Ministry Natural Resources & Environment
MWIT:	Ministry Works Infrastructure and Transport
NBC:	National Beautification Committee
NBSAP:	National Biodiversity Strategy Action Plan
NDEMP	National Disaster Environment Management Plan
NEMS:	National Environment Management and Development Strategies
NGO:	Non-Government Organizations
NLP:	National Landuse Policy
NOU	National Ozone Unit
NWMP:	National Waste Management Policy
NWRP:	National Water Resource Policy
ODS:	Ozone Depleting Substances
PACER	Pacific Agreement on Closer economic relations
PEAR:	Preliminary Environment Assessment Report
PICCAP:	Pacific Islands Climate Change Programme
PICTA	Pacific Island Countries Trade Agreement
PIREP	Pacific Islands regional energy programme
POPs:	Persistent Organic Pollutants
PSC:	Public Service Commission
PUMA	Planning Urban Management Agency
RMP	Refrigerant Management Plan
SDS:	Strategy for the Development of Samoa
SARS	Severe Acute Respiratory Syndrome
SIDS:	Small Island Developing States
SOE:	State of Environment Report
SPREP:	South Pacific Regional Environment Programme
SPRIG:	South Pacific Regional Initiative on Forest Genetic Resources
STEC:	Samoa Trust Estates Corporation
SWA:	Samoa Water Authority
UNFCCC:	United Nations Framework Convention on Climate Change
UNCED:	United Nation Convention for Environment Development

**Foreword:**

*The Barbados Conference in 1994 was a historic event for SIDS countries in that it provided a forum to voice concerns about their special development needs; the outcome of which was the 14 point Plan of Action tailored to meet the singular nature of the challenges faced. These include difficulties in achieving economies of scale, management and development of resources in marine areas many times larger than the national land base as well as other universal issues such as poverty reduction, human resource development and meeting the challenges of globalisation and taking advantage of any opportunities it may offer.*

*Many of the urgent issues faced today are related to the oceans that surround us such as climate change, sea level rise, waste management at home and the impact of sea borne wastes generated elsewhere. As maritime nations, we also have a part to play in addressing the current environmental issues of our time such as global warming and the preservation of biodiversity.*

*With all of this, we find ourselves in the midst of a bewildering array of negotiated trade agreements, international conventions and newly formulated market instruments. It is a struggle to determine the sets of actions, implementation strategies and reporting requirements needed to keep in step with the changing global environment. In the process of these challenges we also face increasing levels of international crime that have managed to reach our shores some of which have come with the snare of technological advancement. This is the context within which sustainable development is being pursued.*

*In our efforts to implement the Barbados Programme of Action, we have affirmed the importance of partnerships in trying to achieve sustainable development at the national, regional and international levels. Through partnership we can achieve sustained results and ensure a healthy environment and a vibrant economy for future generations.*

## **Executive Summary:**

The Barbados Plan of Action provides a framework for specific actions and measures to be taken at the national, regional and international levels in support of the sustainable development of small island developing states. Many of the issues faced today are related to the surrounding oceans such as climate change and sea level rise, global warming and the preservation of biodiversity.

In the process of meeting these challenges, small island countries are also having to deal with the changing global environment and the impacts of globalization which have made compliance and the determination of appropriate responsive strategies difficult.

The Samoan economy continues to change and develop in a significant way with the implementation of economic and public sector reforms. Economic performance has improved consistently reaching robust growth rates in the past two years. These have been well supported by having a sound and stable political situation, government commitment to reforms and good governance standards.

Despite steady economic growth, issues of inequality and hardship are emerging in Samoan society. This is evident among those unemployed in both the rural and urban areas not having access to basic services and opportunities or being unable to realize their potential and aspirations.

While much progress has been achieved in the delivery of services in the health and education sectors as well as extensive infrastructural development, the quality of such services remains questionable. Government should focus its attention over the next decade in addressing the improvement of the quality of service delivery.

In the social area, communities need to be supported in small scale projects to improve access to basic services, transportation and the management of natural resources.

It is within this socio-economic context that Samoa has been able to implement and achieve many of the goals and objectives of the Barbados Plan of Action.

In the sectoral areas, progress is noted as follows:

- ◆ Climate change – ratification by the government of key international instruments, data and information collation on climate variability resulting in the development of adaptation measures through established institutional mechanisms and intensive public awareness programmes. As a result of active participation in regional and international efforts to assess and monitor climatic impacts, Samoa is used as a case study in all of the 4 regional projects on climate change
- ◆ Natural and environmental disasters – Samoa has managed to strengthen its disaster preparedness and management institutions, policy and planning framework and cultural and traditional systems that improve community resilience. An integrated approach has been taken in the implementation of major projects to enhance resilience.
- ◆ Coastal and marine resources- marine and terrestrial reserves have been established with the full participation of the communities that they serve, the policy framework is in place and Samoa has ratified a number of key international instruments such as the Convention of the Law of the Sea

- ◆ Freshwater resources – All efforts have focused on the issues of limited natural water resources and ways to control wastage and unaccounted for water through a policy framework, redefining roles and restructuring of management agencies, as well as the development of projects to rehabilitate and protect degraded watershed areas.
- ◆ Land resources – development has been mainly in the development and improvement of national databases and information dissemination to stakeholders for landuse planning and management
- ◆ Energy resources- an energy policy including renewable energy has been developed and an institutional mechanism is in place
- ◆ Tourism resources – adoption of integrated planning and policies to ensure sustainable development with all landuse and coastal zone management activities requiring environmental impact assessments
- ◆ Biodiversity resources – through partnerships, emphasis has been on the ratification of the necessary instruments which have provided opportunities for technical and financial assistance to implement projects for the conservation of biodiversity
- ◆ Transport and communications – major projects have been completed to improve transport and road networks and public access to communication including the use of the internet
- ◆ National institutions and administrative capacity – the recent realignment of ministries has seen the restructuring of the MNRE and assuming added responsibilities for disaster and watershed management
- ◆ Science and technology – there has been limited progress in integrating science and technology into sustainable development
- ◆ Human resource development – MNRE has been mandated with the protection of the environment and natural resources and has had additional staff commensurate with its restructuring.
- ◆ Implementation and monitoring – mechanisms have been established through institutional strengthening and restructuring within the public sector that promotes partnerships with the private sector and community stakeholders

Some of the problems encountered in the implementation of the BPoA include: inadequate financial and lack of appropriately skilled human resources, lack of scientific support from the educational and research institutes, poor facilities, equipment and tools and rudimentary technology transfer.

Trade related concerns include lack of competitiveness of products due to supply side constraints common to all island states, non tariff barriers in the form of quarantine and conformance, and lack of awareness of market requirements.

Investment concerns include the inflexible land tenure system which adds to the difficulty in accessing funds by local investors, erosion of trade preferences leading to possible relocation of some of the investments.

Samoa is a member of PICTA aimed at creating a common market for 14 island countries and is party to PACER and the Cotonou Agreement, both instruments having the potential to provide opportunities for market access, technical assistance and capacity building. It is in the process of acceding to the WTO and has found the constraints to be limited financial technical and administrative resources.

The Millennium Development Goals represent a framework for achieving human development and broadening its benefits through the implementation of 8 goals, 15 targets and 45 indicators. Overall, Samoa is in a strong position to achieve all of the goals by the year 2015. The main challenge faced is the limited ability to use surveys and datasets and census results to measure the indicators.

As a way forward, there is a need to address emerging concerns in all of the sectoral areas through a national plan of action. Overall, the implementation of the national plan of action requires adequate and quality information, capacity building programmes and sufficient funding. Appropriate partnership arrangements are recommended to meet these special needs including those with the communities themselves.

To achieve sustainable outcomes, it is important to develop appropriate indicators to assess progress in the next decade, establish monitoring and evaluation programmes under each sectoral area, ensure stakeholder accessibility to information and knowledge networks, build community capacity to management resources and provide financial support as well as improve networks for mobilizing resources among the sectoral areas.

## **1.0 SOCIO-ECONOMIC CONTEXT**

The Samoan economy has changed and developed significantly in recent years as economic and public sector reforms have been implemented. Following the external shocks of the early 90s, the government decided to put in place a program of reforms to restructure the economy to be able to respond to internal and external shocks. In that process the economy was transformed from an inward looking, top-down, protective environment into one which is now much more participatory, open, transparent and investment friendly.

### **1.1 Reform program**

The Public Sector Reform Program of Government was initiated with the introduction of a broad based tax, the VAGST in 1994 of 10%; followed by the preparation in 1995 of the new output based/performance budgeting system which was launched in 1996; and tariff and tax reform as well as liberalization of the financial sector in January 1998.

Another key aspect of the reform, was the commitment towards a more strategic planning approach. In 1995, the Government moved away from the long term comprehensive planning in favour of a more strategic planning focus resulting in the publication of its first Statement of Economic Strategy (SES). This was very important because it allowed the government to place all the development challenges in a transparent, strategic and prioritised order. With the SES, the national vision for moving forward was clearly articulated as well as strategies for achieving that vision.

In line with the strategic focus, was the establishment of the Cabinet Development Committee which provided a transparent process for monitoring development. Chaired by the Prime Minister, the CDC involves all the Cabinet Ministers, Under-secretaries, and all heads of ministries and Corporations.

Running parallel to this strategic focus was the reforming of the public sector which embraces the restructuring of the public service and the enhancement of the performance of government corporations to support the economic strategy for greater efficiency and effectiveness in the delivery of services, towards a more market based competitive economy.

The reform of the public service and government corporations involved extensive corporate planning to create not only a corporate environment for the operation of government departments and enterprises that would promote greater transparency and accountability, but also to gain better understanding of core functions and responsibilities to enable departments and corporations alike to implement change management processes that will enhance or improve the delivery of services they are responsible for.

The introduction of best practices and sound principles of good governance has been the overarching objective of these reforms in the public sector towards improved and measurable performance of government services.

These reforms were seen to be necessary in support of the government's economic vision that would enable the private sector to be the engine for growth. These reforms also take into account the absorptive capacity of the government ministries as well as the capacity of the private sector as a partner wherever possible, in the government's privatization program.



### **1.3 Economic performance**

Economic performance measured in real GDP, has improved consistently since late 1995 reaching robust growth rates of 6.9% and 6.2% in 2000 and 2001 respectively. These positive growth rates were driven mainly by the construction sector, commerce industry, especially tourism and the export sectors. Economic growth, slowed down to 2% in 2002, but overall, the average growth rate in the last three years is 4.9%. Economic activity is showing signs of improvement, supported by indicators in the first quarter of 2003 which was 6 per cent higher than the first quarter in 2002.

On the external front, export revenues were 12% lower while imports increased by 1% over 2001. Remittances continued to grow strongly, increasing by more than \$40 million over 2001. Net foreign reserves, at year end amounted to \$176 million, an increase of 0.6% over 2001 and equivalent to 4.7 months worth of import cover.

The current account deficit improved significantly by \$30 million, dropping from \$95.5 million in 2001 to stand at \$65.3 million in 2002. Narrowing the current account deficit was assisted by the significant increases in net private transfers of \$40.2 million and \$1.64 million of net income and services.

Domestic credit to the private sector rose to \$295 million, representing an increase of \$28 million over 2001.

On public finance, the 2001/02 (provisional) budget outturn indicates an overall deficit of \$17.5 million, compared to the budgeted deficit of \$23 million. The first half of fiscal year 2002/03 (provisional) budget outturn indicated an overall surplus of \$3.6 million, against a pro-rata estimated budget deficit of \$8.6 million.

The annual average rate of inflation stood at 8.1 percentage points at end December 2002, which was 4.2 percentage points above end December 2001. The increase was largely attributed to the increasing prices of local goods sold at the Fugalei market. This trend has however slowed to around 1.4% in October 2003.

### **1.4 Socio-context**

In the light of the many changes which have been, and are continuing to take place in the Samoan economy and society, the issues of inequality and hardship are emerging as important issues and can no longer be ignored. Hardship and poverty are multi-dimensional, they are not just concerned about income levels, although this is a key measure of poverty. For many people, particularly those unemployed living in both the urban and rural areas, hardship is about poor access to services and opportunities, or of being unable to realise their own potential and aspirations. Even the traditional Samoan social structure and associated safety nets are coming under strain as external influences affect attitudes and aspirations.

The results of the participatory survey carried out in 2002 and 2003, suggest that hardship is becoming important daily issues at the household level. The results of the 2002 HIES will provide baseline data to calculate the poverty line for Samoa and allow analysis of those incomes below the basic needs poverty line who will be considered to be experiencing some degree of financial hardship on a daily or weekly basis.

The level of basic literacy is both high and equitably distributed both throughout the country and between genders. However there is some evidence that the quality of education and the consequent attainment level reached by many students has not shown uniform improvement

in the recent years. There is also a need for more opportunities for technical and vocational training for those who are unable to follow an academic path. Thus a significant proportion of the student population might be failing to achieve their potential and are thus more likely to experience hardship as a result of the lack of appropriate skills and relevant education, if they are unable to share in the opportunities created by development.

Similarly in health, whilst many key health indicators have improved in recent years there is concern that the quality of services being delivered, especially in some rural areas, is insufficient. The morbidity profile of the population is tending towards non-communicable, lifestyle diseases where strong primary health care, health education and nutrition programmes have an important preventative role to play.

Thus whilst many appear to have become better-off, there are a growing number of others, particularly amongst the youth and the elderly, who do not appear to be sharing directly in this process. Many youth are finding it difficult to get the sort of jobs to which they now aspire; a traditional village and subsistence agriculture lifestyle no longer has much appeal. Conditions of financial hardship whilst not widespread do nevertheless; have the potential of leading to increased social and domestic tensions, rising crime and a deteriorating quality of life for those most affected

## **2.0 FRAMEWORK FOR SUSTAINABLE DEVELOPMENT**

The sound and stable political situation and government's commitment to economic and public sector reform and improving governance standards have been the principal factors supporting the satisfactory rates of growth in the economy. These policies need to be sustained but with added emphasis to addressing the needs of the community. The Strategy for the Development of Samoa 2002 – 2004 (SDS) recognises this and has as its theme "Opportunities for All".

The key issues facing Samoa are therefore the need to:

- (i). sustain and build on the good progress of the last seven or so years in macroeconomic growth and stability;
- (ii). ensure continued fiscal discipline and improving standards of governance;
- (iii). continue to promote private sector investment and employment creation;
- (iv). strengthen the education system, particularly in technical and vocational skills; and to,
- (v). improve primary health care and health education.

There is therefore a need for continued clear vision, strong leadership and good governance. As the government has already recognised in the SDS, there is a need for a comprehensive set of national strategies to achieve equitable growth and to alleviate hardship in Samoa.

Alleviating hardship needs to address both macro and micro level issues. At the macro level, national policy must continue to focus on the broad issues of education and health service delivery and creating an environment conducive to encouraging private sector investment. At the micro level, it is necessary to address the specific needs of individual villages and communities. This means promoting rural enterprise activities to create income generating opportunities as well as meeting particular local priorities.

In the social area it needs small-scale hardship alleviation projects for improving water supplies, health services, transport and similar community based activities. It also requires government to improve the quality of basic service delivery, through better training of teachers, staffing of schools and clinics, maintenance of health and education facilities and infrastructure and improving the availability of essential teaching materials and medical supplies.

The recent apparent slight weakening in the fiscal situation needs careful monitoring to ensure that fiscal discipline is maintained. Continued economic growth needs to be sustained through an appropriate investment enabling environment and improving governance standards. Growth oriented, employment-creating strategies, must be maintained to keep the macroeconomic side moving forward.

A new or revised set of national development strategies will be formulated in the coming year or so as the present SDS rolls forward to 2004. The emerging issues of hardship and inequality which have been identified need to be incorporated into future strategies and priorities to achieve the government's objective of ensuring "Opportunities for All".

### 3. NATIONAL PROGRESS, PROBLEMS ENCOUNTERED IN THE IMPLEMENTATION OF BPOA AND FUTURE DEVELOPMENT

#### 3.1 Introduction

Samoa's achievement and implementation of BPOA objectives and activities has been measurably significant. These can be seen throughout national reports to Multilateral Environment Agreements that Samoa has become party to, as well as programme and project implementation terminals executed at the bilateral level with its development partners. While the development, implementation and monitoring of this myriad of national and regional programmes, actions and projects had been incepted towards a diversity or spectrum of goals their integration reflects the achievement at the same time of BPOA objectives and goals.

The path to these achievements did not escape the obstacles and difficulties prevalent in efforts by LDCs in their development. Samoa also faced difficulties in institutional, financial and mechanistic resources. The magnitude and seriousness of these difficulties in each thematic area also affects the extent of their achievement.

This section will provide an outline of the path towards achieving goals and objectives of BPOA within its 14 main thematic areas since Barbados and also reflects on the challenges and needs for future sustainable development.

#### 3.2 National Progress:

##### 3.2.1 Sectoral areas

##### 3.2.1.1. Climate Change and Sea Level Rise

In the area of climate change the BPOA called for the ratification of or accession to the United Nations Framework Convention on Climate Change (UNFCCC) and others related to the protection of the world from changes in atmospheric equilibrium. As a result Samoa ratified the UNFCCC in 1994 and the Kyoto Protocol in 1997

A number of actions were taken at the national and community levels to implement the climate change international agreements. At the same time, the goals and objectives of national economic development strategies and policies remain closely integrated in the development and implementation of these programmes and projects. These actions started with Monitoring, surveying and data collection on observed climate change and variability, sea level rise and their impacts on local social, environmental and economic sectors. These are summarized in Table.1

**Table.1 Surveying, Data Collection and Monitoring Programmes on Climate Change Vulnerabilities and Strategic Adaptation Plans**

<b>Monitoring and Surveying Programmes and Activities</b>	<b>Impact assessments on social and economic vulnerabilities</b>	<b>Strategic Adaptation Programmes and Plan</b>
Greenhouse gas inventory (1999)	Vulnerability & Adaptation Assessment 1999;	Planning for Climate Change Policy in the finalization stage.
Sectoral Vulnerability Assessment for Development of Initial National Communications 1999	Community Vulnerability & Adaptation Assessments 2003;	First National Communications 2000
Vulnerability & Adaptation	Coastal infrastructure Assessment	National Coastal infrastructure

Assessment (1999)	/ Hazard Mapping 2001	Management Strategy (2001)
Coastal Hazards Database 2001	Map areas and computer-based information systems on vulnerable areas to sea level rise	District Coastal Infrastructure Management Plans (2002)
Community Vulnerability Assessment 2003 – ongoing.	The mapping of areas vulnerable to coastal hazards (flooding, erosion, landslips) /sea level rise was completed under the World Bank funded project in 2001.	

The data and information collated were then used as baselines for development of Climate Change Adaptation Strategies and Measures. The strategy and action plan development process contributed to a better understanding of the range of issues associated with the development of methodologies, approaches and specific action oriented facilities that enabled adequate adaptation to climate change and its impacts.

A number of key institutional mechanisms were set up to facilitate this development. They include the establishment of a permanent National Disaster Council to coordinate programmes and strategic response actions to extreme events, Establishment of the National Climate Change Country Team, the formalization of the Climate Change Unit within the Ministry of Natural Resources and Environment and an ongoing climate change Projects Steering committee that oversees and provides technical advice for all climate related programmes and projects.

All initiatives and actions taken by the government in partnership with the private sector and communities had an associated public awareness component. This was to ensure common understanding by all stakeholders of the issues and potential impacts of climate change initiatives, objectives, goals and expected involvement of all players in the implementation of assessment and adaptation actions. Specific actions to improve public and political understanding include;

- National Climate Change Awareness Day July every year since 2001
- Media publicity / awareness programs on TV and radio
- Continuous School programs in local newspapers and through the school curriculum development office work
- Community programs with pilot testing of adaptation projects in the villages of Saoluafata in Upolu and Lano in Savaii
- Environment Forum since 2000 during the environment week that is held on the first week of November since 1991.

Samoa's participation in the bilateral, regional and global research, assessment, monitoring and mapping of climate impacts, including the adoption of oceanographic and atmospheric measures and policies and the development of response measures, resulted in its selection as a case study in each of the following regional and international programmes. The four regional programmes, include the Pacific Island Climate Change Adaptation Project (PICCAP) that enabled the development of national communications and Green House Gas Inventory, the Capacity Building for Development of Adaptation Measures for Pacific Island Countries (CBDAMPIC) by CIDA and SPREP, the Promotion of Renewable Energy and Greenhouse Gas Abatement Project (PREGA) project funded by ADB, and the Pacific Island Renewable Energy Project (PIREP) project funded by UNDP and Pacific Island Global Climate Observation Project (PIGCOS) executed by SPREP. At the international level there is the

National Adaptation Program of Action (NAPA) GEF/ UNDP project where urgent and immediate adaptation needs of Samoa are being identified.

While a number of assessment reports, Action Plans and National Communications exist, there still remains the challenge of filling information and data gaps in the area of Greenhouse gas inventory and qualifying certainty of adaptation measures' impacts on the social and economic livelihoods of the local population.

### **3.2.1.2 Natural and Environmental Disasters**

Samoa has strived to strengthen its disaster preparedness and management institutions. Disaster management and awareness policies and plans including building codes, regulatory and enforcement systems have been prepared and codified. These instruments have been framed as responses to the need for strengthened preparedness, response and mitigation that improves the resilience of the country's people, infrastructure and economy to the increasing range and frequency of natural and environmental disasters.

The promotion of early warning systems and facilities for the rapid dissemination of information and warnings has equipped the national Meteorological office with modern computerised disaster early warning systems. In 1990 a National Disaster and Emergency Management Council was established by Cabinet (chaired by the Prime Minister) to coordinate the different roles of government departments and institutions, private sector groups and NGOs in a way that harmonises the delivery and performance of each member's responsibilities in the three core stages of disaster management; namely Disaster Preparedness, Disaster Response during an event and Disaster Mitigation in post-disaster reparation.

A National Disaster and Emergency Management Plan (NDEMP) was endorsed in 1991 and later reviewed in 1997. The plan spells out the goals and objectives for disaster management at the national level, the institutional requirements, and council membership (or stakeholder) roles in response to all kinds of disasters likely to threaten Samoa. For instance a specific Cyclone Response Plan has been established by the National Meteorology Office which is the first line of information and defence for cyclones, tidal waves, and flooding, while the Fire Department are first in line for execution of the Fire Response Plan that are part and parcel of the NDEMP. Cyclones are the most common natural disasters in Samoa and expected to be an annual phenomenon during the wet season, although there has only been record of three extreme events of such magnitude between 1990 and 2003.

A permanent National Disaster Management Officer was appointed in the Prime Minister's department in 1997. The recent restructuring of government ministries saw the shifting of this central disaster management role to the Planning and Urban Management Agency (PUMA) of the Ministry of Natural Resources and Environment in early 2003.

The capacity of local broadcasting has been strengthened to assist remote rural and outer island communities and among neighbouring countries during disaster events. The single national radio was joined by the first private FM station in the late eighties and later expanded to three more FM radio outlets in the mid 1990s. The radio frequencies are also received in American Samoa, and Tokelau. The National television station was established and started broadcasting in 1991. One other TV station was also established in the mid 1990s followed by three Cable TVs in the late 1990s. In 2003 the public Television and radio stations were merged into one broadcasting corporation to improve its operations and cost effectiveness.

A national disaster emergency fund has been planned for natural disasters. This fund is kept at the Ministry of Finance with expected support and input from other ad hoc sources during and after a national disaster event. There is joint private and public sector support for areas where insurance is not available in the commercial market, taking into account the relevant experience to be gained from the operation of similar funds.

Non government Organisations such as the Samoa Red Cross fundraises to assist Pacific Island Countries that suffer severe disasters. The Government has also offered financial aid to fellow Pacific Island Countries that suffer severe disasters. The village women's committees undertake implementation of non-governmental organisation programmes (including the Red Cross) in disaster management. This is effected through the storage and dissemination of first aid kits as well as information dissemination via the women's centre, which is also the location of the red cross box of first aid supplies.

Long term planning for disaster management is evidenced in the integration of natural and environmental disaster policies into national development planning processes. Encouraged are the development and implementation of public and private sector pre- and post- disaster recovery plans, drawing on the capacity of the United Nations Department of Humanitarian Affairs and the current focus on the International Decade for Natural Disaster Reduction.

In the preparatory stages for natural disaster and emergency management, a number of integrated actions have been developed. These have been promoted to improve resilience to risk of natural hazards. The Coastal Infrastructure Management Strategy established under the Infrastructure Asset Management Project (2000) expanded to 15 electoral districts with completed Coastal Infrastructure Management Plans. The public and communities are also made aware of the vulnerabilities of areas that they inhabit with the completion and dissemination of a national series of hazard maps estimating the extent of flooding, landslip and coastal erosion threats. A GIS database now contains a significant pool of information on a range of hazards.

While the scope of National Disaster and Emergency Management Plan covers all types of natural and environmental disasters, its implementation has concentrated mainly on extreme weather events such as cyclones and tidal waves as well as bush fires. This is unarguably the case given the frequent occurrences of these two types of environment disasters. Recently however, other types of disasters are also becoming more important hence the much wider expansion to health, pollution, agricultural, cultural and economic disasters.

A Draft Oil Spill Contingency Plan has been completed, with consultation being undertaken to develop a Marine Pollution Legislation. The intention is to establish a legal framework that can prevent pollutant spill disasters in Samoan waters, along the lines of international Maritime Global Agreements.

The Ministry of Health has also developed its own response strategies against any health epidemic of significance, while day-to-day programmes promote the preparedness and preventive measures against any outbreaks of diseases such as HIV/AIDS and those deemed contagious such as SARS and Rubella.

Samoa's agricultural sector has suffered setbacks in its taro production throughout the 1990s due to a virus (phytaurus virus) outbreak and the proliferation of the African snail pest. The research centre of the Ministry of Agriculture has conducted research and put in place

response strategies to address these pressures, and as a result taro production has recovered in more recent times although the quality.

Continuing efforts are made in strengthening cultural and traditional systems that improve the resilience of local communities to disaster events. The women's committee in every village is an active group in national efforts on disaster management programmes and public awareness is continuously enhanced through ongoing consultations with communities and the annual commemoration of the annual Disaster Awareness day in October at the beginning of the cyclone season.

### **3.2.1.3 Waste, Drainage and Sanitation**

The Government has developed fiscal and policy incentives and other measures to encourage environmentally sustainable imports and local products with low waste or degradable waste content. Cabinet passed a directive that calls for the ban of importing non-ozone friendly goods e.g refrigerators etc. Government has also reinforced the ban of pre 1995 made vehicles. The Ministry of Transport (MOT) also bans the importation of right-hand driven vehicles by codification of its relevant 2003 Regulations. Import duties on all imported drink in cans, plastic and glass containers, where a portion of the duty is reimbursed if the importer re-exports the containers. The government through MNRE introduced a disposal fee at the Tafaigata Landfill site for commercial and industrial solid wastes as means to recover operation and maintenance costs.

Data and information that reflect baselines for the waste situation and the management approaches in Samoa to control pollution, monitor waste generation, emissions etc for both sea and land based sources of pollution has reached a number of milestones. Waste Characterization Studies were conducted and documented 1991, 1994 and 1999. Time and motion studies were also conducted together with the characterisation studies. The same studies also assessed and recommended a competent authority in the country that will be responsible for the on going coordination of waste management issues at the national level in the MNRE. Land based sources of pollution were investigated in 1994. Estimation of Persistent Organic Pollutants and Identification of contaminated sites in Samoa was conducted in the first half of 2003.

The development and implementation of appropriate regulatory measures, including emission discharge and pollution standards, for the reduction, prevention, control and monitoring of pollution from all sources; for the safe and efficient management of toxic, hazardous and solid wastes, including sewage, herbicides, pesticides and industrial and hospital effluent; and for the proper management of waste disposal sites have all been taken up with the relevant organ of government that is directly in charge.

A number of guidelines, draft standards, codes of environmental practise, and legislations have been developed some of which already have the force of law. The approved policies and guidelines include the National Environment Impact Assessment Guidelines, Urban Planning & Management Strategy 2002 which sets up the Planning & Urban Management Agency (PUMA) within the Ministry of Natural Resources and Environment, the National Waste Management Policy 1996. Also approved is the Healthcare Waste Management Strategy 1999, and immediately followed by the Healthcare Waste Management Strategy 1999.

The Planning and Urban Management Strategy (2002) and its Implementation Plan (2003) set the framework for better management of sewage and drainage systems in Samoa. An incremental approach is taken to lessen the burden of high costs associated with large-scale



conventional sewage treatment systems with ocean outfalls. An ADB facilitated Integrated Sanitation and Drainage project has been approved by government in November 2003 and expected for implementation in January 2004.

Samoa does not have environmental standards for most of technology and pollution sources emitting contaminants into the environment. However, international standards of the World Health Organisation (WHO), relevant standards and procedures of New Zealand and Australia National Environment Agencies, and the USEPA have been selectively applied where appropriate. Codes developed and operationalised to address waste management needs include the National Codes of Environmental Practices 2002, and the National Building Code 2002.

The proposed National EIA Regulation is still under consideration by Cabinet, awaiting the codification of the Planning and Urban Management Bill (2003), which has gone through its second reading in parliament earlier this year. A proposed draft exists for an Integrated Waste Management Plan for Apia (1999), but implementation did not wait until its formal endorsement. Hence the upgrading of the Tafaigata Disposal Landfill since the beginning of 2003 that also saw the establishment of an Anaerobic Digester Plant & Waste Separation Facility at Tafaigata 2003. A health care waste incinerator plant is being constructed at the Tafaigata landfill which is designed to operate at the accepted international emission control standards. A second landfill was established on the island of Savaii at Vaiaata in 1999. Its planning included the undertaking of an EIA. The solid waste Collection (municipal) service was extended to rural areas on both Upolu and Savaii in 2000. A new collection was also recently introduced in 2002 for bulky waste such as refrigerators, TV and so on, twice a year and free of charge, by the Government

Samoa has ratified and implemented relevant Multilateral Environmental Agreements (MEAs) or conventions relating to waste and pollution control. They include the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their disposal signed in 2002, the convention on the Prevention of Marine Pollution by dumping of wastes and other matter (London Convention 1972), the Rotterdam Convention on Chemicals acceded to in 2002, and the Stockholm convention on Persistent Organic Pollutants (POPs). Samoa has also given due recognition other international conferences such as the Global Programme of Action for the Protection of the marine Environment from Land Based sourced of Pollutants. Samoa is also a signatory to the Vienna Convention for the Protection of the Ozone layer, its Montreal Protocol for the Control of Ozone Depleting Substances (ODS) and all of its Amendments.

Implementation of these conventions at the national level started immediately after the submission of Samoa's instruments of ratification for each convention. For some of these MEAs national enabling legislative environment already exists, while others needed new initiatives. Enabling Activities under the Global Environment Facility were then approached and approved to assist with the development of plans and strategies to facilitate implementation.

Under the Stockholm convention Samoa has been enabled to identify sites in Samoa that are contaminated with POPs. A National Implementation Plan for the convention is also being prepared with an initial inventory. A special Task Team has been set up to develop the NIP for POPs. Working parallel with the task team is the special committee (mainly from the main authorities involved) to facilitate the future trans-boundary movement of hazardous wastes under the Basel and Waigani conventions.

Under the London Convention for Maritime Pollution Control, port reception facilities for the collection of waste in accordance with annex v of the International Convention for the prevention of pollution from Ships (MARPOL 73/78).

In conformity with the Regional Waigani convention, and the Basel and relevant decisions taken by the parties to that convention, Samoa has formulated and enforced national laws and or regulations that ban the importation from states that are members of the organization for Economic Cooperation and Development of hazardous wastes and other wastes subject to the Basel Convention, including hazardous wastes and other wastes destined for recycling and recovery operations. The Samoa Ports Authority was established in 2000, after being identified as the competent authority in the country responsible for the on going policing of the transboundary movement of hazardous wastes, while coordination remains with the MNRE.

The Montreal Protocol for the Phase out of Ozone Depleting Substance is probably the most advanced in implementation of MEAs. A National Country programme was established back in 1997, which included an Institutional Strengthening Project that is currently still operative. The National Refrigeration Management Plan was approved in 2001, as well as ODS Management Strategy and Action Plan also the same year. A national Policy to control the importation of controlled ODS and white goods based on ODS is being finalised. In the meantime, the Refrigeration industry and Customs officers have received on the job training on alternative refrigeration practise and servicing, as well as ODS detection techniques for boarder control, once the Licensing system is operative.

Court actions have been taken to deal with sea pollution incidents in 2000 penalizing some vessels with fines. The proposed Shipping Bill that covers the trans-boundary movement of hazardous wastes is in its final stages of public consultation.

Public awareness and education campaigns in waste management, sanitation and drainage have been designed to gain local recognition of the need to control wastes at the source, the value of reuse, recycling, renew, and of the possibilities for converting wastes to resources in culturally appropriate ways particularly packaging. A number of capacity building and awareness programmes have been implemented with some still ongoing. These include the Samoa Environment and Conservation Support multi media environmental education project 1998, producing teaching materials (Where Can You Take Your Garbage, Composting, turn Household waste into Food For your garden, Managing Samoa`s Waste), video and radio programs. Environment subjects are integrated into the national education curriculum. Ad hoc initiatives range from on-going workshops, meetings and other informal gathering focusing on enhancing public awareness on waste at the community level to continuous airing of TV advertisement and on going clean up campaign activities for schools and organizations.

A number of institutions (both public and private sector) have contributed to the effectiveness of these programmes. Most prominent from government are the MNRE waste management services and the Samoa Tourism Authority's National Beautification Committee. The utilisation of cross sectoral committees and task team are recognised as an excellent means of ensuring better coordination and sharing of resources in the public sector programmes. A number of NGOs are also involved in the committees.

A National Waste Awareness Day is commemorated in March as an annual event since 2001.

In addressing sewage and sanitation problems that are threatening the environment, clean technologies and treatment of waste at the source and appropriate technology for solid waste treatment have been introduced. These range from basic experimental pilots to large-scale projects attracting government investment. Samoa has experienced construction of compost toilets at villages, schools and some government organizations. A number of organic waste composting projects at the community level were piloted in ten villages on Upolu in 2002 by the MNRE, while the MAFFM contributes with continuing research of compost in association with the JICA. The main hotels and an increasing number of government offices in the central business district have connected to onsite sewage treatment systems.

#### **3.2.1.4 Coastal and Marine Resources**

The coastal and marine resources are fundamentally important for the well-being of the Samoan people, as they provide food, shelter and protection as well as other basic needs for their socio-economic development. The protection, conservation and development of marine resources has been a high priority for the Samoan Government since independence in 1962, and remains a major focus of sustainable development efforts.

The Palolo Deep Marine Reserves and the terrestrial O le Pupu Pu'e Parks & Reserves were established in 1979. In the late eighties and early nineties, several marine and terrestrial ecological surveys and inventories had been conducted to assess and evaluate the status of these natural resources on which our socio-economic development depended. Coordinated activities among the Government agencies, non-governmental organisations and the private sector through active consultations took place. The Ministry of Agriculture, Forests, Fisheries and Meteorology (MAFFM) in collaboration with the Ministry of Natural Resources and Environment (MNRE) established community inshore fisheries reserves that were managed by the communities. These community inshore fisheries reserves have been expanded to cover 117 villages of the Samoan main islands. The Government in partnership with the World Bank and IUCN and selected communities set up pilot projects in some of our districts (Aleipata and Safata) to verify the concept of Community-Based Marine Protected Areas (CBMPA) which if successful, will then be replicated in other parts of Samoa. The CBMPA will be completed by the end of 2004.

Samoa ratified the UN Convention on the Law of the Sea on February 9<sup>th</sup> 1994, the Convention on Biological Diversity on August 14<sup>th</sup>, 1995 and the Cartagena Protocol on Biosafety in June 2002.

In 2002, Cabinet approved the dedication of its entire Exclusive Economic Zone (EEZ) for a National Marine Sanctuary for sharks, dolphins, turtles and whales. The finalisation of the management plan for the sanctuary is work in progress for the Division of Environment and Conservation of MNRE and the Fisheries Division of the MAFFM. Since Samoa's EEZ is the smallest in the region and the resources therein are vulnerable to illegal fishing, it is vital that there is efficient management and control of these marine resources. Work is in progress in the delineation of Samoa's EEZ with the assistance of the Commonwealth Secretariat and the SOPAC.

The development and formulation of the Marine Resources Use Policy has been progressively undertaken as part of the National Environment Management Strategy (NEMS 1994) and should be ready for approval before the end of 2004.

Public awareness methodologies and techniques have been developed and tested for effectiveness. Effective coordination and collaboration among the key stakeholders have been

integrated into the implementation of various programmes and projects, at the community level as well as harnessing the strengths of the traditional social structures. An all pervasive approach has been taken in public awareness campaigns to include all levels of stakeholders on the importance of nature and the environment and the limited natural resources that Samoa has, in order to instigate collective efforts in sustainable management and utilisation of these resources.

### **3.2.1.5 Freshwater Resources**

People all over the world are increasingly realizing that water is a finite and vulnerable natural resource. In 1992 the Water and Environment Conference in Dublin and the United Nations (UN) Conference on Environment and Development in Rio focused attention on treating water as a scarce and vulnerable resource that is essential for all life. The conference recommended that water developments must satisfy basic human needs first and that water use beyond that should be charged appropriately. That same conference identified water as an economic good that should be developed through a participatory approach.

Beside the basic needs for drinking, hygiene and food production, water is also required for hydro-generation of electric power, manufacturing and other industries. Unfortunately, sufficient water is not always available to meet all these competing needs due to the limited nature of natural water resources, as well as wasteful use of water resources. In other cases, sufficient water may be available, but is not suitable for the intended use due to poor quality.

In 1982 a 'Watershed Evaluation' was carried out by FAO in collaboration with the Division of Forestry, Parks & Reserves of MAFFM. Since then more and more activities have been directed to improve the status of identified watershed areas in Samoa up until 1990. Government approved the establishment of the Watershed Management Section under the Forestry Division of the MAFFM which activities mainly focused on the most immediate needs of the Vaisigano and Fuluasou Watershed areas feeding the main supply for the township of Apia and the surrounding villages as well as those at Faleaseela and Palauli in Savaii. Rehabilitation forest plantations have been established at the Vaisigano and Fuluasou degraded watershed areas and assessments of other watershed areas were undertaken. Community tree planting on customary lands have been encouraged and facilitated by the Watershed Section through public consultations and awareness raising activities. Currently this activity has now been replicated in both islands of Upolu and Savaii.

The Watershed Regulation was approved by Cabinet in 1992 and in July 1994, the Samoa Water Authority was set up under the Water Authority Act 1994. The Samoa Water Authority (SWA) has since been working very hard on the improvement of water services and the effective control of water consumption and related uses.

The realignment of ministries as part of the public sector reform programme by the Samoa Government in 2002 resulted in the transfer of the Watershed Section from the MAFFM to the MNRE under the Division of Environment and Conservation (DEC). The current review of the Principal Act of Lands, Surveys and Environment 1989 (LSE Act 1989) has accommodated this transfer, which will be tabled in Parliament as the Ministry of Natural Resources and Environment Act 2003 (MNRE Act 2003). Since the MNRE is given the full responsibility for water resources, it is in the process of developing and formulating a proposal for a Water Resources Division for the approval of the government.

Cabinet approved the National Water Resource Policy in 2001 and the SWA is currently finalizing the National Water Services Policy for Government approval before the end of

2004. 'WATER FOR ALL SAMOA' is the theme of the national water resource policy approved by Government in 2001 under the MNRE as well as the national water services policy currently developed by the SWA..

The introduction of water tariffs and a user pay system will go a long way to control excessive water utilisation and wastage. There are currently 13 bottled water ventures in the country, providing quality water as well as import sources.

The regional International Waters Project (IWP-Samoa) has been focusing on two (2) pilot projects to rehabilitate degraded watershed areas in the rural communities of Apolimatai island and Lepa village since 2001. Protection of the watershed areas and the community's commitment to sustainable management and use of the water resources are crucial elements of this project. Again these pilot projects are expected to be replicated in other villages of Samoa, if the resultant outcomes are sustainable and economically viable.

There is a need to ensure that there is coordination on the implementation of responsibilities of all parties involved in the sustainable management of freshwater resources especially when such responsibilities span a number of ministries and government corporations as well as civil society.

#### **3.2.1.6 Land resources**

The development of land resources has principally been in the development and improvement of national databases and the dissemination of information to relevant groups, especially local communities, youth and women, for land-use planning and management. Information on estimates of the carrying capacity, economic and environmental value of land resources, along with appropriate decision-making tools, such as land/geographic information systems have all been part of the assessment and dissemination process. In the latter half of the last decade, management and control mechanisms such as policies and legislation came to the fore.

The government through MNRE has developed national land information databases and attempts have been made starting with internal networking that links various databases for easy access within the Ministry of Natural Resources and Environment that is mandated with the generation and storage of land related information. A website including relevant publications for the purpose of national and international awareness on the progress of Samoa's implementation of Multilateral Environmental Agreements and the Ministry's core functions and services such as land management, technical land services (surveying, mapping, valuation and drafting), Planning and Urban Management, and Conservation has been established.

There is work in progress on the land capability/zoning systems for Samoa and the need to establish mechanisms for the sustainable allocation of land-based resources such as sand, aggregates, rocks etc. Traditional management systems, government institutions and development projects have been taken into consideration in the process of sustainable management and development of limited land resources.

Land in Samoa is divided into three main tenure; customary, freehold and government lands as shown in Table-2.

Table-2 Estimates of Land Ownership in Samoa in 1991

Type	Upolu		Savaii		Total	
	(ha)	%	(ha)	%	(ha)	%
Customary land	76,166	17	153,490	54	229,656	81
Government	19,758	7	10,626	4	30,384	11
WSTEC/SLC	9,499	3	4,476	2	13,975	5
Freehold	7,800	3	1,037	*	8,837	3
<b>Total</b>	<b>113,223</b>	<b>40</b>	<b>169,629</b>	<b>60</b>	<b>282,852</b>	<b>100</b>

In the rural communities, land remains primarily under customary ownership and a large proportion of it is under cultivation. A study conducted in 1990 (ANZDEC) produced land use capability maps of the whole country. The maps categorised Samoa's land into four main classes:

- 1) land with few limitations to agricultural use (39,600 ha);
- 2) land with moderate limitations to agricultural use and few limitations to forestry (121,700 ha);
- 3) land with severe limitations to agricultural use and moderate to severe limitations to forestry (59,400 ha); and
- 4) land unsuitable for agriculture or forestry (69,000 ha)

Samoa acceded to the United Nations Convention to Combat Desertification (UNCCD) on August 20, 1998. Reporting requirements under this convention have already been met with two reports submitted in the last two years consecutively.

Samoa has prepared and/or reviewed land-use plans in conjunction with agricultural, forestry, mining, tourism, traditional land-use practices and other land-use policies, with a view to formulating comprehensive land-use plans and zoning so as to protect land resources, ensure sustainable and productive land-use and guard against land degradation and pollution that exceed the island's carrying capacity. It is widely understood that the tenure system in Samoa, which gives more than 80% of land ownership to the Chiefs and Orators complicates any commitment from financial agencies to use these as collateral for lending. Absentee owners who could be residing overseas or in town may caveat the exchange of use of land in the rural areas or traditional villages. This has resulted in some of the customary land being left unattended to. Disputes over ownership of some land result in these lands being overgrown with weeds and scrub. Fortunately though, when the village council conducts its clean-up for beautification of the village these overgrown lands are also maintained. There are also village based reserves particularly in forestry where the village are charged with maintenance of the forests.

A Sand Mining Policy was formalised in 2001 to provide guidance for management of sand and aggregate extraction from the foreshores of Samoa. Existing legal requirements are contained in Part VIII of the Lands Surveys and Environment Act 1989, which prohibits removal of sand or any aggregate from the foreshore, as well as disallowing any construction including reclamations within the foreshore without the prior consent of the Minister of MNRE. The Coastal Infrastructure Management Plans also provide guidance for the responsibilities of villages, and districts as well as the government, in ensuring that the sand resources are not being extracted beyond the carrying capacity of the foreshore so that in the long run, natural replenishment becomes elongated or even impossible.

The Planning and Urban Management Bill (PUMB) 2003 which has already gone through its second reading in parliament went through a national consultative process to ensure wide

public support and adherence, is expected to provide a legal framework for the management of and control of unsustainable types of land use. Particular types of land utilisation forms will be closely scrutinised with the requirement for mandatory development consent. Included is the Salelologa Township development on the island of Savaii. Government has acquired customary land with compensation to develop physical infrastructure to attract Savaiians to remain on the island and develop its land and human resources.

Appropriate forms of land tenure are encouraged, improved land administration and a greater appreciation of the integrated nature of land development is promoted in order to facilitate sustainable land-use, with the establishment of the National Land Use Policy.

In addition, the Land Management Division of MNRE administers the extraction of land resources such as; the reclamation of land from the sea and river banks and extraction of sand and aggregates. Coastal-based communities are increasingly becoming more aware of the effects of unsustainable sand mining, and are addressing this issue through traditional governance (e.g – bans). Issues arising from unsustainable sand mining have increasingly been recognised in various programmes (Climate Change, Marine Biodiversity conservation, and Coastal Infrastructure asset management). The increasing application of Environment Impact Assessment procedures to proposed sand extractions has meant that such could be carried out in a more sustainable manner.

### **3.2.1.7 Energy Resources**

Samoa's energy needs are mostly dependent on external or overseas supply of fuel. Fuel for transportation and technology are oil dependent although there has also been an increase in renewable hydropower energy generation with the establishment of the Afulilo hydropower plant. This improvement is coupled with strategic promotion of a more efficient use of energy sources in development planning and use of appropriate methods to minimize the adverse effects of climate change on the sustainable development of those resources.

These are reflected in the incorporation of renewable energy in Samoa's National Energy draft policy. Two ongoing projects such as PIREP and PREGA are also mainly focused on research and technical assistance to encourage the development of renewable energy opportunities that exist in Samoa.

More than 75% of Samoa is now covered by electricity. While access has been improved dramatically, the quality of electricity has been haphazard with breakages or outages becoming common in remote as well as heavily populated areas in the urban area due to a demand that is higher than the capacity of the supply.

The idea for Geothermal power has been explored by a couple of overseas developers, but the drilling is extremely expensive. The amount of land envisaged to be encircled within such an exploration exercise was confirmed substantial hence will be difficult to secure and compensate.

Overall, a draft National Energy Policy has been completed and being taken through a consultation process. One of the main components of the policy has been reserved for renewable energy. The development of this part of the policy involved the promotion of public awareness of renewable energy, collection of data on sustainable energy needs and potential, development of pilots on renewable energy, development of Type II projects on renewable energy, development of Clean Development Mechanisms (CDM) projects on renewable energy, and development of efficient wood stoves for cooking

At the same time, except for the development of hydro electricity generation, there is limited action to date on sustainable energy. Nevertheless, actions at the national level for the development of energy resources are expected to lead to the establishment of a division for sustainable energy, incorporating climate change and other energy related projects such as the organic waste biogas generation project being piloted at the national landfill at Tafaigata on the island of Upolu. The main focus of the energy sector in Samoa is for the development of renewable energy, such as solar, wind, heat, biogas and wave energy. There has been a pilot study conducted for the potential of renewable energy in the small island of Apolima and findings have proven it to be costly and unaffordable.

### **3.2.1.8 Tourism Resources**

Tourism development and environmental management are mutually supportive. This is the principle that has been given great recognition by the government of Samoa as well as its private sector and community tourism stakeholders in efforts to capitalize on this growing sector. Strategic development in tourism has gone through various planning stages that take into account the three pillars of development in social, environmental and economic considerations. This is reflected in the successive National Statements of Economic Strategies including the current Strategy for the Development of Samoa 2002-2004, identifying the Tourism Sector as developing attractions and activities with respect to nature, culture, adventure and coastal tourism

Planning processes for tourism resulted in the finalization of the first Tourism Development Plan 1994 -1998. Later in 2002 the initial plan was reviewed and the Tourism Development Plan 2002-2006 was completed to provide a framework for sustainable tourism development which focuses on conserving and enhancing the country's natural and built environment. Its goal is to provide a framework and a process that ensures a balanced, coordinated, practical and efficient approach to the sustainable development of tourism in Samoa.

As a result tourism in Samoa has enabled the sustainable development of cultural and natural heritage sites, including conservation areas, providing more visitor interest since the past decade. Sustainable tourism has promoted environmentally related conservation efforts in the preservation of cultural and natural heritage sites of Samoa, and since 1994 tourism earnings have been the largest source of foreign exchange. Tourism receipts have grown from 5% of GDP in the eighties to 15% in the late nineties.

Samoa has adopted integrated planning and policies to ensure sustainable tourism development, with particular attention to land-use planning and coastal zone management activities requiring environmental impact assessments for all tourism projects. The continuous monitoring of the environmental impact of all tourism activities and the development of guidelines and standards for design and construction taking into account energy and water consumption, the generation and disposal of wastes and land degradation, the proper management and protection of eco-tourism attractions, and the carrying capacity of areas for tourism have all culminated in assurance that tourism is not being developed at the expense of the social and environment resources.

Integration of sustainable development objectives in tourism are evidenced by the Samoa Tourism Authority (STA) adopting the EIA Guidelines 1998 and draft EIA Regulation 1998 for evaluation of all tourism projects. The National Policy for Cultural and Natural Heritage has been drafted. The National Landuse Policy was approved by Cabinet in 2001 and so was



the Coastal Infrastructure Management Strategy 2001 for the protection of government and community coastal assets.

The Samoa Tourism Authority has and continues to work with private researchers to design and implement the Sustainable Tourism Indicators program to be used in monitoring cultural, economic, and environmental impacts of tourism development.

The development of tourism facilities have been encouraged to meet specific niche markets, particularly in eco-tourism, nature and cultural tourism, and involve local populations in the identification and management of natural protected areas set aside for eco-tourism. Since 1994 development of eco-tourism through nature based activities and cultural experience had increased awareness of tour operators and visitors on the importance of a balance in environment and environment eco-tourism activities.

The Tourism Taskforce was established by Cabinet to promote an enabling environment for tourism investment, facilitate upgrading and expansion of accommodation, identify potential premium sites for development, and to attract in the near-term investment in a quality-room hotel/resort. Samoa has an increasing number of protected areas, some of which are also popular with visitors. All these areas have associated tourism activities and most have considerable potential for further tourism use and improved management interpretation. Tourism awareness is improved at the village, public and private sector levels through strengthening the consultative process

Measures have been adopted to protect the cultural integrity of Samoa as a Small Island Developing State. These include STA through its Development plan 2002-2006, promoting natural, cultural, adventure and coastal tourism and improvement in its development of attractions and activities with respect to nature, culture, adventure and coastal tourism. The STA in close collaboration with the tourism industry in Samoa supports all small and medium sized resorts in rural areas for community development, and National Committee for Culture and Natural Heritage Sites which was established in 2001 and includes all relevant stakeholders and players in the tourism industry.

### **3.2.1.9 Biodiversity Resources**

The biodiversity of Samoa 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 of the islands of Samoa highly, Savai'i 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 recognised 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).

Because of the potential danger of losing our heritage, there continues to be concentrated effort to ensure that Samoa sustains its wealth of biodiversity for socio-economic and ecological development. Policies and legislations have been developed and formulated such as the National Biodiversity Policy (NBP), National Deforestation Policy (NDP) and the National Heritage Policy (NHP). Approval of these is anticipated before the end of 2004.

Samoa has placed great importance on the International Environmental Agreements (IEA), and has been instrumental in leading the region in ratifying various biodiversity-related agreements such as the Convention on Biological Diversity (CBD), the Cartagena Protocol, the Convention on Migratory Species (CMS), the CITES, the Convention on Wetlands

(RAMSAR) and the Convention on World Heritage (CWH). These international agreements have been very useful for Samoa to access both financial and technical support for the implementation of various activities to achieve sustainable development and at the same time enhance the awareness of our people and the local communities of common concerns and issues and elicit appropriate responses. Also as a party to these IEAs, Samoa has been very focused on the priorities set-up in our policies and plans, and various enabling activities have been prepared and approved through UNDP, World Bank and the Global Environment Facility (GEF) to achieve sustainable development.

A National Biodiversity Strategy and Action Plan (NBSAP) was completed in 2001 and now serves as the guiding blueprint for the protection and conservation of our environment. The National Project for the formulation of the National Biosafety Framework was initiated in 2001 and work is progressing towards finalising the framework for the consideration of the National Coordination Committee (NCC) before Cabinet approval, hopefully before the end of 2004.

A Medium Sized Project (MSP) for the conservation and monitoring of the upland and lowland forests of Savai'i which is believed the last remaining native forest areas in Samoa is near completion. The Government of Australia and the South Pacific Regional Environment Programme (SPREP) have been helping Samoa in the conservation of mangrove areas, establishing pilot projects in the conservation of native forests in Savaii and Upolu, and the development and formulation of the National Invasive Species Strategy and Action Plan (ISAP), which was highly recommended by the NBSAP as a priority issue for Samoa. This document is now in its final stages of preparations and consultation, and should be ready before the end of 2004.

Throughout these programmes and projects, public awareness have been built into the activities, and monitoring and evaluation exercises have also been undertaken to ensure sustainability and acceptance by our people.

Various community-based conservation areas both marine and terrestrial have been established and managed by the local communities. Community-based training activities on various environmental issues have been promoted and carried out in villages, districts, schools and with special groups. A transparent and close working relationship is essential with the media and educational and research institutions on the value of our biodiversity and its importance to socio-economic development

### **3.2.1.10 Transport and Communications**

Samoa has continued its efforts to strengthen transport services and facilities at both the national and local levels, paying particular attention to environmental protection, safety, and innovative energy-efficient and low-cost transport solutions. The CIMS has great bearing on the planning and development of transportation systems and network that are responsive to public and community needs.

This is demonstrated by a number of national actions being undertaken at project level by the Ministry of Works, Infrastructure and Transport (MWIT). The MWIT carried out a few projects within the country during the period 1999-2003 which involved physical work to upgrade and improve road networks and bridges. After the two tropical cyclones in 1990 and 1991, the Road network covers almost 90% of the whole country with sealed roads. From 1994, after the Road safety programmes has been conducted to minimize road accidents more progress was registered with rural roads and urban residential area side street sealing works.

To improve safety on the roads, the Land Transport Board and Administration conducted Defence driving courses as part of the Road Transport Administration and Safety Programme in 2000-2001. The IAMP is also providing the Transport Control Board with specialist consultancy services for improving road safety, education, motor vehicle certification and relevant legislative review. As well, MOT has enforced its rules on the types and models of vehicles that are allowed to be imported into Samoa, this includes the ban on the importation of left hand drive vehicles.

Specific transportation sector projects driven and implemented by government include the Project for the Construction of the Inter-Islands Navigation Vessel, Improvement of all the Ports Project including the construction of the new wharf at Apia, in collaboration with the government of Japan (2002-2003). The improvement and upgrading of the national airport includes the runway paving, drainage and auxiliary works as well as improvements and upgrade of the airport terminal, construction of the new Aviation control Tower and Fire Station within the airport compound and the installation of emergency fire fighting equipment. Improvements to sea and air transportation facilities have also addressed quarantine and customs problems and requirements stemming from insufficient space and unclear designations.

Domestic communication facilities, including radio and telephone coverage, were upgraded to remote rural and outer island communities, and continued efforts to improve international telecommunications links. Satellite communication has progressed as well as mobile telecommunications becoming widely available.

Specific actions of national significance in the communications sector include the development of rural Telecommunications to extend services to the rural areas in Upolu and Savaii islands since 1994. Almost 98% of government departments and private sectors have access to internet and use of email connection for speedy communications.

Significant progress has been made with regards reforms in the transport sector with devolved responsibilities to the different authorities such as the Samoa Ports. There is a proposal for a Land Transport Authority that is under Cabinet consideration, but one of the activities with the Transport Control Board is the planned construction of a new vehicle testing complex that will include the testing of vehicle emissions to levels that are acceptable for ambient air control and greenhouse gas emission control.

### **3.3 Cross sectoral areas**

#### **3.3.1 National Institutions and Administrative capacity**

The national institutions and administrative capacities have gone through a major restructuring process. Institutional realignment of government agencies came into effect in January 2003. It reduced 26 departments to 14 ministries. The build up to this new public sector structure involved institutional strengthening of the public service for more transparency and accountability through a PSC -ISP project as well as 12 other ministry specific institutional strengthening projects. Coupled with these reforms are institutional strengthening training and corporate governance workshops to enhance capacity of public sector chief executives, assistants and even to the officer level on management or ministries, divisions and sections therein.

The mandate for the protection and management of the environment also resulted in institutional restructuring from the former Department of Lands Surveys and Environment to the new Ministry of Natural Resources and Environment, incorporating: lands, natural resources, environment, planning, disaster management and supporting technical services. Capacity for corporate and business planning was developed. Processes for the management of natural resources and environment were also developed which saw the Draft procedures for EIAs implemented, and its enabling legislation in progress.

Government established transparent tendering procedures for contracting-out services and approved policies on population and sustainable development. The new legislation for the MNRE incorporates MEAs into national laws. The Aid Coordination Division has been moved from the MFAT to Treasury.

### **3.3.2 Regional Institutions and Technical Cooperation**

Samoa has ratified key environmental regional agreements such as the Apia Convention, SPREP Convention, and the Waigani convention. The government has indicated its commitment to environment protection and management at the regional and international level by availing land to accommodate the South Pacific Regional Environment Programme (SPREP) head quarters at Vailima. The location is pristine property of natural upland ecosystem and part of a national reserve.

Samoa also actively participates in other CROP agencies of the Pacific as well as the coordinating Pacific Islands Forum Secretariat. Samoa's participation in these CROP agencies has led to its close involvement in a number of regional programmes for the protection of the environment. These include regional programmes for climate change, waste management, pollution prevention, biodiversity conservation, management of hazardous substances, community development initiatives, protection of the ozone, and many more.

A great deal of national projects and activities has also been enabled through bilateral arrangements, particularly with the governments of New Zealand (biodiversity conservation and waste management), Australia (Persistent Organic Pollutants and Hazardous substances) and Japan (waste management). Integrated projects have been implemented under ADB and World Bank projects that include specific components dealing with Environmental assessments, urban planning for sanitation and drainage, and planning for landuse development.

### **3.3.3 Science and technology**

Limited progress has been made in integrating science and technology into sustainable development programmes. Nevertheless Samoa has been open-minded in welcoming environment friendly technology pilot projects into Samoa. The integration of science into sustainable development should start at the curriculum development level and this has started.

While there is no framework for the application of science and technology for sustainable development a number of activities have already begun in the various sectors. For instance, in agriculture, tissue culture has played a significant part in the development of suitable blight resistant taro hybrids and there has been extensive work on germplasm development for the fruit tree industry. A growing thematic area is organic farming, where bee keeping, vegetable gardens and coconut oil production in selected parts of Upolu and Savaii have been certified. Much of the research into environment friendly technology has been taking place at the Nuu agricultural station of MAFFM. Cut flower has also been on the rise with some of the farmers using composted soil from kitchen waste..

The generation of power from hydro schemes has been extensive and not without the scrutiny of the Environmental Impacts Assessments. The proper management of waste disposal through a semi sanitary landfill that uses locally available material has also been completed with ongoing maintenance continuing. The recycling of waste oil has also been explored by private sector entrepreneurs. The generation of biogas from the anaerobic decomposition of organic waste is also being experimented with at the Tafaigata Landfill on Upolu.

Awareness days for the various thematic environment components such as climate change, hazardous substances, waste management, water resource, biodiversity etc has also seen environmental technology ideas being put on display by college students.

### **3.3.4 Human Resources Development**

Institutional and process strengthening should go hand in hand with the enhancement of the available human resources capacity. Key activities that affected the progress made in institutional restructuring centre on strengthening of existing HRD in the public sector. The National SDS identified Education and health as the two national priorities in the enhancement of human resources to support its strategic development goals. Training needs analyses have been completed in most of the government ministries. Notably is the progress made in the strengthening of capacity within the Ministry of Natural Resources and Environment which has been mandated with the protection of the environment and natural resources. Personnel have been trained and appointed to senior positions for all MEAs that Samoa has become party to, as well as senior positions traditionally within this government institution.

Since the establishment of the Division of Environment and Conservation (DEC) in 1990, its core staff has increased from 8 to 21 in 2001. The DEC was later split into two divisions in June 2002 giving birth to the new Planning and Urban Management Agency with consecutive staff numbering 21 each with the addition of Watershed Management from the Ministry of Agriculture to DEC, the creation of a Marine Conservation Unit, and the transference of Disaster Management Division from the Prime Ministers department to Environment Planning in PUMA. The Fisheries Division of MAFFM has been strengthened.

### **3.3.5 Implementation, Monitoring and Review.**

National progress made and the problems encountered in the implementation of the BPOA have been identified through established implementation, monitoring and Review processes. These have been developed by involving relevant stakeholders in designing best practice and approaches that are affordable and realistic.

Implementation, monitoring and review of all environmental component programmes and actions have been established through institutional strengthening and restructuring of the public sector that promotes partnerships with private sector and community stakeholders. Table.2 lists the various examples of implementation monitoring and review mechanisms that have been developed and operating.

**Table.2 Implementation, monitoring and evaluation mechanisms**

<b>Development Component</b>	<b>Mechanism</b>
Climate Change	National Country Team for Climate Change, Task Teams for Each project (Climate Change Section – PUMA)
Marine Resources (Fisheries)	Monitoring of fish catches being enforced by the national Police Force and Fisheries Officers.
Biodiversity	National Biodiversity Country team, DEC (MNRE). Terrestrial Water and Marine resources also have a specific team.
Waste Management, Sanitation and Drainage	All projects implemented and monitored in accordance to project TOR and funding requirements. A Project\ Steering Committee has been established for Sanitation and Drainage works to be chaired by Treasury. The Urban Management Services Section of PUMA (MNRE) monitors daily rubbish collection and evaluates performance of contractors.
Transport and Communications	Ministry of Works Transport and Infrastructure formed in 2003, Land Transport Board being upgraded to Authority, Contract selection criteria upgraded by the Tenders Board and new legal requirements for Contract Development by the Attorney general's office to ensure fair treatment.  Ministry of Communications, Privatized service provision for communications, Radio and TVS amalgamated
Energy Resources	National Energy Task Team being linked to the National Team for Climate Change to ensure coordination with other climate change related projects. Project office established in Treasury.
Science and Technology	PUMA
Land Use Development	PUMA processes for land use development consents and environmental impact assessments.
Tourism Development	STA has its own programme and project planning, implementation and review procedures.

The implementation of actions to achieve objectives of development components have been constrained initially by the lack of financial resources and lack of human resources. The response was to bring closer the public and private sector service providers for implementation. Communities were closely involved in community developments and projects, while private sector local consultants were given employment opportunities in close collaboration with the respective Ministry or National Teams responsible for each development component.

Monitoring of community and private sector implementation is made a responsibility of the project coordinator in the Ministries while public sector performance has been monitored through the Performance Budgeting system introduced by government in the late 1990s.

Evaluation of programmes and projects are conducted using midterm, and terminal evaluation procedures of funding sources including government's own processes. Evaluation of the actual impact of the programmes and actions has however been difficult to measure due to difficulty with finalizing agreed parameters for quantitative indicators, particularly in the area of public awareness. Ministries and national organizations responsible for implementing projects and action plans have encountered problems with evaluation procedures of United Nations Implementing Agencies basing success of projects on the rate of expenditure rather than actual activities completed and planned output deliverables achieved.

### **3.4 Problems encountered**

Implementation of the BPoA was not an easy exercise for Samoa, taking into account its infrastructure, limited capacity in both financial and human resources and most importantly the limited support and assistance by the international community.

The Ministry of Natural Resources and Environment (MNRE) for the last ten years has undertaken reviews of its structure in order to determine the most relevant, effective and efficient organisation to deliver what would best meet the needs of our people in sustainable environmental protection, conservation and security.

Since Barbados, the agency of the Government responsible for the environment has yet to reach a level of capacity that would confidently provide effective services. Its budgetary allocation remains minimal and insufficient, specialized skills and knowledge are lacking and the number of staff is still not enough to cater for the current work load. Environmental facilities and tools are lacking, technology transfer is rudimentary and there is a lack of scientific and technical support from the educational and research institutions. All of these constraints and problems are contributory to the challenges of effectively implementing the BPoA now and in the years ahead.

There is still much to be done to ensure that there is compliance with legislations and policies; however at the same time, these need to be carefully matched against people's needs in order to engender a better appreciation of the importance of conservation.

### **3.5 Future development**

In order to ensure continued progress in the next ten years support is required for the following:

1. Funding for community projects to protect coastal and conserve marine resources and protect and improve watershed areas and water sources
2. Funding for community-based conservation projects and pilot projects identified in the National Invasive Action Plan and the NBSAP pilot projects identified in the National Invasive Action Plan and the NBSAP
3. Funding for implementation of activities identified under the WSSD report
4. Technical studies on coastal and marine resources
5. Effective legislation to protect watershed areas and public access to water resources; develop technical capacity to assess and monitor water resources and develop mechanisms for water allocation
6. Legislative review of all the environment-related laws and regulations in Samoa
7. Implementation of National Policies (Water, Land, Biodiversity, Marine, Coastal, Deforestation etc.)
8. Technical support for our land resources: national policy on customary land uses, land use capability plans, national inventory of customary land, develop maps of land degradation and develop technical land databases.

## **4.0 TRADE AND INVESTMENT & STATE OF VULNERABILITY**

### **4.1 Trade related needs and concerns:**

The Samoan Government believes that sustained economic growth and reduction of unemployment requires growth in private sector investment. The Government is encouraging growth in the export and import substitute industries and tourism and to that end offers incentives to investors and exporters in the form of duty concessions.

On the import front the main concern often expressed by the business community relates to import tariffs on both finished goods and raw materials. It is sometimes experienced that some policies put in place by government to encourage growth and sustainability may work to the contrary in some sectors of the economy. One of the concerns raised by the manufacturing sector is that, on reflection, tariffs for some imported finished products from overseas are equal to the tariffs applied on imported raw materials to manufacture similar products locally.

The sourcing of raw materials and inputs from overseas has been very costly. This has affected the competitiveness of our local products in relation to final goods imported from abroad. Samoa's manufacturers and importers have to venture beyond our traditional trading partners in order to obtain good quality products at competitive prices.

It is often the experience that overseas market requirements may demand a minimum volume to be supplied by the exporters. However, these requirements on volume cannot be met due to supply side constraints such as the smallness in size, isolation from major markets and occurrence of natural disasters. This is often the case in agro-based products and calls for investment in the production of downstream processing of locally available resources.

Non-tariff barriers have been a major concern for Samoan exporters. These non-tariff barriers (NTBs) come in the form of quarantine, customs and standards & conformance. Samoa has experienced and is still facing difficulties in trying to comply with excessive measures accorded by the New Zealand authorities to some of Samoa's export products. A recent example is the measures imposed by the New Zealand Food Authority on the import of desiccated coconut from Samoa. The requirement calls for all desiccated products to go through metal detectors in Samoa and again upon entry into New Zealand. This measure is not applied to other exporters of the same product from other parts of the world and has certainly weakened the competitiveness of Samoan products in the New Zealand market cost wise. There is a need for consistency in application of importing countries' policies to allow for a level playing field for all exporters.

Some of the farmers have alluded to the lack of overseas markets for their products. However, it can be argued that the concern is not the lack of markets, but rather it is Samoa's inability to consistently supply good quality products on a timely basis at competitive prices. It is likely that our exporters probably are not fully aware of the requirements the markets of the importing countries.

### **4.2 National level or community based initiatives related to trade practices and services including those that aim at diversifying exports or improving national competitiveness**

The Government has introduced various programmes and initiatives aimed at diversifying exports and /or improving national competitiveness.



- The setting up of institutional strengthening projects such as that funded by AusAID in the fisheries subsector which has put in place fisheries programmes aimed at the protection of inshore fish and fishery resources from overfishing;
- Availability of finance from the Development Bank of Samoa and the European Union Micro-projects to fund new fishing vessels which have contributed to a substantial increase in exports of fish;
- The Ministry of Agriculture, Forestry and Fisheries has developed a forestry sector plan that looks at ways to ration deforestation and encourage reforestation since the devastation of plantation forests through cyclones and fire a decade ago;
- Government is encouraging through a policy on the diversification of agricultural exports from traditional crops to developing other products such as kava, nonu and other tree/ fruit crops. This is evident by having in place a High Temperature Forced Air (HTFA) Plant to ensure that overseas market quarantine requirements for agricultural produce are met by our exporters;
- Encouragement and promotion of value added products in the manufacturing and processing sector for agriculture produce and also encourage organic farming.

### **4.3 Key investment related concerns and needs**

The current land tenure system in Samoa continues to be a challenge in securing foreign investment in Samoa. The land ownership system makes it difficult to lease land for tourism, forestry or extensive farming. Like other island countries in the Pacific region, land is a very sensitive issue and it has been an area of concern repeatedly brought up by foreign investors especially in the tourism sector. Foreign investors have often encountered a number of obstacles in their effort to secure properties for their investment due to arrangements available for the purchase and lease of customary and freehold land. There is a need for Government to establish an agency to facilitate negotiations of customary lands on behalf of investors.

Furthermore, the structure of land ownership in Samoa is 80% customary owned, 15% crown land and 5% is freehold. However, customary land cannot be used for collateral when an investor requires borrowing funds for investment projects from financial institutions. The issue of concern is not the availability of the funds from lending institutions but the difficulty faced by local investors in accessing funds. There is work in progress to initiate a policy related to land use aimed at supporting private sector investment.

The market access advantages, such as those provided under South Pacific Regional Trade and Economic Co-operation Agreement (SPARTECA) & the Generalised System of Preferences, have been a pull factor to some of the manufacturing ventures now in Samoa. The erosion of these trading preferences due to the multilateral trading arrangements in place is likely to result in decisions to relocate elsewhere by the foreign investors. This may impact negatively on employment both within the concerned companies and linkages to the supporting investments.

Investment in new technology would be beneficial to Samoa in terms of efficiency and faster production. However, there is a need to evaluate the environment and social impact of these investments. It is important to note that Samoa's agricultural sector has largely been based on traditional methods and practices. Transfer of inappropriate but expensive technology is a concern to both manufacturers and business merchants alike.

Interest rates on borrowed funds are sometimes relatively high and this could retard growth in investment. In addition, the relatively high cost of electricity has discouraged investment in

capital intensive industries. The shortage of skilled labour is one of the main concerns for labour intensive investment projects because it affects business performance.

#### **4.4 Specific subregional cooperative mechanisms**

Samoa is a member of the Pacific Island Countries Trade Agreement (**PICTA**) which came into force in April 2003 and aims at creating a common market for Forum Island Countries (FICs). It is hoped that this Free Trade Agreement (FTA) will give FICs a stronger foundation for responding to globalization and universal trade liberalization as well as encouraging specialization and greater efficiency in their economies. PICTA is considered a “stepping stone” to a greater integration of Pacific countries into the world economy and an initial preparatory step towards more extensive liberalization in the future that will hope to achieve greater long run benefits. It is hoped that more intra and inter-regional trade would take place as a result of PICTA. The resulting increase in trade will reflect enhanced efficiency and improved consumer welfare in the FIC economies, leading hopefully to the overall creation of jobs.

It is also hoped that the creation of a regional market will encourage increased investment in FICs. Many FICs currently struggle to attract investment because of their small domestic markets. However, the opportunity to reach the regional market of 6m people, at zero tariff rates, may encourage investment that was before, hesitant.

Unfortunately, the level of trade among FICs is low, due to the constraints of geographical location and poor transport links. Even with the FTA it will be difficult to overcome these constraints, and by itself the FTA may deliver only marginal benefits to the FICs initially.

The PICTA will provide the FICs with experience in the negotiation and operation of an FTA, and it will help to create a common basis for the FICs’ negotiations with other trading partners. The PICTA will be a “training ground” for the FIC economies, ready for further integration in the future. Businesses will become used to the idea of outside competition, and governments will have to begin implementing reforms needed in preparation for more extensive trade liberalization, for example reform of revenue collection systems.

Samoa is party to the Pacific Agreement on Closer Economic Relations (**PACER**), which became effective in October 2002. It is a framework agreement setting out the basis for the future development of trade relations among all 16 Forum members. Free trade arrangements between the FICs and Australia and New Zealand will be negotiated at some time in the future. In the meantime, under PACER, New Zealand and Australia have committed themselves in funding traderelated programmes to alleviate and improve trading amongst FICs.

Samoa is a signatory to the SPARTECA which is a non-reciprocal preferential trade agreement which allows for duty free, unrestricted or concessionary access for virtually all products originating from the developing island member countries of the Forum to New Zealand and Australian markets, subject to meeting the rules of origin criterion.

Samoa is also party to the **Cotonou Agreement** which was signed in 2000 to succeed “aid and trade” agreements of the Lomé Convention nature. Six new members from the Pacific have changed the regional balance within the ACP and it is hoped that this will help in airing the issues and concerns of small island states more forcefully with the EU and in other international fora. Under this Agreement, the EU is committed to working closely with the

FICs in a number of areas including capacity building and training at the national and regional level.

The trade preferences permit products ‘originating’ in the ACP states to be exported to countries of the EU, free of customs duty and other charges. Product coverage includes special arrangements for agricultural products governed by EU agricultural policies. There are also Rules of Origin requirements to be met.

As a Least Developed Country (LDC), Samoa may access the EU markets through the “**Everything But Arms**” (EBA) initiative. The other option for Samoa to take is negotiating economic partnership arrangements with the EU under the Cotonou Agreement on configuration supported by Samoa.

In the multilateral trading system, Samoa is currently in the process of accession to become a member of the **WTO** since April 1998. It has been a long and cumbersome experience. Progress so far has been highly dependent on the collaborated work at the national level as well as the much-needed technical assistance and capacity building received from WTO. Since then, we have seen in September 2003, Cambodia and Nepal, the first LDC countries to become WTO Members through the accession process. Samoa has been going through this process since 1998.

Accession of LDCs is given special consideration and is included in the WTO annual plans for technical assistance. There is also an Integrated Framework for Trade-Related Technical Assistance specifically for LDCs in the area of trade development. In addition, United Nations agencies accord special consideration and privileges to LDCs in the provision of training, technical capacity building and institutional strengthening programs.

It is also important to note that Samoa, as a Small Island Developing State (SIDS), will not receive the same privileges under WTO as LDCs do. SIDS are not fully recognised by WTO Members as reflected in the Doha Development Agenda and, as Small Economies these countries have encountered difficulties in negotiating special and differential treatment under WTO rules.

The major costs faced by Samoa in this process are the limited financial, technical and administrative resources.

#### **4.5 Vulnerability**

Like other small islands states, Samoa is highly vulnerable to fluctuations in commodity prices, it is ecologically fragile and vulnerable to natural disasters such as cyclones which have the capacity to wipe out the productive capacity of a country in a matter of hours. Re-building takes up enormous resources. The possible potential areas, which aggravate vulnerability to poverty in Samoa, are linked to the following economic, political, cultural and other factors.

- (i) A narrow economic base and geographic isolation from markets
- (ii) Customary land tenure system with no clear registration system in place hinder development of customary lands particularly in rural areas, however, it also ensures that there is access to land for every member of the extended family.
- (iii) Customary owned land cannot be used as collateral for financing.
- (iv) The onerous social and ceremonial obligations in the extended family, church and village context of the Faa-Samoa could aggravate poverty of income particularly in the rural areas,

- (v) Vulnerability of agricultural crops to pests and diseases as shown by the taro blight could aggravate poverty in the agro-based villages in the rural areas,
- (vi) Vulnerability to cyclones and other natural disasters like flooding is significant given the concentration of settlements and traditional villages are located in exposed coastal areas.
- (vii) Urban drift
- (viii) Lack of paid employment opportunities
- (ix) Lack of access to credit
- (x) Geographical isolation from the mainly centralised services

## **5.0 MILLENNIUM DEVELOPMENT GOALS**

### **5.1 Poverty reduction**

On a macro scale the per capita GDP, which has been traditionally used as the measure of the standard of living, has increased to around USD1,200 from USD760 in 1993. On a global scale the human development achievements based on the vulnerability index continues to place Samoa under the United Nations category of a Least Developed Country. The shortcomings of the GDP per capita has led to the increasing use of the Human Development Index which is constructed from a number of economic, health and education achievement indicators including life expectancy, real per capita GDP, adult literacy rate and combined enrolment ratio. In 2003 Samoa ranked 70 out of 175 countries in the Human Development Index. The strong social indicators such as life expectancy, literacy and access to water, health and education services have lifted the global ranking of Samoa in contrast to the GDP per capita measure

The main characteristics of poverty as they apply in Samoa using available statistics are discussed as follows:

#### **5.1.1 Definitions of poverty**

##### **5.1.1.1 Poverty of Income**

Income poverty defines the lack of sufficient income to meet minimum consumption needs. Relative poverty means living in a considerably worse way relative to other people in the same society. These poverty concepts are often analysed based on National household income surveys, which attempt to measure household or individual income or the extent of income inequality. The effectiveness of these income-based measures is limited on account of the special characteristics that are also important for livelihood. In the case of Samoa such characteristics include the role of subsistence production, remittances, operations in the cash and non-cash economy and an understanding of the Samoan traditions and culture.

The latest empirical study to measure poverty in Samoa, was conducted through the Division of Statistics, Ministry of Finance using the results of the 2002 Household Income Survey. The study examined absolute poverty using food and basic need poverty lines estimates as well as relative poverty assessed in terms of the characteristics of the poorest 20 percent of sample households

##### **5.1.1.2 Food Poverty Line (FPL)**

The FPL identifies households, which cannot afford a basic minimum nutritionally adequate and palatable diet. Using the data from the 2002 Samoa Household Income and Expenditure Survey the Food Poverty Line was estimated at ST24.68 per capita per week. The results showed that around 7.6% percent of households had income/expenditure less than the food poverty line

##### **5.1.1.3 Basic Need Poverty Line (BNPL)**

BNPL identifies households, which cannot afford the basic minimum nutritionally adequate and palatable diet as well as essentials for life transport, energy (electricity, kerosene and wood), health, education, water, and housing. Using data from the 2002 Samoa Household Income and Expenditure Survey the Basic Needs Poverty Line was estimated at ST37.49 per capita per week.. The results found that 20.3% of total households had per capita income/expenditure below the basic needs poverty line.

#### **5.1.1.4 Relative Poverty**

The characteristics of the poorest households were analyzed using standardized household expenditure data. The analysis assumes that household expenditure is for the equal benefit of all household members, which may not necessarily be so in reality. The results show a median total daily expenditure per adult equivalent from standardized data of ST6.12. The expenditure data in the 2002 HIES suggests that nationally only about 5% of households had per capita expenditure of less than US\$1 a day.

#### **5.1.1.5 Poverty of Opportunities**

Poverty of Opportunity is defined as the inability of people to lead the kinds of lives they aspire to and is based on an underlying idea that more people are denied basic human opportunities than are denied a minimum income. Poverty of Opportunity can be assessed in terms of education, health and employment, however, poverty of opportunity can also involve the denial of opportunities in material well-being, access to markets, job security, political and social freedoms and other dimensions that are not easy to quantify.

On account of the peculiarities of the Samoan culture and social practices, the broader concept of poverty of opportunity including the level of access to and standards of education and health services, lack of economic assets, social exclusion and political marginalisation, is considered a more appropriate description of poverty for Samoa.

#### **5.1.1.6 National initiatives:**

1. Improved access to credit through a number of micro-credit schemes by both the government and non government organizations. Partnerships with international NGOs have resulted in a scheme that provides low cost housing for low income families. As well, the Housing Corporation was established to provide assistance for those that may not have access to financing from the traditional financial institutions.
2. Increased funding for community development projects such as the building of school and health facilities, agricultural, livestock and fisheries development, improved water supplies and community tourism/ecotourism development.
3. Establishment of a facility to support community projects on natural resource management
4. Partnership with ADB to determine a national definition of poverty currently defined in terms of hardship

### **5.2 Education and reduction of child mortality**

Education at primary level is compulsory but not free and the government is looking at ways by which it can enforce the associated legislation on compulsory education. There is a 98% net enrolment ratio for primary education and there is not a marked difference by gender. More children are staying longer at school and the transition rate to secondary schooling is on the increase. The Government continues to maintain its strong commitment to education. The strategy being pursued attempts to resolve limited access to senior secondary education, inequitable access to quality education, improve the quality of teaching staff and provides adequate facilities for learning. Samoa is not endowed with many natural resources and therefore an educated and skilled labour force is considered the most valuable resource for its development. The availability of skilled human resource to meet the demands of the private sector is a desired long-term goal.

Teachers are provided the opportunity to pursue a formal degree at the National University of Samoa and the University of the South Pacific. In-service training and professional

development programs continue and these are expected to elevate teacher status, qualification and professional skills leading to improved service delivery in education. Furthermore curriculum and teaching materials will continue to be reviewed and developed further in order that students have access to quality and relevant teaching resources. Improved education facilities are another key element of education development. ADB, Japan and the European Union are supporting the government's efforts to improve the access to and quality of primary and secondary education through rehabilitation, expansion and upgrading of schools. Upgrading will enable the Government to implement a school zoning arrangement that will contribute to equitable access to education. Institutional strengthening of the Ministry of Education Sports and Culture has contributed significantly to the availability of sound management capacity, appropriate structures and supporting systems for the efficient management and oversight of education development nationwide. There is close cooperation with the private sector including the church.

A healthy labour force is a pre-requisite for effective and efficient management of the economy. Government will maintain priority support to the health sector to ensure equal access to health services by all households. Currently Samoa has health indicators equivalent to those of some developed countries. The under 5 mortality rate (per 1000 live births) has declined from 42% in 1990 to 26% in 2002. Similarly, infant mortality rate (per 1000 live births) has gone from 33% in 1990 to 17% in 2000

Health promotion and health prevention remains a key strategic focus. The Government continues to develop and intensify health promotion and education policies and programs. Primary health care services will be improved through strengthening primary and secondary prevention and treatment programs for non-communicable diseases (NCD).

Health services at the community level will be closely targeted. An integrated community health service has been established. The efficiency and effectiveness of primary, secondary and promotive service delivery at the community level will be improved through strengthening planning, management and resource utilisation within the geographic areas of the service. A mobile clinic is already in service to better serve the rural communities.

### **5.2.1 National initiatives**

1. The 10 year Strategic Plan (1995-2005) for Education will be reviewed
2. Government policies on the areas of early childhood education and special education, areas usually under the jurisdiction of non government organisations are in place as well as associated development projects to strengthen these partnerships
3. Ratification of the Convention on the Rights of the Child by the Government on July 29<sup>th</sup> 1994.
4. Support for NGOs who work in the area of children's rights, in particular child protection
5. An Expanded Programme of Immunisation with a 98% coverage
6. Partnerships with bilateral and multilateral donors to address the issues of improved education facilities, updated curricula, improved teacher quality, and improved children's health and protection measures.

### **5.3 Gender equality and empowerment of women**

In 1992, Samoa was the first country in the Pacific to ratify the Convention on the Elimination of all forms of discrimination against Women (CEDAW) on the 25<sup>th</sup> September

1992. Prior to that the Government had set up a Ministry of Women Affairs which functions mainly to provide policy and strategic advice and to a lesser extent welfare programmes.

The ratio of girls to boys in primary education is about the same at 95%. At secondary level, the ratio is higher at 105. It is not possible to determine any gender differences on the basis of literacy. The share of women in wage employment in the non-agricultural sector is 38% and the proportion of seats held by women in parliament is only 6%.

### **5.3.1 National initiatives**

- A National Policy on Women was prepared in 1999 and has been approved by Cabinet.
- The Convention on the Elimination of Discrimination Against Women was ratified in 1992 and the Convention on the Rights of the Child was ratified by Samoa in 1994.
- Gender awareness training workshops are an integral part of capacity building efforts by the Ministry of Women Affairs, Social and Community Development as well as other government departments and civil society.
- Affirmative action has been put in place in areas where there is still a lag in women's participation such as special scholarships for women in trades at the Samoa Polytechnic.

### **5.4 HIV/AIDS and other vector borne diseases**

Extensive spread of HIV/AIDS has yet to appear in the Pacific, by November 2000, the cumulative reported cases for the Pacific island countries and territories reached 3,568 and 1,304 respectively for people with HIV and AIDS; Papua New Guinea accounting for 80% of the HIV cases and 79% of the AIDS cases. Compared with other parts of the world these figures might appear insignificant but if measured against the small populations of the Pacific island countries, the numbers represent a growing problem. While there may be few confirmed cases of HIV/AIDS, there is the concern that there may be under reporting. Although data may be limited, health trends indicate that Pacific countries are extremely vulnerable to HIV/AIDS given the high incidences of STIs. Malaria is unknown in Samoa and the prevalence rate of Tuberculosis is 22 (per 100,000) people in 2000 and declining. The proportion of TB cases detected and cured under Direct Observation Treatment System (DOTS) was 53% and 92% respectively.

#### **5.4.1 National initiatives**

- 1** Peer education training involving NGOs, schools and youth
- 2** A multi-sectoral National AIDS Council was established to coordinate all activities to do with public education and awareness raising.
- 3** Community education advocacy using HIV infected persons and sports role models

### **5.5 Environment sustainability**

The National Environment Management Strategy was adopted in 1992 out of which a number of policies were developed. Implementation of these policy measures is ongoing. Despite this relatively strong policy framework a major challenge would be to reverse the loss of environmental resources. The share of the population with access to safe water continues to increase although 100% coverage has not yet been achieved.



## **5.6 Global partnerships for development**

A core principle of the MDGs is that human development is a shared responsibility and that strong partnerships need to be developed to promote a more open and equitable system of international finance and trade, increase development assistance and enhance commitment to good governance and development. While the prime responsibility for human development rests with the individual countries, international partners can support and enhance that commitment but cannot substitute for it. Through partnerships, there will be added contribution to new knowledge and ideas along with new technologies and new resources.

As of March 2003, government's official debt was 54% of GDP having dropped in level compared to the last quarter of 2002. ODA has increased slightly and continues to remain fully disbursed at the end of each financial year. There is a good balance of activities being funded between infrastructural projects and those in the social sectors.

### **5.6.1 National and regional initiatives**

1. Since the early nineties, the government has been undertaking a reform programme starting with financial/economic reforms. Public sector reform is work in progress and noted for the recent realignment of ministries from a total of 26 to 14. Part of the financial reforms saw the promotion of private sector development as the engine of growth.
2. Reforms to foreign direct investment regulations have been made with the intention of facilitating the arrival of new foreign capital and technologies for productive activities; this has yet to materialise
3. As part of the process towards economic integration, Samoa has entered into regional trade agreements through PICTA and PACER. As part of the ACP group, negotiations are ongoing for new economic partnership arrangements under the Cotonou Agreement.
4. Samoa is working towards accession to the WTO.

## **6.0 EMERGING CONCERNS AND SPECIAL NEEDS**

Samoa's progress over the last decade has laid the platform for necessary mechanisms to implement all its environmental obligations under international and regional environment conventions since the Barbados Programme of Action in 1994. These include; amendments of existing legislations (Lands and Environment Act 1989), national environment policies, action strategies, regulations and management plans which have all contributed to Samoa's national efforts of sustainable development and natural resource management. Despite progress over the years, new concerns have emerged together with imperative issues of special needs that require immediate assistance from the international community on the sustainable management, protection and conservation of small island developing states' natural, ecological, cultural and human resources. These emerging concerns are seen as the next stepping stone for Samoa to consider in the coming decade if it is to fully realise a balance between development and natural resource management.

### **6.1 Emerging concerns under thematic areas:**

#### **6.1.1 Climate Change:**

The necessary instruments to combat the impacts of climate change are in place, however there are emerging issues that need to be addressed, and for which financial assistance to start the implementation process for these plans is crucial in order to support community development efforts in sustainable management of their natural and cultural assets /resources.

- To ensure full participation by communities in the execution of community coastal adaptation projects based on their management plans, the government needs to find ways and means for communities to better access funding assistance for micro projects, that can contribute to communities efforts to sustainable management of Samoa's resources.
- There is an urgent need for technical assistance in terms of resources required for the development and digitising of maps to better identify vulnerable areas that are highly impacted by climate change such as; inland floods, watershed areas and land degradation.
- There should be more collaborated programmes from all relevant government agencies that target the impacts of climate change in their sectors.
- There is a need to review climate change programmes in order to include national adaptation measures as mitigation measures are not enough to combat climate change.
- Developed countries through advance technological resources and skills, should promote more capacity building programmes for SIDS such as Samoa, in terms of CDM projects on appropriate technology transfer.

#### **6.1.2 Natural and environmental disasters:**

Natural and environmental disasters are becoming common phenomena in Samoa ranging from long periods of droughts to devastating tropical cyclones.

- National disaster plans need to be reviewed and more emphasis put on mitigation and readiness. This would ensure the minimisation of the aftermath damages caused by disaster events.
- A national disaster management legislation to be the main guide for enforcement of standards that can reduce damages on natural resources, government and community assets from impacts of natural and environmental disasters must be developed.

- There is limited public awareness of natural and environmental disaster issues. There is an imperative need to start national public awareness and educational campaigns using the media (television, radio and newspaper), community road-shows and educational programmes in schools on mitigation and preparedness

### **6.1.3 Management of waste:**

Much progress has been achieved in waste management with the implementation of programmes such as the national waste management collection covering both the urban and rural areas, as well as the waste separation project within the main waste disposal area of Tafaigata Landfill.

- There is a need for capacity building within MNRE in the preparation and production of public awareness materials in order that there is continuity in making these available for educational purposes.
- Small grant funding assistance if available can help achieve community waste management projects in the areas of composting, reuse, recycling and waste separation at source.
- The progress on waste management, has led to new initiatives that can be implemented through the development of Type II projects on waste recycling, as there is a vast amount of waste that can be recycled.

### **6.1.4 Coastal and marine resources:**

In Samoa, people are very much dependent on the coastal and marine resources for their livelihoods.

- Population pressures along coastal settlements has led to the increase in reliance on coastal and marine resources for sustenance and subsistence income and a subsequent decrease in marine resources and loss of coastal habitat areas for marine organisms to breed. There is an urgent need to seek funding through appropriate partnership arrangements to set-up marine protected areas enabling the conservation of coastal and marine resources.
- More technical assistance for research or studies on coastal and marine resources is required which can assist communities in decision making on ways to better manage their projects and protect coastal and marine resources.

### **6.1.5 Freshwater resources:**

Samoa is endowed with freshwater resources, however the existing remaining freshwater resources of the country is at a critical level, as seen in the number of dry springs and rivers seen around the country during drought periods. This issue should be a priority concern for the government, and all relevant stakeholders to address.

- Legislation for the protection of watershed areas and public access to water resources needs to be in place, with the MNRE being responsible for its enforcement and regulation of the utilization of existing freshwater resources.
- The community to be supported in the implementation of projects to protect and improve watershed areas and water resources projects such as the planting of trees along river banks and springs for forest rehabilitation and to stop soil erosion caused by flooding.
- Early implementation of the national water resource policy approved by cabinet in 2001, and the establishment of a Water Resource Conservation division within the

Ministry of Natural Resources and Environment are key factors to addressing the current shortage of freshwater supply.

- Development of the technical capacity to assess and monitor water resources is essential.
- There is an urgent need to develop maps of national watershed areas that will enable the identification of areas that are in a critical condition and requiring emergency rehabilitation programmes.
- There is a need to develop appropriate mechanisms to regulate the allocation of water resources.

#### **6.1.6 Land resources:**

The proper utilisation of land resources according to their appropriate capabilities and vulnerabilities holds the key to future land use management in Samoa, according Samoa's Report to the Johannesburg Summit Conference on Sustainable Development in 2002. Little progress has eventuated over the years with regard to the sustainable management and proper utilization of land resources due to conflicting issues to do with land ownership especially as the majority are under customary tenure. Land assessment activities need to be undertaken:

- Develop and update existing land resource technical maps is for the updating of information about land resource utilization in Samoa.
- Identification of areas of land degradation in Samoa, through the development of maps of areas that are in deteriorating conditions, such as fallow and dry lands.
- Develop national land use capability plans to assess the mechanisms required for sustainable land use management in Samoa.
- Develop a national policy on customary lands to enhance the Ministry of Natural Resources and Environment programmes on improving access to land use resources..
- Conduct an inventory assessment of customary land to find out the percentage of lands that are currently utilized and those left unused and determine the impact of customary ownership on such a distribution pattern. The government plays an important role in developing appropriate mechanisms that should be in place to utilize customary lands for the benefit of stakeholders
- The Ministry of Natural Resources and Environment to develop technical databases on soil types and geology of the islands landscape, based on existing and updated information on land use maps of Samoa to better find means of addressing issues on land use in terms of fertile land, wet lands and swampy areas and land degradation.
- The increased exploitation of land-based resources such as sand, aggregate, gravels and rocks and sustainable allocation of these land based resources are a concern. The Land Management Division of MNRE together with relevant stakeholders should look at establishing mechanisms that can sustain the utilization of these land based resources.
- The government is to develop innovative ways for funding housing for low income people through the use of customary lands as collateral.

#### **6.1.7 Energy resources:**

It is important that Samoa develops the means of better utilizing existing natural energy resources available in-country such as solar energy, wind, wave and biomass.

- The energy sector needs to be all inclusive of a division for sustainable energy, incorporating climate change programmes. In this way the full potential of programmes to implement ways of promoting the use of energy resources in Samoa can be realized and will also avoid duplication of national activities that are similar.

- Having established a division for sustainable energy and climate change can enable the collection of data on sustainable energy needs and potential use.
- There is also a need to promote public awareness programmes on renewable energy and cost-effective means of saving non-renewable energy use in the homes and work places.
- Support to be given to develop small scale pilots project on renewable energy for selected communities who have an interest in renewable energy and the potential to manage such projects.
- Further development of Type II projects on renewable energy is necessary for sustainable energy management in Samoa.
- Also the development of CDM projects on renewable energy can greatly assist Samoa in technological transfer from developed countries on the best methods used in utilizing renewable energy resources.
- To meet the subsistence needs of a communal lifestyle the development of efficient wood stoves for cooking have the potential for cost effective means to avoid the use of non-renewable energy.

#### **6.1.8 Tourism resources:**

The tourism industry in Samoa has experienced gradual growth over the years supporting other major sectors of the economy such as agriculture and remittances from Samoan families overseas.

- Although tourism contributes significantly to Samoa's economy the real cost of its development on the environment has not been fully established. There is a need to develop research and studies on the impact of tourism at its various levels on the cultural, social, and ecological implications on Samoa's environment.

#### **6.1.9 Transport and communication**

Transport and communication sectors have seen accelerated progress through the development of road infrastructure in all of Samoa. As well, the communication network has reached most villages in the rural areas through the work of the Samoa Tel corporation.

- There is a need to refine existing roles played by each government ministry in terms of regulatory and operational functions. The government needs to separate the regulatory role from the Ministry of Transport, and transfer it to the Planning and Urban Management Agency (PUMA) of MNRE. This will provide an efficient mobilisation of existing resources and avoid conflict of interest for one ministry playing both regulatory and operational role. The PUMA can regulate and monitor the construction of road infrastructure by conducting preliminary environmental assessments on the impact of these developments on Samoa's environment.
- The Ministry of Transport needs to develop instruments for the determination and appropriate allocation of transport costs.
- Information, communication and technology has become one of the priority areas for Samoa and the application of public awareness and educational programmes is very much needed to further enhance understanding on the importance of ICT.

#### **6.1.10 Biodiversity resources:**

Similar to progress in waste management in Samoa, the biodiversity area has received much attention over the past decade with the development of relevant instruments to implement the protection and conservation of biodiversity programmes, such as the National Biodiversity Strategy Action Plan, the draft National Biodiversity Policy, the draft Bio-prospecting regulations, the National Environmental Management Strategies for Sustainable Development

in Samoa (NEMS – 1993), and the Lands and Environment Act 1989. Outstanding issues are as follows:

- More support for community conservation project initiatives, which are important indicators of grass root level support for conservation efforts to sustainably use and manage biodiversity resources.
- Further assistance is required for the implementation of pilot activities on other aspects of the NBSAP programme.
- The development of the National Invasive Species Strategy is a crucial outcome for the Ministry of Natural Resources and Environment in its effort to address the pressing concern on the domination of alien species which has become a major problem for land owners. Financial support be given to implement pilot projects identified under the Strategy.

#### **6.1.11 National institutional capacity:**

Samoa has taken an exceptional step through its government reforms to address institutional capacity assessment and needs for all its line ministries, by amalgamating sections from other government departments into relevant ministries and merging of government departments into one line ministry that can best utilize existing resources and provide effective services.

- There is an immediate concern to promote the participation and involvement of NGOs in sustainable development programmes at the national and community level and be supported through capacity building.
- Additional financial assistance is required to implement priority capacity building needs of the country, such as; technical trainings in the areas of technology, computer programming and database development.
- Furthermore, the recognition of integrating environmental consideration into national economic planning is a critical issue that requires priority attention. The development of a national policy on economic growth and sustainable development must include the integration of environmental issues into economic planning.

#### **6.1.12 Science and technology:**

Samoa has not progressed well in the area of science and technology due to limited funding assistance to promote this area, lack of human resources with expertise and the identification of institutions to develop this area.

- A national policy on science, technology and sustainable development that will provide the guidelines for the implementation of activities in scientific research development in-country, as well as technological initiatives for technology that are appropriate for Samoa's environmental context, and can be easily adopted must be developed.
- The government needs to identify an agency that will be responsible for providing science and technology development to assist all relevant agencies in achieving sustainable development programmes of the country.

#### **6.1.13 Human resource development:**

The government of Samoa with the assistance of its development partners has have given priority consideration to the implementation of educational and health programmes as seen in extensive infrastructural and human resource development. As stated in the WSSD report for Samoa (2002), the shift in employment structure is in favour of more formal employment evident in the increasing number of people employed in the formal labour force, as compared to the decline in the informal employment sector in 1999.

- There is still a need to develop a national policy on human resources and sustainable development to provide guidance in achieving Samoa's national goals of sustainable development through appropriate natural and human resource management.
- The growing number of youth school drop-outs is a problem and employment creation as well as appropriate skills development programmes is crucial to address the situation.

**6.1.14 Implementation, monitoring and review:**

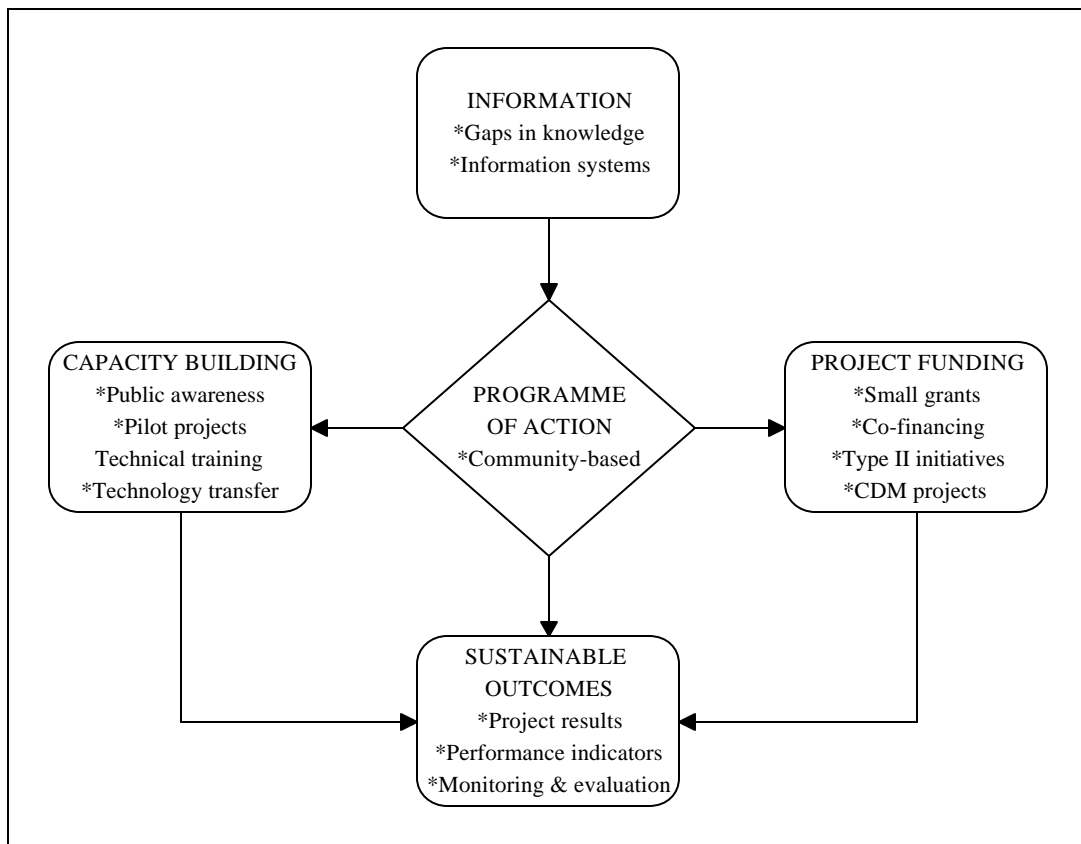
Samoa has come along way to achieve some of the objectives set-out in the BPoA 1994, however some areas require immediate attention as mentioned in the emerging issues identified in each thematic area.

- In order to effectively address the emerging issues highlighted, the establishment of programme evaluation systems for each thematic areas is necessary and would be best implemented through the development of a national programme of action.

**6.2 SPECIAL NEEDS**

Samoa's Plan of Action for the next 10 years, is a reflection of all priority areas of special needs as outlined in Figure-1 model of a Framework Implementation Plan.

**Figure-1 Framework Implementation Programme of Action for Samoa's BPoA+10**



**6.2.1. Information:**

The lesson learnt from previous environmental programmes highlights the limited information available for decision making and programme planning and implementation. The

huge gap in the types of information needed include legal documents on relevant environment legislations, review of management plans to cover updated information and technical information on environmental assessments. In addition, information systems are important components that need to be in place for information inventories,

**Box: 1 Summary on Information Needs for implementation of Samoa's BPoA+10**

<b>Area</b>	<b>Actions</b>
Climate Change:	<ul style="list-style-type: none"> <li>■ Information from other sectors, such as health, agriculture, forestry, and water is essential in determining the implications that climate change and climate variability can have on these sectors.</li> <li>■ Scientific research needs to be developed for Samoa, on areas of climate variability so that accurate or appropriate information are obtained to enable better planning and implementation of programmes for climate change.</li> <li>■ Development and application of information systems (data indicators etc) to support assessments (such as PEAR and EIAs) and decision-making on settlements and planning.</li> </ul>
Natural and environmental disasters	<ul style="list-style-type: none"> <li>■ Early warning information needs to be developed for Samoa on national actions for preparedness and responds to when disaster strikes.</li> <li>■ Review of existing national disaster plans, requires the incorporation of more information about mitigation and readiness strategies for disaster management in Samoa.</li> <li>■ Strengthened enforcement of early warning/disaster preparedness information, through development of a disaster management legislation.</li> </ul>
Management of waste	<ul style="list-style-type: none"> <li>■ Review existing information on waste issues and associated health problems, to update data and fill in the gaps from previous programmes to further enhance on-going waste management programmes .</li> <li>■ Inventory of waste management information pertaining to methodologies used in development of resources from waste materials.</li> </ul>
Coastal and marine resources	<ul style="list-style-type: none"> <li>■ Strengthened scientific research in the areas of coastal and marine resources to improve productivity and biodiversity of coastal areas in Samoa.</li> </ul>
Freshwater Resources	<ul style="list-style-type: none"> <li>■ Development and application of appropriate legislative and institutional arrangements for the sustainable management of watershed areas and water resources.</li> <li>■ Application of specific information technology for designing maps and databases of watershed areas and water resource.</li> </ul>
Land Resources:	<ul style="list-style-type: none"> <li>■ Development of information systems on technical databases, for soil types and geology of the Samoa landscape.</li> <li>■ National inventory of customary land and ownerships</li> <li>■ Gathering of existing information to develop land use capability plans.</li> <li>■ Application of GIS to map out land use areas of Samoa including areas of land degradation.</li> </ul>
Energy Resources	<ul style="list-style-type: none"> <li>■ Promote scientific research studies on the use of renewable energy in Samoa.</li> <li>■ Collect data on sustainable energy needs and potential in Samoa, identifying different types of renewable energy found in-country.</li> </ul>
Tourism Resources	<ul style="list-style-type: none"> <li>■ Conduct a national cost-benefit analysis to assess the true cost or impact of tourism on the environment.</li> </ul>
Transport & Communication	<ul style="list-style-type: none"> <li>■ Assess existing information on the country's accessibility to improved infrastructure</li> </ul>
Biodiversity Resources	<ul style="list-style-type: none"> <li>■ Develop an information database on traditional knowledge and the application of traditional conservation methodologies used by Samoan's to protect and conserve biological diversity resources</li> </ul>
National institutional capacity:	<ul style="list-style-type: none"> <li>■ National assessment of existing institutional capacity needs to be strengthened for a more define and collaborated work between relevant stakeholders on environment programmes</li> </ul>
Science & Technology	<ul style="list-style-type: none"> <li>■ Established agencies to conduct scientific research and assessment needs, providing backstopping information to all relevant stakeholders on the</li> </ul>



	<ul style="list-style-type: none"> <li>■ application of appropriate technology for sustainable development.</li> <li>■ Develop a national policy on science, technology and sustainable development</li> </ul>
Human resource development	<ul style="list-style-type: none"> <li>■ Gather information to develop strategies on sustainable employment creation.</li> <li>■ Develop a national policy on human resources and sustainable development</li> </ul>

### 6.2.2 Capacity Building:

Public awareness programmes should fully explore the use of different forms of the media, such as television (documentaries and TV ads), radio, newspaper, handouts, posters, pamphlets, road-shows and dramas to communicate sustainable development concepts to all sectors of society). Workshops and training of stakeholders are crucial aspects of capacity building to empower people with skills and knowledge on improving ways for sustainable use and management of resources. A scientific research culture needs to be encouraged to support scientific understanding and assessments of environmental issues as well as encouraging appropriate technology transfer that suits Samoa.

#### Box: 2 Summary on Capacity Building Needs for implementation of Samoa's BPoA+10

Area	Actions
Climate Change:	<ul style="list-style-type: none"> <li>■ Strengthened capacity building activities in public awareness, training and education.</li> </ul>
Natural and environmental disasters	<ul style="list-style-type: none"> <li>■ Promote national public awareness on early warning and Disasters preparedness to respond to and recover from disaster events</li> </ul>
Management of waste	<ul style="list-style-type: none"> <li>■ Enhance existing capacity in the preparation and production of public awareness materials, such as educational booklets, video documentaries, CDs, posters and publications etc.</li> <li>■ Encourage Technology Transfer</li> </ul>
Coastal and marine resources	<ul style="list-style-type: none"> <li>■ Strengthened existing awareness, trainings and educational programmes on sustainable coastal and marine resource management.</li> </ul>
Freshwater Resources	<ul style="list-style-type: none"> <li>■ Promote public awareness and educational programmes on conservation of watershed areas and the sustainable use of existing water resources.</li> </ul>
Land Resources:	<ul style="list-style-type: none"> <li>■ Build capacity of local communities on sustainable land use management. Develop public awareness focusing on win-win resolution to address customary land ownership conflicts to benefit all instead of a minority</li> </ul>
Energy Resources	<ul style="list-style-type: none"> <li>■ Promote public awareness on renewable energy in Samoa</li> <li>■ Support technology transfer and technical trainings.</li> </ul>
Tourism Resources	<ul style="list-style-type: none"> <li>■ Strengthened community-based sustainable tourism through building capacity of stakeholders (trainings).</li> <li>■ Promote public awareness of eco- and community-based tourism.</li> </ul>
Transport & Communication	<ul style="list-style-type: none"> <li>■ Application of ICT for public awareness and education. Promote technical assistance in trainings</li> </ul>
Biodiversity Resources	<ul style="list-style-type: none"> <li>■ Promote public awareness on the value of traditional knowledge and skills in natural resource management.</li> <li>■ Enhance awareness on access to genetic resources and its applications.</li> </ul>
National institutional capacity:	<ul style="list-style-type: none"> <li>■ Strengthened partnerships between government agencies and NGO's on environmental awareness and trainings</li> </ul>
Science & Technology	<ul style="list-style-type: none"> <li>■ Promote a scientific and technology research culture, to build specific capacity on advance technology.</li> </ul>
Human resource development	<ul style="list-style-type: none"> <li>■ Capacity building should be encouraged in all sectors for HRD</li> </ul>

### 6.2.3 Adequate Funding:

Access to adequate financial assistance is very much required when filling information gaps and the development of up to date information systems. In addition capacity building programmes can not come into action without funding support to implement planned programmes. Funding assistance should be encouraged for community-based projects to draw on local communities' participation and involvement. Furthermore, Type II initiatives could be explored, particularly on activities to do with recycling and reuse.

#### Box: 3 Summary on Funding Needs for implementation of Samoa's BPoA+10

Climate Change:	<ul style="list-style-type: none"> <li>■ Application of small grants to fund and support community micro projects on the impact of climate change on other sectors; health, agriculture and fisheries.</li> <li>■ Encourage the development of CDM projects</li> <li>■ Support development of Type II projects on climate change adaptation</li> </ul>
Natural and environmental disasters	<ul style="list-style-type: none"> <li>■ Funding for community-based projects on development of mechanisms for preparedness to respond to and recover from disaster events.</li> <li>■ Encourage bi-lateral funding to assist communities in rehabilitation when disaster strikes.</li> </ul>
Management of waste	<ul style="list-style-type: none"> <li>■ Encourage Type II initiative partnerships between communities and business sector</li> </ul>
Coastal and marine resources	<ul style="list-style-type: none"> <li>■ Promote financial assistance from donor agencies through bi-lateral funds, co-financing or Type II initiatives to assist community pilot projects and on-going micro projects on the protection of coastal areas and conserve marine resources.</li> </ul>
Freshwater Resources	<ul style="list-style-type: none"> <li>■ Encourage funding assistance for community projects around watershed areas to protect and improved watershed areas and water resources conditions.</li> </ul>
Land Resources:	<ul style="list-style-type: none"> <li>■ Adequate financial assistance for land resource programmes should be promoted through bi-lateral funding, co-financing and CDM.</li> </ul>
Energy Resources	<ul style="list-style-type: none"> <li>■ Type II initiatives should be encouraged to develop research on renewable energy. As well, funding assistance from donor agencies can support programmes to assess the potential value of renewable energy resources for Samoa.</li> </ul>
Tourism Resources	<ul style="list-style-type: none"> <li>■ Strengthened Type II initiatives for community based sustainable tourism</li> </ul>
Transport & Communication	<ul style="list-style-type: none"> <li>■ Application of CDM should be encouraged. Support for bi-lateral assistance is required for the improvement of community infrastructures.</li> </ul>
Biodiversity Resources	<ul style="list-style-type: none"> <li>■ Encourage financial assistance such as bi-lateral funding and co-financing to support the implementation of Samoa's Invasive Species Strategies and other components of the National Biodiversity Strategy Action Plan (NBSAP)</li> </ul>
National institutional capacity:	<ul style="list-style-type: none"> <li>■ Funding assistance for institutional capacity buildings should be encouraged through bi-lateral funding to assist the government, NGO's and other relevant stakeholders</li> </ul>
Science & Technology	<ul style="list-style-type: none"> <li>■ Bi-lateral, co-financing and type II initiatives can support science and technology research work in-country.</li> </ul>
Human resource development	<ul style="list-style-type: none"> <li>■ Strengthened bi-lateral assistance for capacity building in HRD.</li> </ul>

### 6.2.4 Programme of Action and Implementation +10

In order for Samoa to advance forward on the implementation of its programmes for the BPoA, it requires enough information, capacity building programmes and adequate funding. The PoA+10 for Samoa focuses on soft solutions to be implemented by communities,

NGO's and other relevant stakeholders. The need for information to fill the gaps on knowledge and established information systems will ensure that enough information has been assessed for improved decision making, and programme planning. Therefore implementation plans take an integrated approach of all actions identified in Boxes 1, 2 and 3 for each thematic areas, under special needs issues on information, capacity building and adequate funding. The PoA+10 for Samoa emphasizes soft solutions for local communities to play the leading role in implementation of micro-projects or pilot projects that are easily manageable by village authorities. Thus, capacity building at this level is very much encouraged, as well as financial support.

There are other major projects implemented at a large scale, which government capacity can undertake, such as the upgrading of national infrastructures of the country, and maintenance of government assets. The application of hard solutions can be the sole responsibility of the government to identify financial mechanisms to support such development.

#### **6.2.5 Sustainable Outcomes:**

- Development of indicators for improved programme implementation is highly recommended from the outset, to better assess Samoa's progress in the next 10 years.
- Inclusion of monitoring and evaluation programmes should be encouraged for each thematic area, action plans.
- Accessibility of stakeholders to information and knowledge network.
- Increase community capacity to sustainably manage natural resources.
- Funding mechanisms established for environmental programmes at local and national levels.
- Improved collaborated network on information sharing, capacity building and mobilising financial resources between each thematic areas.

