



**UNITED NATIONS
CONVENTION OF BIOLOGICAL
DIVERSITY**

**Stocktaking and Thematic Assessment
Report**

2007

**Prepared for
Tonga National Capacity Self Assessment
Project**

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EXECUTIVE SUMMARY

The Convention of Biological Diversity



Natural and anthropogenic exploitation of natural resources led to the increasing rate of biodiversity loss. Concern was expressed by the international communities about the loss of biodiversity. In an effort to address the biodiversity crisis the United Nations Convention of Biological Diversity (UNCBD) was opened for signature at the United Nations Conference on Environment and Development (UNCED), in Rio de Janeiro in June 1992. The UNCBD was opened together with two other conventions namely the United Nation Framework Convention on Climate Change and the Convention to Combat Desertification (UNCCD). These conventions are known as the “Three Rio Conventions”.

Tonga acceded to the UNCBD, on the 19th May 1998. As a party to the UNCBD, Tonga is required to take measures to ensure biodiversity conservation, sustainable use and the equitable sharing of benefits from the use of its biological diversity. The articles of the Convention also require adhering to. Tonga identified seventeen obligations under the UNCBD to be fulfilled. The obligations are further described in this report.

Background

NBSAP Project and the Cartagena Protocol on Biosafety

Under Article 6 of the UNCBD “General Measures for Conservation” parties are required to formulate a strategy and plan of action for biodiversity. Therefore Tonga is currently formulating its National Biodiversity Strategic Action Plan (NBSAP). The NBSAP Project started in June 2003 and is to be completed in June 2006. The main outputs of this project are to produce Tonga’s NBSAP and its First National Report to the Conference of Parties (COP).

Tonga ratified the Cartagena Protocol on Biosafety to the UNCBD on the 18 May 2003. The protocol binds party countries to a framework to address Biosafety issues and to develop a national framework.

The Government approved that a National Biosafety Framework be developed for Tonga in order to ensure safety in the field of safe transfer, handling and use of living modified organisms (LMOs) resulting from modern biotechnology, that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health, and specifically focusing on transboundary movements. This project was funded by the United Nation Environment Programme/Global Environment Facility (UNEP/GEF).



National Capacity Self Assessment

This report combines the Stocktaking and the Thematic Assessment of capacities required for the UNCBD in Tonga. The Stocktaking section of this report outlines existing biodiversity work in Tonga which either directly or indirectly implements the UNCBD obligations. It is evident that the level of biodiversity conservation work in Tonga is still at an early stage. There are no legislations in place which are specific for biodiversity conservation, however there are existing legislations which indirectly address biodiversity. The National Biodiversity Strategy and Action Plan (NBSAP) Project which started in 2003 has assisted in raising the awareness about biodiversity conservation. Thus there is room for building the biodiversity conservation work in Tonga.

The thematic assessment was divided into three areas, firstly to analyse the gaps in the biodiversity work conducted in Tonga in terms of implementing the UNCBD obligations. Secondly, the required programmes and activities to address the gaps were prioritised. Based on the NBSAP biodiversity issues were further analysed for their causes. Finally, capacity development in Tonga was analysed at three levels, namely systematic, institutional and individual.

The thematic analysis highlighted the gaps in terms of implementing the UNCBD, the biodiversity issues of importance to Tonga and the capacity development required. This report envisages to bridge capacities constraints and to utilize capacity opportunities for the betterment of the UNCBD implementation in Tonga.



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LIST OF ACRONYMS

AD	Audit Department
CHM	Clearing House Mechanism
CL	Crown Law
COP	Conference of the Parties
DO	District Officers
DOE	Department of Environment
EA	Enabling Activity
EIA	Environment Impact Assessment
FAD	
LC	Local Communities
MAF	Ministry of Agriculture and Food
MLCI	Ministry of Labour Commerce and Industries
MLSNR	Ministry of Lands Survey and Natural Resources
MOE	Ministry of Education
MOFi	Ministry of Fisheries
MOFo	Ministry of Forest
MOH	Ministry of Health
NBSAP	National Biodiversity Strategic Action Plan
PO	Palace Office
POPs	Persistent Organic Pollutants
RSD/CTD	Revenue Services Department / Custom and Trade Division
SDP8	Sustainable Development Plan 8
SPREP	Secretariat
TIHE	Tonga Institute of Higher Learning
TO	Town Officers
TVB	Tonga Visitors Bureau
UNCBD	United Nations Convention of Biological Diversity
UNCED	United Nations Conference on Environment and Development
USP	University of the South Pacific



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1.0 INTRODUCTION

1.1 BIODIVERSITY OF TONGA



Tonga is an archipelago consisting of 169 islands with 36 being inhabited. The archipelago lies within tropical latitudes (21° 17' – 21° 27', S174 55'W) in the southwest Pacific Ocean. There are four main island groups, which are the outlying northern Niuaus, Vava'u, Ha'apai and the southern Tongatapu group. Tonga has a tropical climate influenced by the trade winds. The cooler and drier months are June to September, and the wetter and hotter months with high risk of tropical cyclones are November to May.

Tonga is a small island country with estimated total land mass of 748sqkm, the smallness in land area supports low biological diversity. Biological diversity means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

The kingdom of Tonga's biological diversity is under threat, both from anthropogenic and natural pressures. Flora and fauna are rapidly exploited to the extent that some are vulnerable, threatened and in danger of becoming extinct.

Tonga has a few if any endemic and native species of global scientific interest. However since biodiversity is the basis for sustainable development, biodiversity conservation is paramount. Biodiversity conservation efforts tend to be concentrated on endemic and rare species and ecosystems with global scientific significance. However species and ecosystems with ecological and cultural importance must also be given equal opportunity for conservation.

Tonga is known to have a rich agricultural biodiversity of which many species and varieties are endangered and threatened with extinction. Classification of Tonga's agro-biodiversity includes root crops, fruit & food tree crops, fruits, vegetables, traditional crops and livestock. However most of Tonga's agro-biodiversity was introduced. Threats to agro-biodiversity includes clearing of areas through agricultural development, dying of senile trees without any replacement planting and the absence of any proper conservation programme to save endangered species and varieties.

In terms of Terrestrial Fauna, invertebrate studies in Tonga have been in the field of agriculture due to its importance to the economy and society. Invertebrates studied were mainly insect pests introduced to the country. Vertebrate studies concentrated on birds, herpetofauna, Tongan fruit bat, rodents and feral cats. Seventy-four birds have been recorded in Tonga, with two being endemic, which are the Tongan whistler, hengehenga (*Pachycephala jacquinoti*) and the Tongan megapode, malau (*Megapodius pritchardii*).

Twenty known species make up the herpetofauna of Tonga. The South Pacific Banded Iguana (*Brachylophus fasciatus*) is considered to be endangered and the skink (*Tachygia microlepis*) is considered to be extinct. Tongan fruit bat (*Pteropus tonganus*) colonies are abundant. Harvesting them is forbidden, which contributes to the colonies being among the oldest in the Pacific. The types of rodents and feral cats found in Tonga were also documented due to the damage they have caused to the biodiversity.

Threats and pressure to the terrestrial fauna of Tonga includes destruction of natural habitats of terrestrial fauna, intensity of agricultural practices for commercial agriculture and rodents and feral cats.

The original vegetation of Tonga was tropical rain forest, which is almost completely lost. Only small remnants remain on Tongatapu, Vava'u and 'Eua. Three species of plants have been confirmed as endemic to Tonga, which includes langakali vao (*Aglaia heterotricha*), mo'otamea (*Dysoxylum tongense*) and uhiuhi (*Podocarpus pallidus*). There are other plant species likely to be endemic to Tonga but which have not been confirmed. Plant biodiversity in Tonga is used for timber, fuel, minor forest products (such as food plants), cultural purposes, medicines, ornaments and income generation (handicrafts).

The marine area surrounding Tonga is approximately 400,000sq km. The people of Tonga depend heavily on the marine life of coastal waters for food and income. Apart from the pelagic sector in Tonga several marine ecosystems exist such as coral reefs, mangrove swamps and lagoons. These ecosystems support millions of species. The only recorded endemic species in the coral reefs of Tonga is the giant clam *Tirana Tesoro*. Several studies have identified endangered and threatened marine species in Tonga.

It is evident that the biodiversity known to the people of Tonga are those of cultural and economic value. However there is a need to also value biodiversity that are of ecological importance.

1.2 UNITED NATIONS CONVENTION OF BIOLOGICAL DIVERSITY (UNCBD)

Tonga acceded to the UNCBD in May 1998. The UNCBD binds party countries in agreement to protect Earth's biological diversity. The UNCBD addresses 42 articles on various biodiversity issues, which aims at conservation of biological diversity, sustainable use and sharing of benefits from resources used. The articles outline the obligations of party countries.

The Department of Environment is currently the operational focal point for UNCBD. Tonga has developed a biodiversity enabling activity (EA) to implement its obligation under UNCBD. The enabling activity is to develop a National Biodiversity Strategic Action Plan (NBSAP) through a participatory and analytic process. The EA also assists Tonga to meet its reporting requirements to the Conference of the Parties (COP).

1.3 NATIONAL CAPACITY SELF ASSESSMENT

The Department of Environment on behalf of the Government of Tonga entered into an agreement with the United Nations Development Programme (UNDP) and the Global Environment Facility (GEF) for funding of the National Capacity Self Assessment (NCSA) Project.



The NCSA Project aims to identify and characterize critical capacity constraints relevant to effective management in Tonga, and to develop a plan for these constraints, in terms of fulfilling Tonga's obligations under the three Rio conventions (UNCBD, UNFCCC and UNCCD).

This report provides a biodiversity stock take of previous capacities and assesses biodiversity capacities in Tonga. This report will act as baseline information for the development of a capacity action plan for Tonga.



2.0 METHODOLOGY

This report is divided into two main parts, the Stocktaking Report and the Thematic Assessment. Documents already published addressing biodiversity issues in Tonga, such as SDP8, NBSAP, NEMS as well as existing national legislations were used in the compilation of the Stocktaking Report,.

The thematic assessment was divided into three main sections. The first section identified the gaps in implementing the UNCBD obligations. The second section prioritised the required programmes and activities to address the gaps identified in the first section. The third and last section, identified capacity development at three levels, which were systematic, institutional and individual. The thematic assessment was completed by using questionnaires and workshops for biodiversity stakeholders. Experiences of the authors in regards to biodiversity issues in Tonga were crucial in terms of analyzing the information gathered and presented here.

3.0 NATIONAL OBLIGATIONS UNDER UNCBD

The obligations outlined below reflect the object and spirit of the Convention on Biological Diversity. Tonga must take positive actions to meet these obligations and refrain from acting in the contrary.

3.1 NATIONAL BIODIVERSITY AND CONSERVATION PLANNING:

- To develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes: Art 6(a).
- To integrate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies: Art 6(b).
- To integrate consideration of conservation and sustainable use of biological resources into national decision-making: Art 10(a).
- To adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity: Art 10(b)
- To protect and encourage customary use of biological resources in accordance with traditional cultural practices that is compatible with conservation or sustainable use requirements: Art 10(c).
- To support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced: Art 10(d).
- To encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources: Art 10(e).

3.2 IDENTIFYING AND MONITORING BIODIVERSITY AND ITS CONSERVATION:

- To identify components of biological diversity important for its conservation and sustainable use and considering the indicative list of categories set down in Annex I: Art 7(a).
- To monitor, through sampling and other techniques, the components of biological diversity identified in Article 7(a), paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use: Art 7(b).
- To identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects through sampling and other techniques: Art 7(c).
- To maintain and organize, by any mechanism data, derived from identification and monitoring activities pursuant to Art 7(a) (b) (c): Art 7(d).

3.3 IN-SITU CONSERVATION, INCLUDING PROTECTED AREA SYSTEM MANAGEMENT:

- To establish a system of protected areas where special measures need to be taken to conserve biological diversity: Art 8(a).
- To develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity: Art 8(b).
- To regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas, with a view to ensuring their conservation and sustainable use: Art 8(c).
- To promote the protection of ecosystems, natural habitats and the maintenance of viable populations of species in natural surroundings: Art 8(d).

- To promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas: Art 8(e).
- To rehabilitate and restore degraded ecosystems and promote the recovery of threatened species, *inter alia*, through the development and implementation of plans or other management strategies: Art 8(f).
- To establish or maintain means to regulate, manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology which are likely to have adverse environmental impacts that could affect the conservation and sustainable use of biological diversity, taking also into account the risks to human health: Art 8(g).
- To prevent the introduction of, control or eradicate alien species which threaten ecosystems, habitats or species: Art 8(h).
- To endeavour to provide the conditions needed for compatibility between present uses and the conservation of biological diversity and the sustainable use of its components: Art 8(i).
- To develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations: Art 8(k).
- To regulate or manage the relevant processes and categories of activities, where a significant adverse effect on biological diversity has been determined pursuant to Article 7: Art 8(l).
- To cooperate in providing financial and other support in-situ conservation outlined in Articles 8(a) to (l), particularly to developing countries.

3.4 PRESERVING INDIGENOUS AND LOCAL KNOWLEDGE, INNOVATIONS AND PRACTICES:

- To respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices (subject to its national legislation): Art 8(j).

3.5 EX-SITU CONSERVATION OF BIODIVERSITY:

- To adopt measures for the ex-situ conservation of components of biological diversity, preferably in the country of origin of such components: Art 9(a).
- To establish and maintain facilities for ex-situ conservation of and research on plants, animals and micro-organisms, preferably in the country of origin of genetic resources: Art 9(b).
- To adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions: Art 9(c).
- To regulate and manage collection of biological resources from natural habitats for ex-situ conservation purposes so as not to threaten ecosystems and in-situ populations of species, except where special temporary ex-situ measures are required under Article 9(c): Art 9(d).
- To cooperate in providing financial and other support ex-situ conservation outlined in Article 9(a) to (d) and in the establishment and maintenance of ex-situ conservation facilities in developing countries: Art 9(e).

3.6 DEVELOPING AND INTRODUCING ECONOMICAL AND SOCIAL INCENTIVES:

- To adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity: Art 11.

3.7 PROVIDING SCIENTIFIC AND TECHNICAL EDUCATION AND TRAINING:

- To establish and maintain programmes for scientific and technical education and training in measures for the identification, conservation and sustainable use of biological diversity and its components and provide support for such education and training for specific needs of developing countries: Art 12(a).
- To promote and encourage research which contributes to the conservation and sustainable use of biological diversity: Art 12(b).
- To promote and cooperate in the use of scientific advances in biological diversity research in developing methods for conservation and sustainable use of biological resources: Art 12(c).

3.8 RAISING UNDERSTANDING AND AWARENESS:

- To promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes: Art 13(a).
- To cooperate with other States and international organizations in developing educational and public awareness programmes with respect to conservation and sustainable use of biological diversity: Art 13(b).

3.9 UTILISING ENVIRONMENTAL IMPACT ASSESSMENT FOR BIODIVERSITY CONSERVATION:

- To introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and allow for public participation in such procedures: Art 14(1) (a).
- To introduce appropriate arrangements to ensure that the environmental consequences of its programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account: Art 14(1) (b).
- To promote notification, exchange of information and consultation on activities under their jurisdiction or control which are likely to significantly affect adversely the biological diversity of other States or areas beyond the limits of national jurisdiction, by encouraging the conclusion of bilateral, regional or multilateral arrangements: Art 14(1) (c).
- To notify immediately potentially affected States of any imminent danger or damage originating in its jurisdiction or control to the biological diversity of that State and initiate action to prevent or minimize such danger or damage: Art 14(1) (d).
- To promote national arrangements for emergency responses to activities or events, which present grave and imminent danger to biological diversity and encourage international cooperation to supplement such national efforts or establish joint regional or organizational contingency plans: Art 14(1) (e).

3.10 REGULATE THE HANDLING OF LIVING MODIFIED ORGANISMS & IMPLEMENTING THE CARTAGENA PROTOCOL ON BIOSAFETY:

- To consider the need and modalities of a protocol setting out appropriate procedures, including advance informed agreement in the field of safe transfer, handling and use of any living modified organism resulting from biotechnology that may have adverse effect on the conservation and sustainable use of biological diversity: Art 19(3).
- To require any person providing any living modified organisms to provide any available information about the use and safety regulations required by that State in handling living modified

organisms and any available information on the potential adverse impact of the specific organisms to the State into which the organisms are to be introduced: Art 19(4).

3.11 REGULATE ACCESS TO AND TRANSFER OF GENETIC RESOURCES:

- To create conditions to facilitate access to genetic resources for environmentally sound uses by other State parties and not to impose restrictions contrary to the objectives of the Convention: Art 15(2).
- To grant access on mutually agreed terms and subject to the provisions of article 15 of the Convention: Art 15(4).
- To grant access to genetic resources subject to prior informed consent of the State party providing the resources unless determined otherwise: Art 15(5).
- To develop and carry out scientific research based on genetic resources provided by other State parties: Art 15(6).

3.12 REGULATE COMMERCIALISATION AND ENSURE BENEFIT-SHARING FROM GENETIC RESOURCES:

- To take legislative, administrative or policy measures aimed at sharing in a fair and equitable way the results the research and development and the benefits arising from the commercial and other utilisation of genetic resources: Art 15(7).

3.13 REGULATE ACCESS TO AND TRANSFER OF TECHNOLOGY:

- To provide and/or facilitate access for and transfer to other State parties of technologies that are relevant to the conservation and sustainable use of biological diversity or make use of genetic resources and do not cause significant damage to the environment: Art 16(1).
- To take legislative, administrative or policy measures so that State parties providing genetic resources are given access to and transfer of technology which makes use of these resources on mutually agreed terms, including technology protected by patents and other intellectual property rights: Art 16(3).
- To take legislative, administrative or policy measures so that the private sector facilitates access to joint development and transfer of technology for the benefit of both governmental institutions and the private sector of developing countries: Art 16(4).
- To cooperate in order to ensure that patent and intellectual rights are supportive of and are not contrary to the objectives of the Convention: Art 16(5).
- To take legislative, administrative or policy measures, as appropriate, to provide for the effective participation in biotechnological research activities: Art 19(1).
- To take all practicable measures to promote and advance priority access on a fair and equitable basis by State parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those State parties: Art 19(2).

3.14 MANAGING INFORMATION:

- To shall facilitate exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity: Art 17(1).
- To exchange of results of technical, scientific and socio-economic research, as well as information on training and surveying programmes, specialized knowledge, indigenous and traditional knowledge as such, including repatriation of information: Art 17(2).

3.15 TECHNICAL AND SCIENTIFIC COOPERATION:

- To promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity, through the appropriate international and national institutions: Art 18(1).
- To promote technical and scientific cooperation with other State parties, in particular developing countries, in implementing this Convention, inter alia, through the development and implementation of national policies: Art 18(2).
- To encourage and develop methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, and promote cooperation in the training of personnel and exchange of experts: Art 18(4).
- To promote the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of this Convention: Art 18(5).

3.16 ACCESSING FINANCIAL RESOURCES:

- To provide, in accordance with its capabilities, financial support and incentives in respect of those national activities which are intended to achieve the objectives of this Convention, in accordance with its national plans, priorities and programmes: Art 20(1).
- To take full account of the specific needs and special situation of least developed countries in their actions with regard to funding and transfer of technology: Art 20(5).
- To take into consideration the special conditions resulting from the dependence on, distribution and location of, biological diversity within developing country Parties, in particular small island States: Art 20(6).
- To consider strengthening existing financial institutions to provide financial resources for the conservation and sustainable use of biological diversity: Art 21(4).

3.17 REPORTING:

- To present to the Conference of the Parties reports on measures which it has taken for the implementation of the provisions of the Convention and their effectiveness in meeting the objectives of the Convention: Art 26.

4.0 COUNTRY ACTIVITIES UNDER UNCBD

4.1 NBSAP PROJECT



Tonga is currently conducting the NBSAP enabling activity project. This project started in June 2003, and it was initially set for completion in 2 years but due to unforeseen factors it has been extended to June 2006. The two main outputs to be produced from this project are the NBSAP and the First National Report to the UNCBD COP.

The Project was divided into 5 activities. These activities are presented in Table 1.

Table 1 NBSAP Project Activities

Project Activities	Description	Status of Implementation
Activity 1	Stocktaking of Tonga's Biodiversity	Completed
Activity 2	Identification and analysis of Options	Completed
Activity 3	Preparation of the NBSAP	April 2006
Activity 4	Preparation of the First National Report	April 2006
Activity 5	Clearing House Mechanism	Completed

4.2 BIOSAFETY PROJECT

Tonga has conducted the Biosafety Project to develop a National Biosafety Framework. Tonga's National Biosafety Bill has been developed and it is currently being reviewed by the Crown Law. Outlined below are the Biosafety Project activities which were conducted and completed.

Biosafety Project Activities

- 1) Regular NCC meetings
- 2) Public Awareness Programme
- 3) Drafting of National Biosafety Framework and Plan of Action for Implementation by National Consultant
- 4) Drafting of Biosafety Bill and Regulations 2004 by an International Consultant
- 5) Computerise Project Accounts
- 6) Translating Biosafety Bill and Regulations 2004 by National Consultant
- 7) Draft NBF & Biosafety Legislation National Consultations
- 8) Technical Review by International Consultants funded by the global project
- 9) Submission of NBF & Biosafety legislation to the Office of the Hon. Minister of Environment

5.0 STOCKTAKING REVIEW OF TONGA'S IMPLEMENTATION FRAMEWORK FOR UNCBD

5.1 INSTITUTIONAL ARRANGEMENTS AND FRAMEWORK

Government agencies are established with mandates that either directly or indirectly address biodiversity or issues concerning biodiversity. In terms of conservation the involvement of churches, communities and youth groups is still very minimal. There is currently an effort to build the capacities of these groups in conservation work. Outlined below are key government institutions with their mandates, roles and functions with regards to biodiversity.

5.1.1 Ministry of Fisheries



The Ministry of Fisheries Strategic Plan 2004/2007 clearly states its mandate and role, and the legal instrument that empowers its role. The Fisheries Act of 1989, Fisheries Management Bill of 2002, and Aquaculture Management Bill of 2004 give direction to the Ministry to fulfill its mandate and role which is mainly for the conservation, management, sustainable utilisation and development of fisheries resources in the Kingdom of Tonga. As stated in the Strategic Plan 2004/2007, the Ministry also set goals and principles so that its role and mandate could be

easily achieved. The six main principles are the conservation and protection of the environment, social well being, accountability and transparency, business surety, resource development and management, and continuous improvement

The Ministry's structure was developed so that its goals and mandate would be functionally executed and achieved. This involves four main divisions which are: Human resources development and administration, Economics and Finance, Resource Research and Development and Management, and Access and compliance.

Programmes and activities that are directly related to the biodiversity conservation and management include:

1. Aquaculture and Research Programme
 - Green snail enhancement
 - Trochus enhancement
 - Pearl farming
 - Giant Clam enhancing programme
 - Mozuku farming

2. Research

- Beche-de-mer stock assessment survey
 - Data collection for tuna resources
 - Data collection for snapper resources
 - FAD
3. Access and compliance
- Monitoring
 - Enforcement
 - Licensing

Other programmes that may be relevant are community base marine reserve and a live coral harvesting programme.

5.1.2 Ministry of Forestry

The Ministry of Forestry is a newly established portfolio in 2005, which until recently had been a division under the Ministry of Agriculture and Food. The main role of this ministry is to promote and implement forestry development programmes in the Kingdom of Tonga. One of the main goals of this ministry is to maintain the long-term sustainability of the environment in terms of agro-forestry and natural forest protection and conservation.

Several objectives and programmes that the ministry developed to achieve the ultimate goal include: agro-forestry development, natural resource conservation, forest plantation and utilization, and forest research.

Under each programme, the following activities have been implemented;

- Nursery seedling – seedling production of vulnerable, socially important and biologically important species in the Kingdom.
- Nursery timber seedlings- exotic forest and local timber production
- Export crop production and seedlings – pawpaw, kava and timber seedlings
- Fruit trees and Coconut improvement
- Watershed management
- National Parks and Recreational areas
- Forest National Parks and Wild life management
- Coastal forest Protection and Rehabilitation
- Sandalwood development
- Natural forest and fruit trees inventory
- Forest genetic conservation

5.1.3 Department of Environment



The Department of Environment Corporate Plan 2004/2007 highlighted the department's mission at the time, which is to sustain the integrity of the ecosystems of Tonga to support life and livelihood.

The department also developed objectives under different programmes so that its mission could be achieved. Based on the developed mission and programmes, the department's structure was also formulated and adopted.

It is clear from its mission and objectives that the department's main role and function is to make sure that the people of Tonga achieve a high standard of life, through sustaining its ecosystems.

The following programmes and objectives are relevant to the country's obligation under the UNCBD convention and will be executed during the plan period;

- Climate change
- Biodiversity
- Biosafety
- International water
- POPs
- Research and assessment
- EIA
- Monitoring Programme
- National Parks and Reserves
- Coral Reef monitoring programme
- Survey of potential parks and reserves
- Coastal trees replanting
- Chemicals management
- Awareness programme

The Department of Environment also envisages playing a coordinating role in all environmental issues in Tonga

5.1.4 Ministry of Agriculture and Food

The Ministry of Agriculture and Food mission statement is to provide high quality and timely service through competent and motivated staff, to enable clients to improve productivity, market access and profits, while sustaining the environment and agricultural security.

The main work programme areas which are relevant for the implementation of the convention obligations include;

- Agro-biodiversity Genetics
- Agriculture genetics /biological resources
- Biosecurity
- Food quality assurance
- Livestock
- Research
 - variety trials
 - plant propagation
 - multiplication
 - livestock breeding
- crop production
- crop protection
- plant nutrition, soil and water requirement

5.1.5 Ministry of Lands, Survey and Natural Resources

The Parks and Reserves Act of 1976 have given power to the Minister of Lands, Survey and Natural Resources as the Parks and reserves Authority, to establish parks and reserves in the Kingdom. The jurisdiction over parks and reserves is vested under the minister and the Natural resources division of the ministry

One of its important roles is to promote the conservation of the biodiversity of Tonga through establishing parks and reserves.

Some of the activities include;

- management of the Parks and Reserves
- monitoring
- survey programmes
- enforcement
- surveillance

5.1.6 Tonga Visitors Bureau

The Department's mandate as stated in the Amended Tourist Act of 1976 is developing tourism as a major sector in the economy and promoting Tonga as a desirable tourist destination.

However, out of six functions assigned for the Department, one function is relevant to biodiversity conservation and protection which is *ensuring that tourism development will enhance and preserve Tonga's unique cultural patterns and historical sites, protect the natural environment and improve communities through out Tonga.*

Under the Department's Programme 2: Tourism Research, Planning, Development and Training, activities 11 deals directly with biodiversity and that is to initiate project activities in eco-tourism.



Activities that are currently executed by the Tonga Visitors Bureau include;

- Whale watching industry
- Bird Sanctuary 'Otumotu lalo Vava'u
- Proposed Marine Reserve in Vava'u
- Rat eradication in Vava'u
- Tourist sites protection and maintenance

5.1.7 Central Planning Department

The mandate for the Department given by CD no.611 of May 24, 1978 is to develop National Development Plans for the Kingdom of Tonga. The National Development Plan outlines strategies for the environment management in Tonga. These strategies are incorporated into the Department of Environment corporate Plan in an effort to implement the National Development Plan.

6.0 LEGAL AND REGULATORY FRAMEWORK

The Department of Environment is the government authority responsible for administering and implementing the Convention of Biological Diversity. There are no existing laws that directly address the concerns of UNCBD. However, a few existing laws have some relevance to biodiversity, but are vested in other government ministries.

Table 2 outlines the relevant laws and the ministry holding the authoritative powers.

Table 2 Existing laws with relevance to biodiversity and responsible ministry.

Responsible Ministry / Department	Existing Laws
Department of Environment	<ul style="list-style-type: none"> • Environment Impact Assessment Act 2003 • Ozone Layer Protection Bill 2006 • Biosafety (Living Modified Organisms) Bill 2006
Ministry of Fisheries	<ul style="list-style-type: none"> • Aquaculture Management Act 2003 • Fisheries Management Act 2002 • Marine Pollution Prevention Act 2002
Ministry of Agriculture and Food	<ul style="list-style-type: none"> • Pesticides Act 2002 • Noxious Weeds Act (Cap. 128) • Animal Disease Act (Cap. 146) • The Bird and Fish Preservation Act (Cap. 125) • Plant Quarantine Act (Cap.127)
Ministry of Health	<ul style="list-style-type: none"> • Waste Management Act 2005 • Public Health Act 1992
Ministry of Education	<ul style="list-style-type: none"> • Education Act (Cap. 86)
Ministry of Forests	<ul style="list-style-type: none"> • Forest Act (Cap.126)
Customs Department	<ul style="list-style-type: none"> • Petroleum Act, Petroleum Regulations and Petroleum Mining Regulations
Ministry of Lands Survey and Natural Resources	<ul style="list-style-type: none"> • Land Act (Cap.132) and Land Regulations • Parks and Reserves Act (Cap. 89)

At the NCSA National Workshop to present the Stocktaking and Thematic Assessment Report (24 March 2006), participants raised the issue of weak enforcement of existing laws and regulations. The representative from the Ministry of Police informed the workshop that one of the difficulties in enforcing these laws is the limited number of enforcing officers.

7.0 POLICIES, PLANS AND STRATEGIES

These policies and strategies have been identified as either directly or indirectly providing a mechanism for implementing the UNCBD obligations. The National Biodiversity Strategy Action Plan (NBSAP) is the only strategy specific for implementing the UNCBD. Most of the policies, strategies and plans identified are not specific to the UNCBD obligations but are in place in the Government of Tonga. Table 3 lists all the policies and strategies for implementing the UNCBD.

7.1 POLICIES AND STRATEGIES DIRECTLY IMPLEMENTING UNCBD OBLIGATIONS

- *National Biodiversity Strategic Action Plan (NBSAP)*

Tonga's NBSAP is currently being formatted for publishing and it is scheduled to be available in March 2006. The NBSAP fulfils the obligation requirement under CBD Article 6 which states "for parties to develop national strategies, plans for conservation and sustainable use of biological resources...."

7.2 POLICIES AND STRATEGIES INDIRECTLY IMPLEMENTING UNCBD OBLIGATIONS

- *Sustainable Development Plan 8*

Tonga's National Strategic Development Plan (SDP8), Goal 7 addresses environmental sustainability and disaster risk reduction. Under this goal there are 3 environment strategies which are as follows:

Strategy 1: Complete and enforce the legislative framework for environmental conservation and management

Strategy 2: Integrate environmental costs and benefits into Government decision making procedures covering policies, projects and private investment proposals.

Strategy 3: Implement environmental education programmes and engage communities in remedial measures.

- *Department of Environment, Corporate Plan 2004 -2007*

The Department of Environment's Corporate Plan (2004-2007) outlines its roles and functions to address its mandate (2003 EIA Act). These roles and functions evolved from national and global emerging environmental issues. Such issues include the preservation of wetlands and the management and protection of coastal areas, the conservation of endangered species and the preservation of the biological diversity.

- *Tonga National Assessment Report for World Summit Sustainable Development*

This report was prepared by the Department of Environment for the World Summit on Sustainable Development (Rio + 10) Johannesburg, 2002. It outlined the biodiversity resources of Tonga, activities and progress, institutional framework and needs and constraints.

- *'Eua Management Plan for 'Eua National Park*



The ‘Eua management plan was prepared at the request of the Government of Tonga as part of New Zealand’s assistance to the forestry sector. ‘Eua National Park (449ha) is Tonga’s first National Park.

- *Tonga’s response to the Barbados Plan of Action (2004)*

Tonga presented its response to the Barbados Plan of Action. This report presented the status of Tonga’s biodiversity. It also presented the progress on programmes and projects concerning Tonga’s biodiversity and highlighted Tonga’s biodiversity needs and constraints.

- *The Kingdom of Tonga, Action Strategy for Managing the Environment*

The action strategy plan was prepared in recognition of the importance of the environment to the health, welfare and economic development of Tonga.

- *Ha’apai Conservation Area Biodiversity Survey and Community-based Biodiversity Conservation Action Plan*

This plan was produced under the South Pacific Biodiversity Conservation Programme. The plan is a commitment of the communities of Ha’apai to protect their islands and marine environment.

- *Fanga’uta Lagoon System Environment Management Plan (2001)*

This plan was produced under the AUSAID funded TEMPP (1998-2001). The plan elaborates a detailed integrated environmental management plan for the Fanga’uta Watershed Area.

Table 3 Policies and Strategies directly and indirectly implementing the UNCBD obligations.

Policies and Strategy Directly implementing the UNCBD obligations	Policies and Strategies Indirectly implementing the CBD obligations
<ul style="list-style-type: none"> • National Biodiversity Strategic Action Plan 	<ul style="list-style-type: none"> • Sustainable Development Plan 8 • The Kingdom of Tonga, Action Strategy for Managing the Environment • Tonga’s response to the Barbados Action Plan • Tonga National Assessment Report, for World Summit Sustainable Development, • ‘Eua Management Plan • Ha’apai Conservation Area Biodiversity Survey and Community-based Biodiversity Conservation Plan • Department of Environment Corporate Plan • Ministry of Agriculture Corporate Plan • Ministry of Forests Corporate Plan • Ministry of Fisheries Corporate Plan

7.3 STRATEGIC PLANNING

Strategic planning is further divided into two types, National and Regional.

7.4 STRATEGIC NATIONAL PLANNING

- *National Biodiversity Strategic Action Plan*

Tonga has identified eight theme areas which are within the UNCBD theme areas which are as follows:- Forest Ecosystems, Marine Ecosystems, Species Conservation, Agro-biodiversity, Local community and civil societies, Access and Benefit Sharing, Mainstreaming Biodiversity Conservation and Financial Mechanisms.

These themes are well documented in Tonga’s National Biodiversity Strategic Action Plan.

Further descriptions of the issues under each of these themes are given in Table 4.

Table 4 Theme areas and issues planned for Strategic National Planning

Theme Areas	Issues planned
1. Forest Ecosystems	<ul style="list-style-type: none"> - Arresting Agro-deforestation - Integrated land use planning - Sustainable Forest Management - Conservation Areas - Information Research and Monitoring - Public Awareness and Education
2. Marine Ecosystems	<ul style="list-style-type: none"> - Managing Impacts of Land based activities - Marine conservation areas - Sustainable management of marine biodiversity - Information Research and monitoring - Public awareness and education
3. Species Conservation	<ul style="list-style-type: none"> - Protection of priority species - Sustainable use and management of species - Invasive species - Research and monitoring - Public awareness and education - Capacity Building
4. Agro-biodiversity	<ul style="list-style-type: none"> - Conservation and sustainable use of threatened agro-biodiversity - Research and development - Public awareness and education - Capacity building
5. Civil communities and civil societies	<ul style="list-style-type: none"> - Local communities and resource owners - Civil society - Schools
6. Access of benefit sharing and traditional ecological knowledge	<ul style="list-style-type: none"> - Access to genetic resources - Fair and Equitable sharing of benefits - Traditional Ecological Knowledge - Public Awareness and education
7. Mainstreaming biodiversity	<ul style="list-style-type: none"> - Legislations, policies and plans

conservation	<ul style="list-style-type: none"> - Multi-sectoral collaboration - EIA - Economic Valuation
8. Financial Mechanisms	<ul style="list-style-type: none"> - Assessment of biodiversity conservation resources - Collation and dissemination of donor-related information - Capacity Building in Conservation Fund Raising and Management - Economic Tools and Instruments for Conservation Funding - Partnerships

7.5 STRATEGIC REGIONAL PLANNING

The national environmental priorities are reflected in regional planning.

- *Action Strategy for Nature Conservation in the Pacific Islands Region, 2003 – 2007*

This action plan accommodates the three pillars of sustainable development and addresses all sectors in development. Table 5 outlines the 3 pillars of sustainable development and the 30 year goal for each sector.

Table 5 30 year goal for each sector of sustainable development

Sector	30 year goal
Environment	The biodiversity and natural environment of the Pacific region are conserved.
Economy	Nature conservation and use of sustainable resources are integral parts of all island economies.
Society	Pacific peoples, their governments, and institutions are leading activities for the sustainable and equitable use of natural resources in the Pacific region.

- *SPREP Corporate Plan 2001 -2005*

The SPREP Corporate Plan 2001 -2005 defines the vision of the Secretariat and identifies its core business functions, especially in management of the environment. There are four key result areas in the SPREP Corporate Plan of which Nature Conservation is the first. The main focus of this area is outlined in Table 6.

Table 6 SPREP Key result Areas – Nature Conservation

Key Result Areas	Main Focus
Nature Conservation	<ul style="list-style-type: none"> Conservation Areas Ecosystem Management Species Protection Bio-safety Traditional Resource Management

8.0 STAKEHOLDER PARTICIPATION AND EDUCATION

8.1 GOVERNING BODIES

The Government of Tonga endorsed the development of a National Biodiversity Conservation Action Plan (NBSAP) on the 27 March 1992, to be administered by the Department of Environment. Three governing bodies were established for the implementation of the project. These three bodies draw on the expertise of Tonga’s biodiversity stakeholders.

These groups are the National Biodiversity Advisory Committee (NBAC), Biodiversity Technical and Consultancy Group and a Project Management Unit. Table 7 outlines the members of these groups.

Table 7 *Members of the three governing bodies responsible for Tonga’s NBSAP Project*

Stakeholders	Members
National Biodiversity Advisory Committee	<ul style="list-style-type: none"> • Director of Environment (Chairperson) • President of TANGO • President of Chamber of Commerce • Director of Ministry of Agriculture and Foods • Director of Education • Director of Tourism • Director of Planning • Secretary of Foreign Affairs • Secretary of Fisheries • Secretary of Lands and Survey and Natural Resources • Secretary of Labour, Commerce and Industries
Biodiversity Technical and Consultancy Group	<ul style="list-style-type: none"> • Agro-biodiversity Expert from Ministry of Agriculture and Food • Terrestrial Fauna Expert from Ministry of Agriculture and Foods • Head of Ministry of Agriculture Research Unit • Forestry Expert from Ministry of Forests • Marine Expert (pelagic) from Ministry of Fisheries • Marine Expert (coastal) Department of Environment • Deputy Director of Environment (Head of MEAs) • Representative from Langafonua (NGO) • Representative from Catholic Women’s League • Representative from Kolomotu’a Development Group • Representative from Fanga ‘o Pilolevu Ex-students Association • NBSAP Project Officer • NBSAP Project Manager
Project Management Unit	NBSAP Project Manager

	NBSAP Project Officer
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8.2 CONSULTATION WORKSHOPS



Throughout the development of the NBSAP, three Consultation Workshops were conducted throughout Tongatapu, Vava'u, Ha'apai and 'Eua. The fourth Consultation Workshop is planned for early 2006.

Table 35 outlines the NBSAP Consultation Workshops and the aim of each workshop.

Table 8 NBSAP Consultation Workshops

Consultation Workshops	Aim	State of Implementation
1	To present the findings from the Stocktaking Report and identify strategies and actions for biodiversity conservations	Completed
2	To present NBSAP draft for comments and feedback	Completed
3	To prioritise NBSAP theme areas, strategies and actions.	Completed
4	Present the NBSAP Project outputs <ul style="list-style-type: none"> - NBSAP - First National Communication Report - Biodiversity Database - Biodiversity Pamphlets 	Planned for March, April 2006

The workshops were scheduled to be conducted in Niuatoputapu and Niuafu'ou but due to the unavailability of flights to these islands, the workshops were not conducted in these two islands.

Workshops were presented to biodiversity relevant government ministries with representatives from most of the other government ministries in all the island groups mentioned. In each island group a workshop was held for representatives of non governmental organisations. Workshops were also conducted in selected villages with representatives from neighbouring villages. Table 9 shows the number of Consultation Workshops conducted in each island group.

Table 9 The number of Consultation Workshops conducted in each island group

Consultation Workshops	Tongatapu	Vava'u	Ha'apai	'Eua
1	11	7	6	5
2	17	7	6	5
3	17	7	6	5
4	3	1	1	1



8.3 SCHOOL VISITS

During the NBSAP project six high schools were visited as part of promoting the project and awareness. More school visits are scheduled to be conducted during 2006 to present Tonga biodiversity facts and the outputs of the project.

The Project also holds reports such as Tonga Biodiversity Stocktaking Reports which are made available to students when information is required.

8.4 TELEVISION AND RADIO PROGRAMMES

Another form of reaching a wider audience is through television and radio programmes. The NBSAP project has used both mediums to great effect.

8.5 STOCKTAKING DATABASE

A Stocktaking Database was established containing the species identified in the Tonga Biodiversity Stocktaking Report. This database is available for the public to access at the Department of Environment.

9.0 MONITORING AND EVALUATION

9.1 GOVERNMENT AND DONOR PROCEDURES

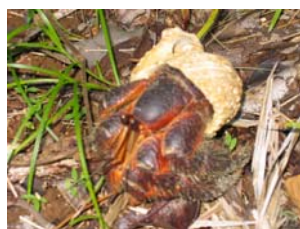
Using Government and donor procedures that are already in place ensures monitoring and evaluating the effectiveness of implementing the Convention obligations. These procedures ensure the accountability of project expenditure.

According to Article 6 of the Convention parties are required to produce a biodiversity strategic action plan. Tonga is currently formulating the NBSAP project to produce the NBSAP. Table 10 shows procedures utilized for monitoring and evaluating Tonga’s NBSAP project.

Table 10 Monitoring and Evaluation Procedures

Monitoring and Evaluation Procedures and Processes	Description
NBSAP Staff Weekly Report	NBSAP staff submit a daily record of work to the Head of Administration
Monthly Output Report	This report outlines the status of project outputs each month
Monthly Work plan	This work plan outlines the work planned for the month to come
Quarterly Reports	<p>The NBSAP project reports in writing to the implementing agency UNDP quarterly. The quarterly report consists of 3 components:</p> <ul style="list-style-type: none"> - narrative report, - financial report and a - work plan and costing for the next quarter. <p>The narrative report outlines the project activities being conducted every quarter, short descriptions of financial issues and also financial requests for the next quarter.</p> <p>The financial report outlines the project expenditures each quarter based on the project vote book which is reconciled with Treasury records.</p> <p>The project also submits a work plan and costing outlining the work planned for the following quarter.</p>
Annual Audit	Auditing of the project fund is conducted annually to monitor project spending.
Tri-Partite Review	The tri-partite review is also conducted annually for all the project stakeholders, which includes representatives from UNDP, Project staff, Department of Environment, Technical Team and relevant stakeholders.
NBAC/NECC meeting	NECC now replaces the NBAC, however the NECC have not met since being established. Project activity outputs were reported to the NBAC when functional

9.2 NBSAP IMPLEMENTATION AND MONITORING



The NBSAP is a holistic strategy and plan requiring a multidisciplinary approach. Its implementation is therefore a multi-agency multi-sectoral responsibility. With such approach in place a monitoring programme is also required. Tonga’s NBSAP dedicates a section to showing ways to monitor each of the actions and strategies in each of the NBSAP theme areas. In doing so, the monitoring section fulfils the purpose of Tonga

having a NBSAP being implemented.

10.0 RESOURCES

Resources are required to ensure successful implementation of both international and in-country UNCBD obligations and activities. International activities involve UNCBD institution meetings and workshops. National activities consist of resources required for implementing the NBSAP Project. The resources required for the implementation of Tonga’s NBSAP is assessed.

10.1 INTERNATIONAL ACTIVITIES TOWARDS IMPLEMENTING THE UNCBD

In terms of implementing the UNCBD, international meetings and regional workshops are held for party countries to attend. In attending these meetings and workshops resources such as staff time are allocated to it. Table 11 shows the UNCBD meetings and regional workshops and personnel attending these meetings.

Table 11 International Activities for implementing UNCBD

UNCBD Meetings and Workshops	Staff Attending
UNCBD Conference of the Party (COP)	Minister of Environment Director of Environment NBSAP Project Staff
SBBSTA	Department of Environment Senior Staff NBSAP Project Manager
Pacific Island NBSAP Coordinators Workshop / Nature Conservation Roundtable	NBSAP Project Manager or NBSAP Project Officer

10.2 IN-COUNTRY UNCBD IMPLEMENTATION ACTIVITIES

Tonga is currently implementing the GEF/UNDP enabling activity NBSAP Project, which started in June 2003 and is set to be completed in June 2006. The total budget for this project is USD\$318,000.00. The Department of Environment is the implementing agency. A Project Management Unit (PMU) was established consisting of a Project Manager and a Project Officer.

The NBSAP project was divided into 5 main project activities. The NBSAP Project activities and status of implementation are shown in Table 12 along with resources being used.



Table 12 NBSAP Project Activities and resources Used

Project Activities	Description	Resources Used	Status of Implementation
Stocktaking of Tonga's biodiversity	Documenting the status of Tonga's biodiversity based on existing literature	<p><i>Human Resources</i></p> <ul style="list-style-type: none"> - Director of Environment - Head of Technical and Sustainable Development - PMU - 5 Local Consultants <p><i>Budget</i></p> <p>TOP\$40,000.00</p>	Completed 2004
Identification and analysis of options	Consultation Workshop 1 to present the findings from the Stocktaking Report and identify the strategies and actions for the NBSAP	<p><i>Human Resources</i></p> <ul style="list-style-type: none"> - Director of Environment - Head of Technical and Sustainable Development Division - PMU - 5 Local Consultants <p><i>Budget</i></p> <p>TOP\$150,000.00</p>	Completed 2004
Preparation of the NBSAP	Preparation and drafting the NBSAP	<p><i>Human Resources</i></p> <ul style="list-style-type: none"> - Director of Environment - Head of Technical and Sustainable Development Division - PMU - International Consultant 	To be completed March April 2006



		<p><i>Budget</i> TOP\$100,000.00</p>	
	<p>Consultation Workshop 2. The purpose of the workshop was to present the NBSAP draft to biodiversity stakeholders for comments and feedback</p>	<p><i>Human Resources</i></p> <ul style="list-style-type: none"> - Director of Environment - Head of Technical and Sustainable Development - PMU - NGO - Local villages - Relevant Government ministries 	
		<p><i>Budget</i> TOP\$100,000.00</p>	
	<p>Consultation Workshop 3. The purpose of the workshop is to prioritise the actions, strategies and theme areas of the NBSAP</p>	<p><i>Human Resources</i></p> <ul style="list-style-type: none"> - Director of Environment - Head of Technical and Sustainable Development Division - PMU - NGO to conduct the workshop - Local villages - Government ministries 	
		<p><i>Budget</i> TOP\$100,000.00</p>	
	<p>Layout of NBSAP for publishing</p>	<p><i>Human Resources</i></p> <ul style="list-style-type: none"> -PMU -Layout Consultant 	



		<i>Budget</i> TOP\$10,000.00	
	Publishing of NBSAP	<i>Human Resources</i> - PMU - Printing Company	
		<i>Budget</i> TOP\$10,000.00	
Preparation of the First National Report	Prepare Tonga's First National Report to the UNCBD COP	<i>Human Resources</i> - Director of Environment - Head of Technical and Sustainable Development -PMU - NGO to recruit local consultants - Layout Consultant - Printing Company	To be completed June 2006
		<i>Budget</i> TOP\$30,000.00	
Clearing House Mechanism	- Prepare Database - Information pamphlets - Internet - Telephone	<i>Human Resources</i> - PMU - Database Consultant	Ongoing and Completed
		<i>Budget</i> TOP\$200,000.00	

Tonga’s NBSAP addresses almost all of the UNCBD obligations. In an effort to implement the NBSAP, human and financial resources are required. Tonga is a small developing country which relies on donor aid. It is obvious that there is a lack of financial resources to implement the NBSAP. Despite Government, overseas assistance and private efforts to send Tongans for training overseas, there is still a shortage of trained individuals to implement the eight theme areas of the NBSAP. Table 13 shows the 8 theme areas of the NBSAP and assesses the resources required to implement the NBSAP theme areas.

Table 13 Resources required implementing the theme areas of the NBSAP

Theme Areas	Resources
Forest Ecosystems	Human Resources (trained) - Botanist - Taxonomist Financial Resources Facilities
Marine Ecosystems	Trained Human Resources - Marine Biologists - Researchers Financial Resources Facilities Equipments
Species Conservation	Trained Ecologists - Terrestrial - Marine Financial Resources
Agro-biodiversity	Trained Human Resources - Agriculturalists Financial Resources Facilities Capitals
Civil Societies and communities	Environment NGO’s Environmental trained human resources - Conservation Capacity Financial Resources
Access to Benefit sharing of transfer of genetic resources	Human Resources - Environmental Lawyers - Researchers (Traditional Knowledge) Financial Resources
Mainstreaming biodiversity conservation	Capable Committed human resource Environmentally informed decision makers



	Economic valuation of biodiversity for decision makers Functional system Legal framework
Financial Mechanism	Information Human Resources Financial Resources



11.0 THEMATIC ASSESSMENT

11.1 UNCBD CAPACITY GAP IDENTIFICATION

The capacity gaps in terms of obligations to the UNCBD were identified. Table 14 outlines programmes and activities carried out by agencies in Tonga towards implementing the UNCBD obligations. Intra and inter agencies committees responsible for the programmes and activities were identified. In doing so, gaps in implementing the UNCBD obligations nationally were identified along with the programmes and activities required to address these gaps.



Table 14 Gaps identified under each of the UNCBD obligations

Requirements under the convention	Government Agencies NGO's	Programmes and Activities	Intra/Inter Agencies Committee	Gaps identified	Required Programme and activities
National Biodiversity Planning	DOE MAF MOFi MOFo MLSNR NGO's MLCI MOE	<ul style="list-style-type: none"> NBSAP NEMS 	<ul style="list-style-type: none"> NECC BTCG 	<ul style="list-style-type: none"> NBSAP & NEMS awaiting Implementation Limited Financial Resources Limited human resources Mainstreaming biodiversity conservation SDP8 to address biodiversity Strengthen Line ministries Plans to incorporate biodiversity No legal framework for biodiversity 	<ul style="list-style-type: none"> High level decision making Financial mechanism SDP8 addresses biodiversity conservation Line ministry plans to address biodiversity Legal framework
Identifying and monitoring biodiversity and its conservation	DOE MAF MOFi MOFo MLSNR LC/DO/TO	<ul style="list-style-type: none"> MAF Monitoring Programme (soil productivity moist conservation) DOE National Environmental Monitoring Programme Fisheries Stock Assessment Forestry Monitoring Programme 	<ul style="list-style-type: none"> Research Committee Pesticide Committee (MAF) Chemical Profile (MLSNR) National Environment Monitoring Committee (DOE) 	<ul style="list-style-type: none"> Irregularity of committee meetings (almost nonfunctional) Lack of financial and capital resources Forestry Monitoring programme for all of Tonga MOU guideline for 'Eua Forestry Enforcement of biodiversity related laws No governing body to monitor 	<ul style="list-style-type: none"> TOR of committees Financial resources Establish governing body Empower a governing body to monitor committees Incorporate biodiversity conservation monitoring of production driven Govt. agencies (MAF, Fisheries) Strengthen coordinating role of



		<ul style="list-style-type: none"> • ('Eua) • NBSAP Monitoring and evaluation section • Fisheries • Stock Enhancement • CITES MAF 		<p>committees</p> <ul style="list-style-type: none"> • Conservation initiatives to be increased • Monitoring of endangered species 	<p>DOE</p> <ul style="list-style-type: none"> • Facilities for conservation of agro-bio diversity and all biodiversity • Monitoring programme for endangered species
In-situ conservation, including protected area system	<p>MLSNR MAF MOFo DOE MOFi TVB NGO's LC/DO/TO</p>	<ul style="list-style-type: none"> • National Parks and Reserves • Fisheries Community base conservation area • Biological control of insect/weed pests • Germplasm programme • Watershed protected areas('Eua) 	<ul style="list-style-type: none"> • National Parks and committees • Parks authority • Research Committee (Pest/Invasive species) 	<ul style="list-style-type: none"> • Nonfunctional committees • Lack of monitoring • Lack of funding • Lack of qualified human resources • Lack of research (species/ecosystems/biodiversity) • Continuous management/control of pests and invasive species (carried out at an adhoc basis) • Difficulty to breed national varieties • Mandate to be in ministries implementing programmes • Limited protected areas/monitored 	<ul style="list-style-type: none"> • Establish new parks in each major island group • Monitoring programme for parks and reserves • Surveillance programme • Recruit qualified human resources • Conduct research • Financial mechanism • Integrated pest management programme (biological control) • Scientific breeding programme for native species. • Mandate to be in right implementing ministry
Preserve indigenous knowledge	<p>MOE (Syllabus) PO TVB</p>	<ul style="list-style-type: none"> • Document • Cultural and traditional programme 	<ul style="list-style-type: none"> • National Committee for Culture and tradition 	<ul style="list-style-type: none"> • Fragmented management • Lack of sectoral management • No focal point for all traditional 	<ul style="list-style-type: none"> • Preserve Traditional agricultural /fisheries practices • Establish a focal coordinating committee for documenting



	<p>TNCC NGO's MLCI DOE MAF MOFi MOFo LC</p>	<ul style="list-style-type: none"> • Conservation of traditional agricultural practices • Enhancement of traditional medicinal plants (forestry) • Tongan Dictionary 		<p>knowledge</p> <ul style="list-style-type: none"> • No legal framework for TEK • IPR for traditional knowledge • No ownership of traditional practices • Lack of documentation • Focus mainly on history concerning the nobility, need traditional scientific documentation • Lack of Scientific research • Lack of awareness 	<p>traditional knowledge</p> <ul style="list-style-type: none"> • Establish a legal framework for preserving indigenous knowledge • Awareness programme for preserving indigenous knowledge • IPR • Scientific research
<p>ex-situ conservation of biodiversity</p>	<p>MLNSR DOE MOFi MOFo MAF</p>	<ul style="list-style-type: none"> • Tissue culture programme • Enhancement programme (Fisheries) • Introducing exotic species (tree crops) 	<ul style="list-style-type: none"> • Aquaculture committee 	<ul style="list-style-type: none"> • Lack of facilities/equipment • Lack of qualified persons in Tonga • Lack of funding • Limited knowledge of species ecology for ex-situ conservation 	<ul style="list-style-type: none"> • Establish translocation programme for specific species • Recruit qualified personnel • Provide facilities • Financial mechanism
<p>Economic and social incentives</p>	<p>DOE NGO's MAF MOFo MOFi TVB MLCI</p>	<ul style="list-style-type: none"> • Environment Week (free samples) • Biodiversity workshops (food, transport) • NGO programmes/ workshops sustainable agriculture and pesticide, women development 	<ul style="list-style-type: none"> • NGO committees • Women's committees • Langafonua • Pan Pacific, • PMO Women Development Division 	<ul style="list-style-type: none"> • Lack of financial resources • Lack of Government support for NGO's environmental initiative • Lack of incentives • Lack of aid funding • To emphasize the dependence of the national economic and social 	<ul style="list-style-type: none"> • Establish more active environmental NGO's and government agencies • Financial mechanism • Aid specific for economic and social incentives • Economic valuation of biodiversity for economists



	Banks Churches	<ul style="list-style-type: none"> • Agricultural show • World Food Day • Trade Show • Ha'apai Trade Show • Museums 	<ul style="list-style-type: none"> • Environment Week committee • MAF Women Development Programme 	situation on the environment for sustainability	
Education and training in scientific areas	MOE DOE MAF MOFo MOFi NGO's USP TIHE	<ul style="list-style-type: none"> • Training in different areas of biodiversity (government agencies and NGO's) • Short term/Formal training • Foundation and 100 course levels 	<ul style="list-style-type: none"> • High school syllabus • Tertiary courses (USP) • Government agencies and NGO's training courses and workshops 	<ul style="list-style-type: none"> • Basic rather than advanced training • Lack of Financial support • Lack of training facilities • Fragmented approach of teaching of biodiversity • Lack of community consultation • Awareness programme • Training holds low priority in ministries • Localising biodiversity in syllabus • Lack of Tongan biodiversity documentation 	<ul style="list-style-type: none"> • Establish a more advance training facility • Financial mechanism • Awareness programme • More Consultation workshops • Local focused biodiversity syllabus • Tonga biodiversity resources
Awareness	MOE DOE MOFo MOFi MAF TVB	<ul style="list-style-type: none"> • Little on genetic and parks and reserves • Government agencies TV and radio programmes 	<ul style="list-style-type: none"> • Government Departments • NGO's 	<ul style="list-style-type: none"> • Awareness of issues funded from overseas but very little awareness of nationally important issues • Limited TV coverage • Lack of financial resources • Lack of resources 	<ul style="list-style-type: none"> • Seek Financial mechanism to address national environment issues • Establish full TV coverage • Awareness to be nationally driven



	Media				
EIA	DOE MOFi MOFo MAF MOW CL NGO MOH	<ul style="list-style-type: none"> EIA (Act) Conduct EIA Screen EIA Report and comment on small scale development 	<ul style="list-style-type: none"> EIA Committee 	<ul style="list-style-type: none"> Regulations not passed (not being processed) complex channel, lengthy formality DOE capacity to address all EIA issues EIA weak enforcement Awareness of EIA 	<ul style="list-style-type: none"> Speed up process (channel) Training for DOE EIA staff EIA Awareness programme
Regulating of handling of LMO	DOE MOFi MAF/Q MOFo RSD/CTD MLCI	<ul style="list-style-type: none"> Regulation in pipeline for parliament approval GEF Biosafety Project to address this issue 	<ul style="list-style-type: none"> Biosafety Committee 	<ul style="list-style-type: none"> No biotechnology programme Lack of awareness Lack of qualified human resources No facilities No financial resources Too technical for the public to understand Legal framework in process 	<ul style="list-style-type: none"> Awareness programme Recruit qualified personnel Establish facility Seek financial mechanism Legal framework to be established Speed up legal process
Regulate access and transfer of genetic resources	DOE MAF MOFi MOForest CL	<ul style="list-style-type: none"> Partially included Biosafety Project 	<ul style="list-style-type: none"> Biosafety Task Team NECC 	<ul style="list-style-type: none"> Not yet regulated in Tonga No legislation in place (Draft Bill not passed yet) Awareness No monitoring programme 	<ul style="list-style-type: none"> Biosafety Committee Authorized body to oversee this issue Facilities required Financial Mechanism Legislation required



					<ul style="list-style-type: none"> • Awareness
Benefit-sharing from transfer of genetic resources	DOE MAF MOFi CL MOFo	<ul style="list-style-type: none"> • Partially included • Biosafety Project 	<ul style="list-style-type: none"> • Biosafety Task team • NECC 	<ul style="list-style-type: none"> • Not yet regulated in Tonga • No Legislation • Awareness 	<ul style="list-style-type: none"> • Authorized body to oversee this issue • Facilities required • Financial Mechanism • Legal framework • Awareness
Clearing House Mechanism	DOE	<ul style="list-style-type: none"> • Database created • NBSAP Project 	<ul style="list-style-type: none"> • NBSAP PMU 	<ul style="list-style-type: none"> • No website • Public not aware of the database created • GEF funding available for CHM (opportunity) • Accessibility 	<ul style="list-style-type: none"> • Website established • Awareness programme • Seek Financial Mechanism
Implementing Cartagena Protocol	DOE MAF MoFi MLCI RSD/CTD MOH	<ul style="list-style-type: none"> • Await approval of biosafety bill 	<ul style="list-style-type: none"> • Biosafety task team • NECC 	<ul style="list-style-type: none"> • Bill in place not passed yet 	<ul style="list-style-type: none"> • Bill to be passed
Accessing financial resources	DOE MAF MOFo MOFin AD	<ul style="list-style-type: none"> • Seeking funding in terms of bilateral and multilateral projects • NBSAP 	<ul style="list-style-type: none"> • NBSAP PMU • Development Coordinating Committee 	<ul style="list-style-type: none"> • Not aware of all donors • Not aware of procedures • Biodiversity not a high priority in DCC • Donor agency drives projects to address 	<ul style="list-style-type: none"> • Need information of donors and eligibility (database) • Assistance programme for project proposal



	NGO CPD MLCI			<ul style="list-style-type: none"> Assist NGO's and agencies for project proposal 	
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11.2 BIODIVERSITY ISSUES AND PRIORITIES IN TONGA

Under each of the UNCDB obligations, the required programmes and activities to address the gaps were ranked as shown in Table 15. Two workshops were held for representatives from the agencies identified to assess Table 15. Table 15 also looked at rating the scale of the problem, the level of concern of the proposed programmes and activities to the country, and the country's ability to address the programmes. The required programmes for each obligation were ranked as shown in the table (Column 6)

The second column shows cross cutting issues that appear in most of the UNCBD obligations. These cross cutting issues were Financial Mechanism, Training (in the form of qualified human resources), Legal framework, Facilities to be established and Awareness programmes. Since these issues were identified in most of the obligations, it highlights the fact that these issues are of paramount importance to Tonga in the implementation of the UNCBD obligations.

The last column in the table (Priority) was left to the workshop participants to rate each of the required programmes according to the scale given. The result from the participants input were analysed which identified the programmes that are of highest demand. The participants' result in the order of highest priority was as follows:

- 1) Financial Mechanism
- 2) Awareness Programmes
- 3) Legal Framework
- 4) Training
- 5) Facilities.

The result from the participants' input confirms that the cross cutting issues were of highest priority in terms of implementing the UNCBD obligations.



Table 15 Ranking of required programmes and activities for the UNCBD obligations

CBD obligation	Required programmes and activities	Scale of Problem (Local/National/ Regional/ Global)	Level of Concern to Country (Low/medium/High)	Country ability to adequately address issue (low/medium/high)	Priority ranking of required programmes for each obligation (1=highest...)	Priority (1=least, 2=poor, 3=moderate,4=high, 5=highest)
National Biodiversity Planning	NBSAP and NEMS for high decision makers	National Local	High	Low	2	
	Financial mechanisms	Global Regional National Local	High	Low	1	
	Legal Framework	National Local	High	Medium	3	
Identifying and monitoring biodiversity and its conservation	TOR for committee members to adhere to	National Local	Low	High	7	
	Financial mechanism	Global Regional National Local	High	Low	1	
	Establish governing body	National Local	Medium	Medium	2	
	Empower a governing body to monitor committees	National Local	High	Low	3	
	Incorporate biodiversity conservation to	Global	High	Low	4	



	monitoring programmes of production driven government agencies (e.g. MAF)	Regional National Local				
	Strength coordinating role of DOE	National Local	Medium	Medium	6	
	Facilities for conservation of biodiversity	National Local			5	
In-situ conservation, including protected area system	Establish new parks in each major island group	National Local	High	Medium	4	
	Monitoring programme for parks and reserves	National Local	High	Medium	6	
	Surveillance programme	National Local	High	Medium/Low	7	
	Recruit qualified human resources	National Local	High	Low	5	
	Conduct research	Global Regional National Local	High	Low	3	
	Financial mechanism	Global Regional National Local	High	Low	1	
	Integrated pest management programme (biological control)	Global Regional	High	Low	9	



		National Local				
	Scientific breeding programme for native species	Regional National Local	High	Low	8	
	Mandate to be in right implementing ministry	National Local	High	Low	2	
Preserve indigenous knowledge	Preserve Traditional agricultural /fisheries practices	National Local	High	Medium	5	
	Establish a focal coordinating committee for documenting traditional knowledge	National Local	High	Medium	3	
	Formulate legal framework for preserving indigenous knowledge	National Local	High	Medium	1	
	Awareness programme for preserving indigenous knowledge	Regional National Local	High	Low	4	
	Intellectual Property Right	Global Regional National Local	High	Low	6	
	Scientific Research	Global Regional National Local	High	Low	2	



Ex-situ conservation of biodiversity	Establish a translocation programme	Regional National Local	High	Low	4	
	Recruit qualified personnel	National Local	High	Low	3	
	Provide facilities	National Local	High	Low	2	
	Financial resources	National Local	High	Low	1	
Economic and social incentives	Establish and enforce proactive environmental NGO's and government agencies	National Local	High	Low	2	
	Aid specific for economic and social incentives	Regional National Local	High	Low	3	
	Financial mechanism	National Local	High	Low	1	
Education and training in scientific areas	Establish a more advance training facility	National Local	High	Low	2	
	Financial mechanism	National Local	High	Low	1	
	Awareness Programme	Regional National Local	High	Medium	4	
	More Consultation workshops	National	High	Medium	5	



		Local				
	Local and focus biodiversity syllabus	Regional National Local	High	Low	3	
	Tonga biodiversity information resources	National Local	High	Medium	6	
Awareness	Financial mechanism to address national environment issues	National Local	High	Low	1	
	Establish full TV coverage	National Local	High	Medium	2	
EIA	Expedite legal processes	National Local	High	Medium	1	
	Training for DOE EIA staff	National Local	High	Low	3	
	EIA Awareness programme	National Local	High	Medium	2	
Regulating of handling of LMO	Awareness programme	Global Regional National Local	High	Low	3	
	Recruit qualified personnel	National Local	High	Low	4	
	Establish facility	National Local	High	Low	5	
	Financial mechanism	National	High	Low	1	



		Local				
	Legal framework	National Local	High	Medium	2	
Regulate access and transfer of genetic resources	Authority body to oversee access and transfer of genetic resources	National Local	High	Low	2	
	Facilities required to be established	National Local	High	Low	3	
	Financial Mechanism	National Local	High	Low	1	
Benefit-sharing from transfer of genetic resources	Authority body to oversee benefit sharing from transfer of genetic resources	Global Regional National Local	High	Low	3	
	Facilities required to be established	National Local	High	Low	4	
	Financial Mechanism	National Local	High	Low	1	
	Legal framework	National Local	High	Medium	2	
CHM	Website established	National Local	High	Medium	3	
	Awareness programme	National Local	High	Low	2	
	Financial Mechanism	National Local	High	Low	1	



Implement of cartagena protocol	Bill to pass	National Local	High	Medium	1	
Accessing financial resources	Information of donors and eligibility required	Global Regional National Local	High	Low	1	
	Assistance programme for project proposal	National Local	High	Low	2	

The NBSAP Project is currently preparing a Biodiversity Priorities Report for Tonga based on the Third Consultation Workshop, where the NBSAP theme areas, strategies, objectives and actions were prioritised. This report is set to be completed during the month of August 2006. The findings of the mentioned report will be used as a basis for the Biodiversity Add On Funding for Tonga. It will also be interesting to compare the findings of the report and the result of this exercise for assessment of Tonga's biodiversity priorities.

11.3 BIODIVERSITY ISSUES OF TONGA

Tonga's NBSAP reflects the biodiversity issues of importance to the well being of its people. The theme areas of the NBSAP were further assessed to pinpoint the causes of these issues. The NBSAP consists of eight theme areas which are as follows:

- 1) Forest Ecosystems
- 2) Marine Ecosystems
- 3) Species Conservation
- 4) Agro-biodiversity
- 5) Civil Society and Local Communities
- 6) Access and Benefit sharing of genetic resources and traditional ecological knowledge
- 7) Mainstreaming of biodiversity conservation
- 8) Financial Mechanism

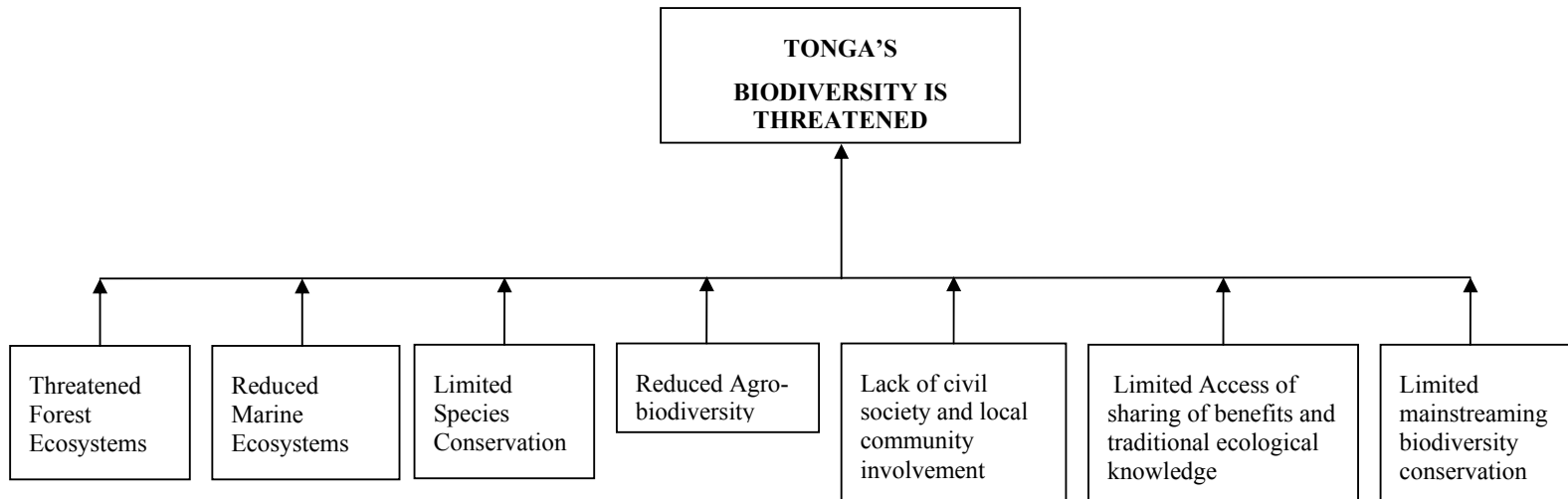
The theme areas were treated as issues. Causal analysis of theme area 1 – 7 was carried out. Theme Area 8 was identified as a cross cutting issue, therefore further analysis was not necessary.

Diagram 1 outlines the main biodiversity issue as Tonga's biodiversity is threatened. The threatened state of Tonga's biodiversity is caused by other factors such as Threatened Forest Ecosystem, Reduced Marine Ecosystems, Limited Species Conservation, Reduced Agro-biodiversity, Lack of civil society and local community involvement, Limited access of benefit sharing and utilizing traditional ecological knowledge and mainstreaming of biodiversity conservation.

The factors causing the main biodiversity issue of Tonga was further analysed as outlined in Diagram 2 -7.



Diagram 1



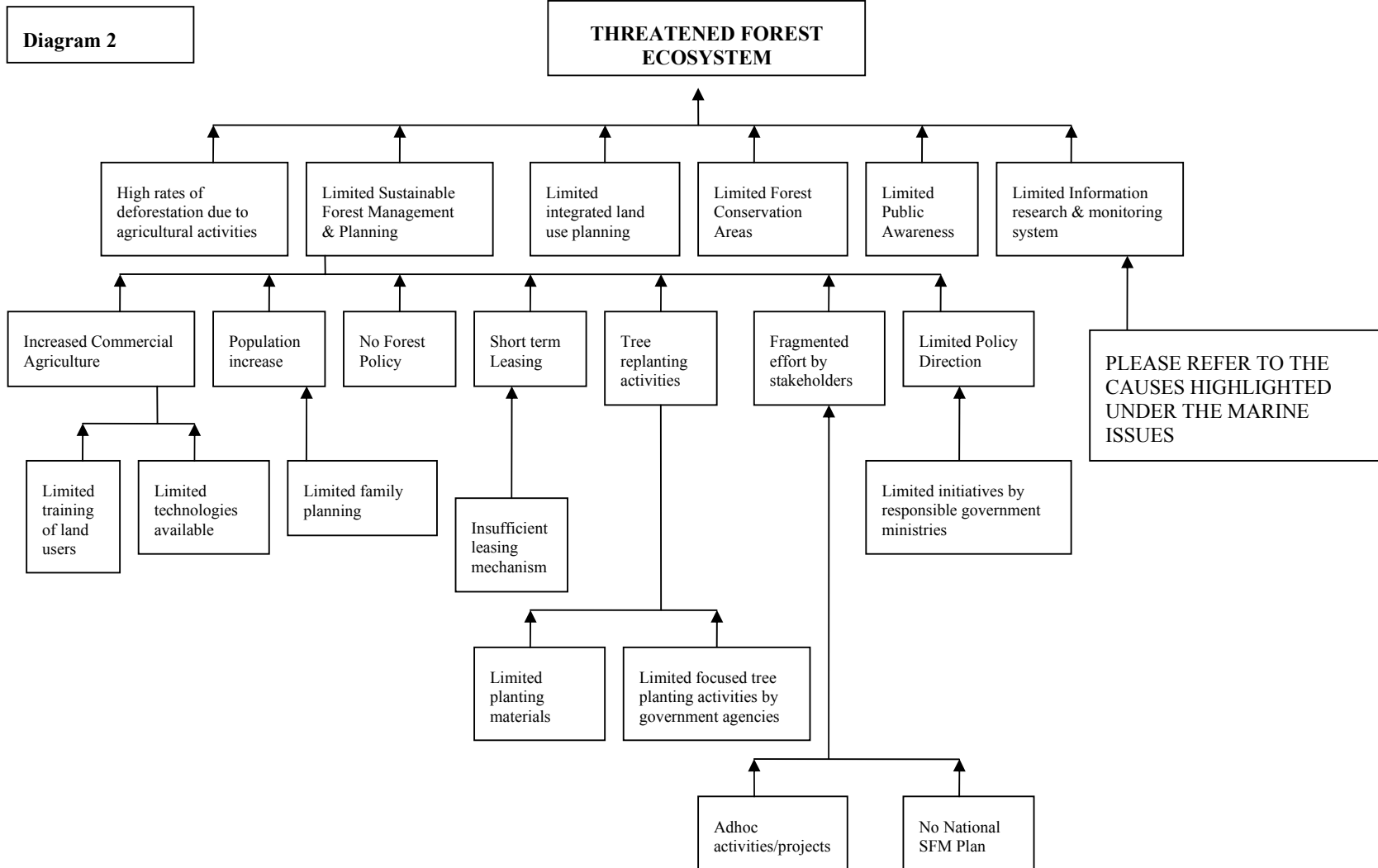
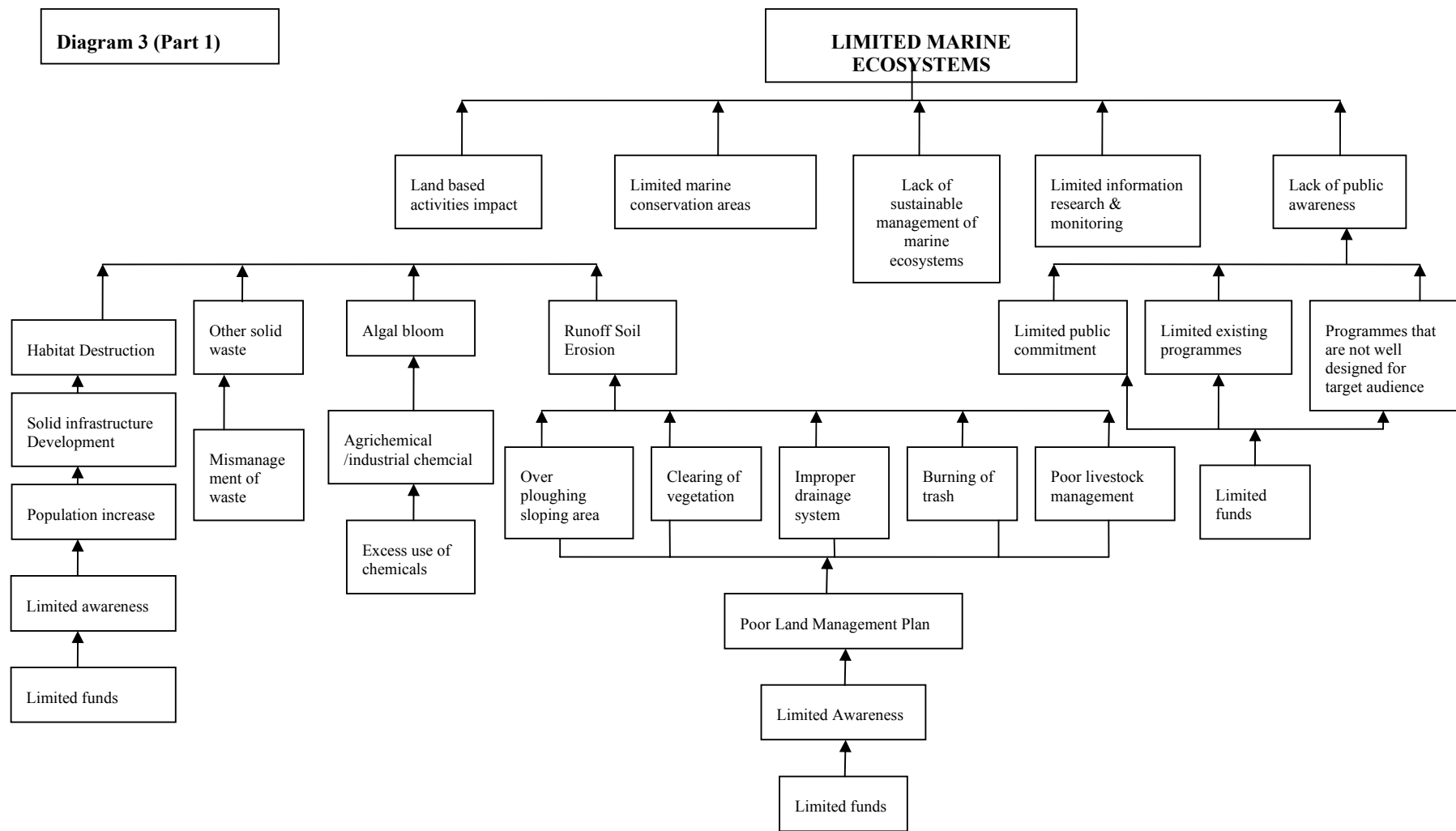




Diagram 3 (Part 1)



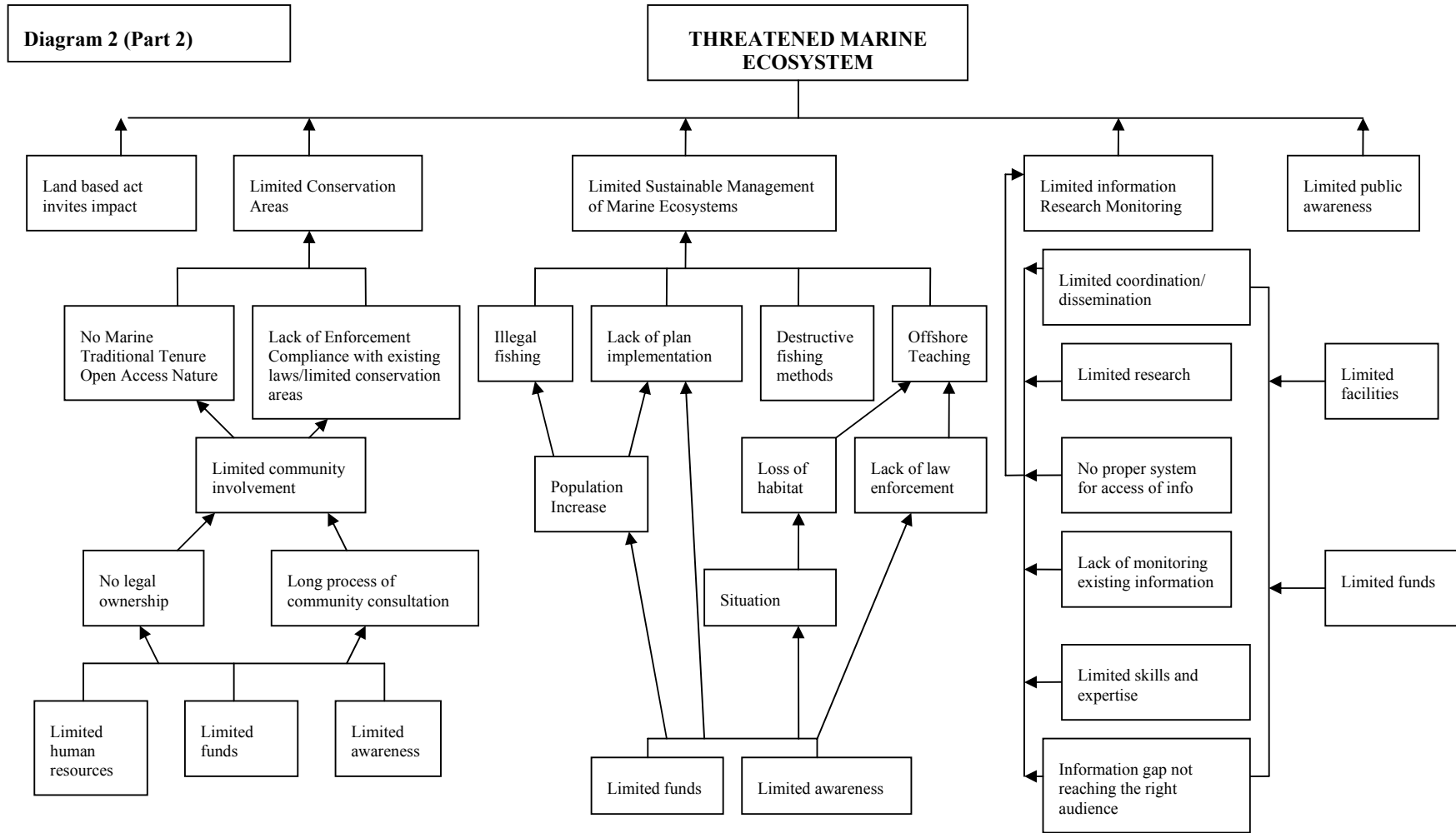




Diagram 3

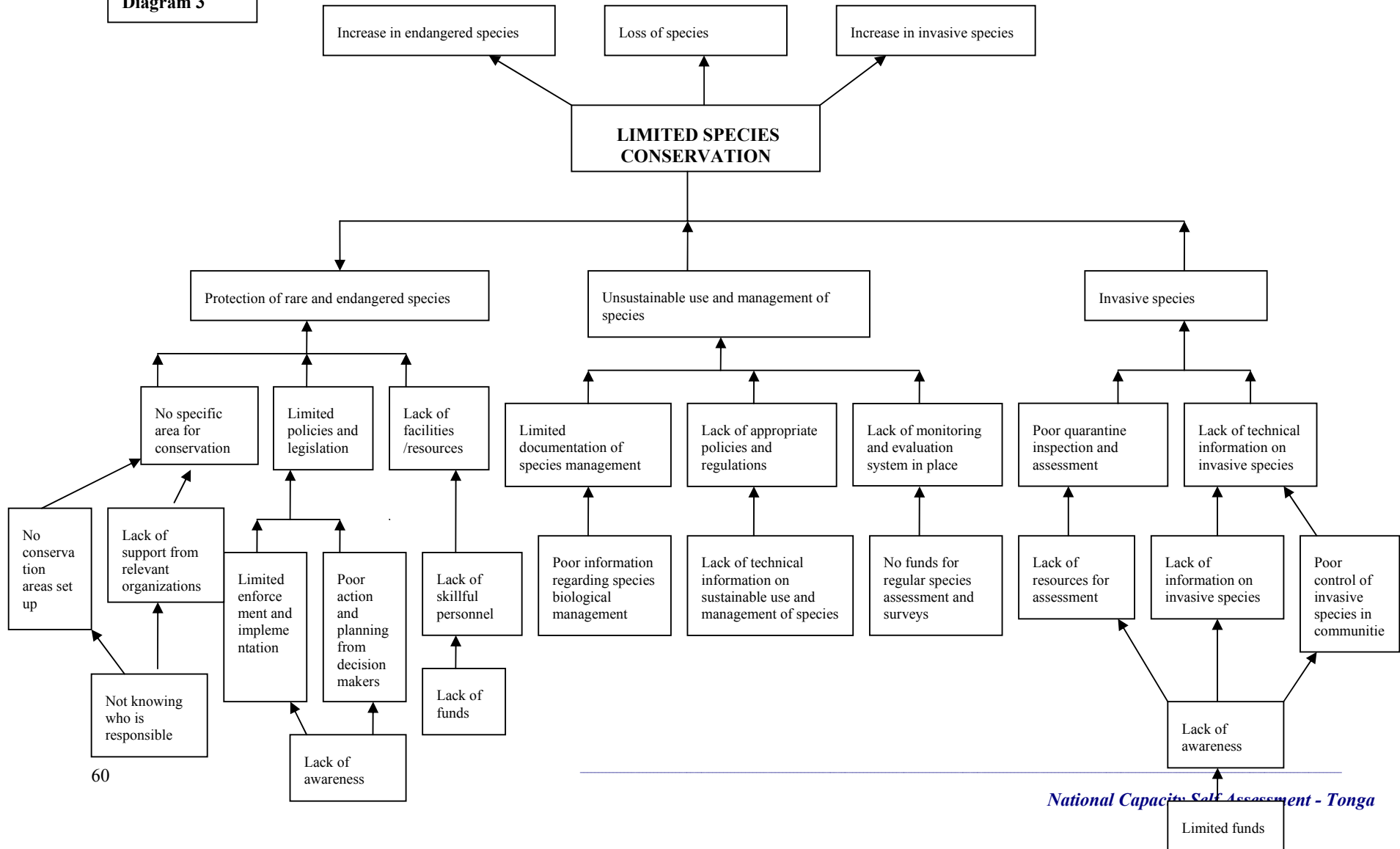
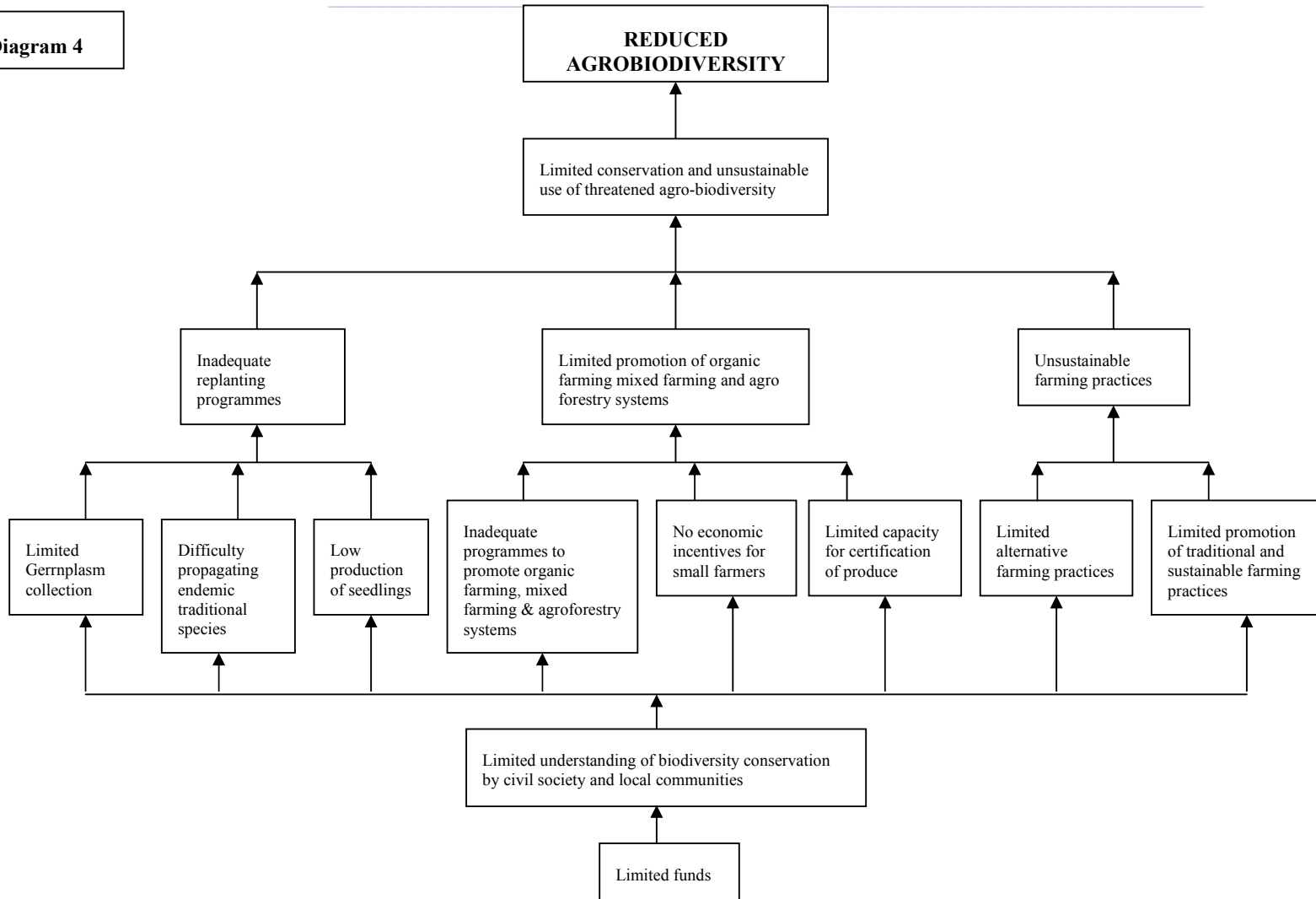




Diagram 4



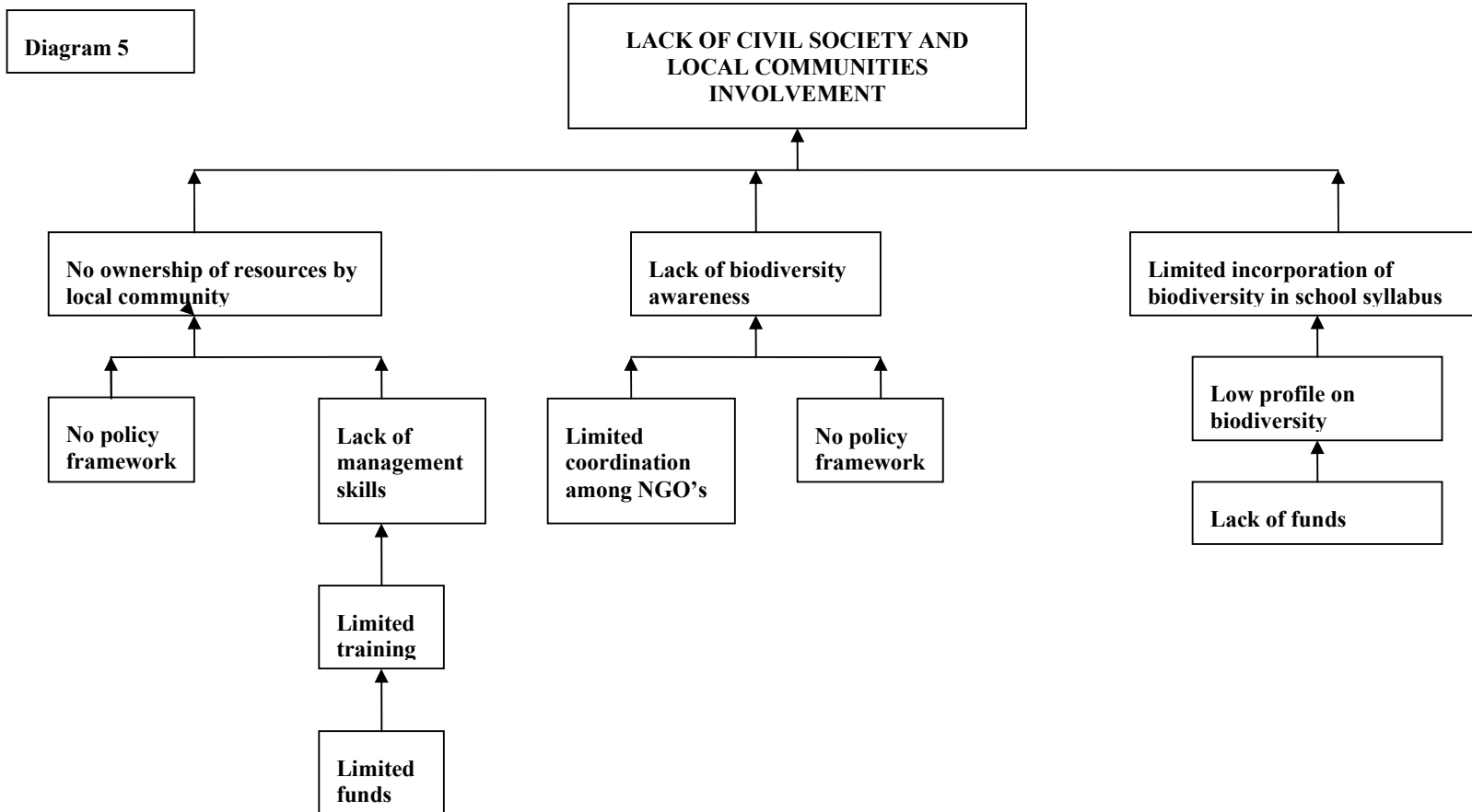




Diagram 6

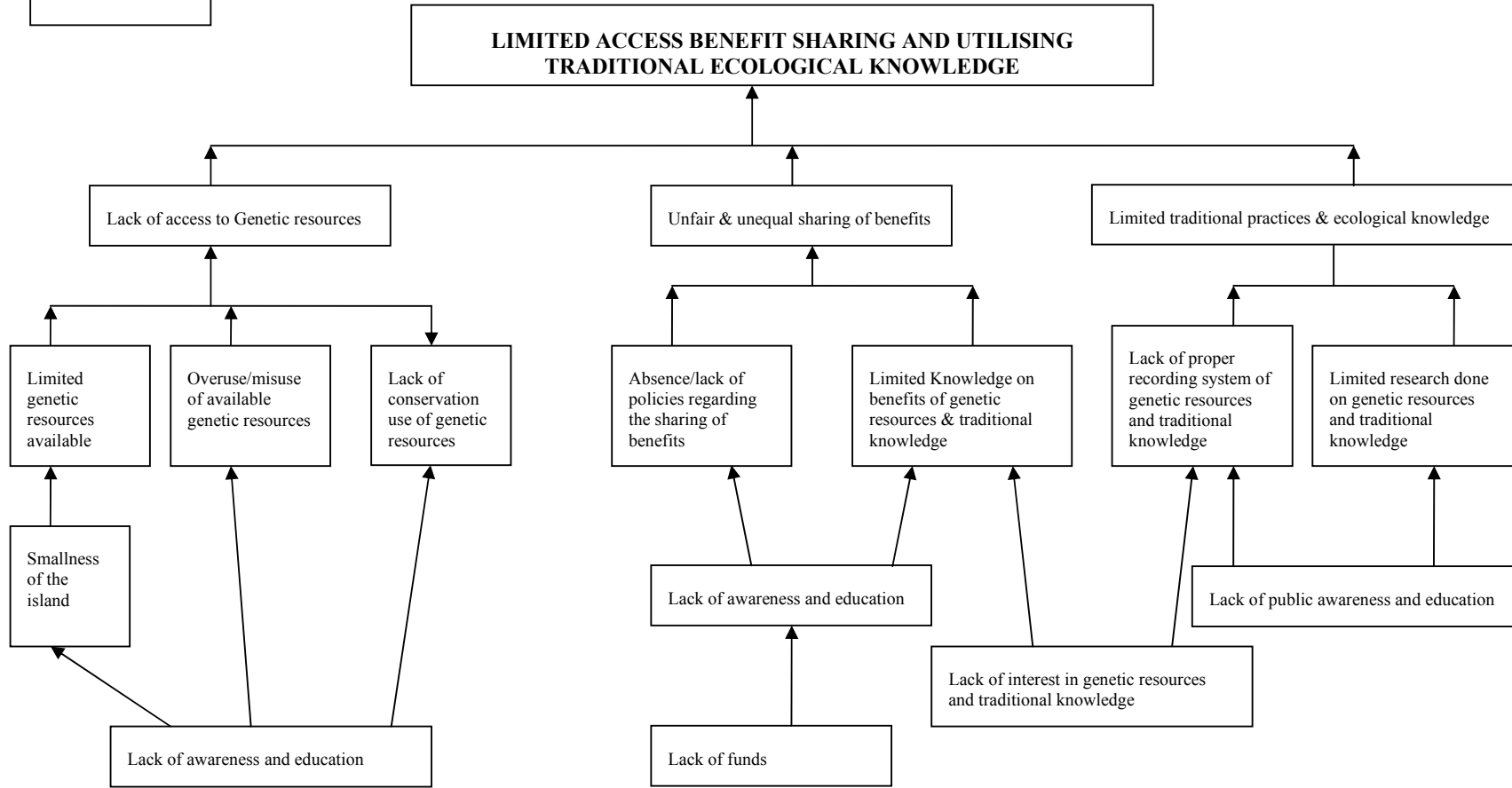
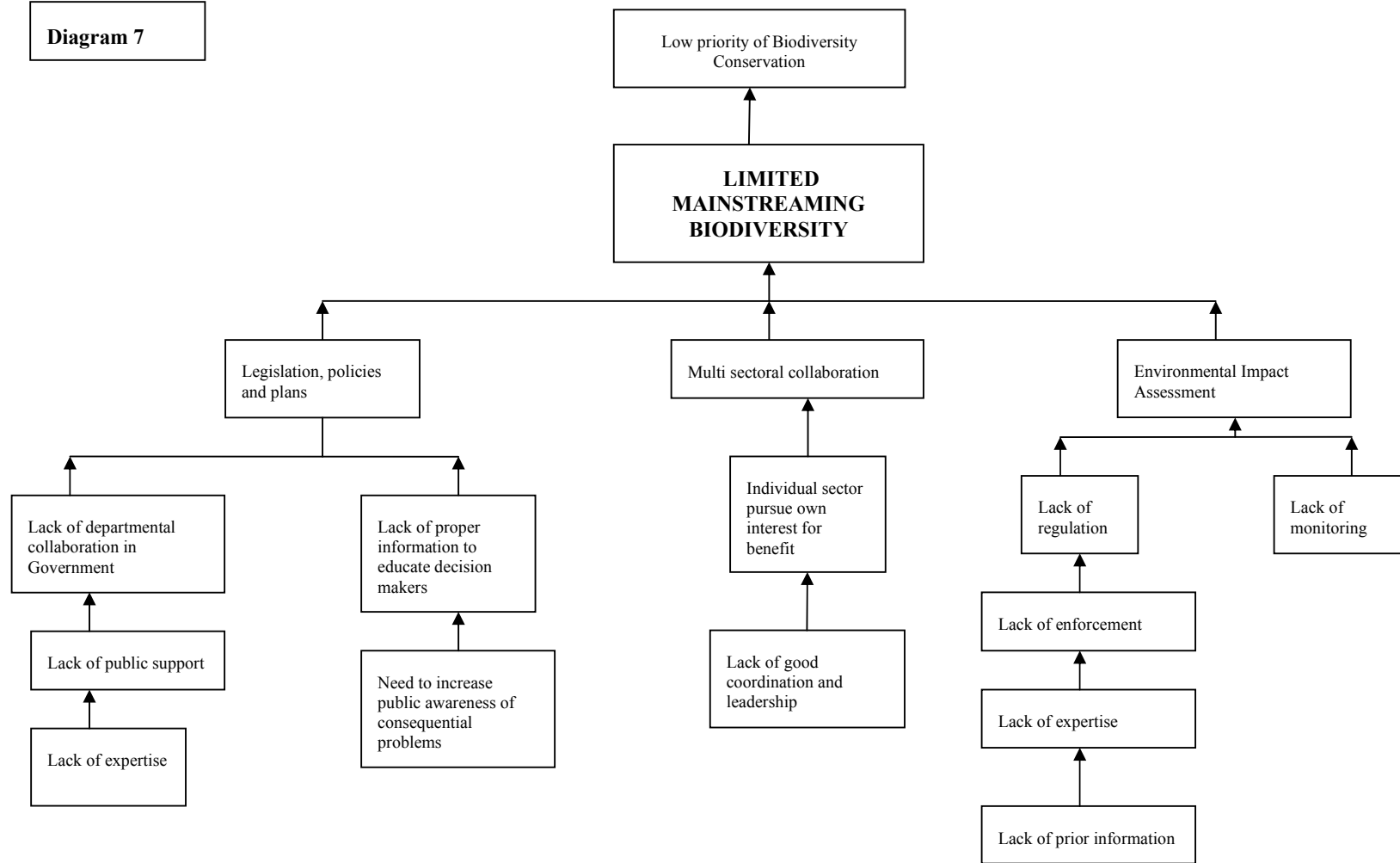




Diagram 7



11.4 UNCBD CAPACITY DEVELOPMENT NEEDS

Capacity Development needs of biodiversity stakeholders to address biodiversity issues in Tonga were assessed at three levels. The stakeholders were government ministries and the Civil Society Forum Tonga, which is a forum with 33 different member organisations. The biodiversity capacity needs of Tonga Trust a member of the Civil Society Forum was further assessed. These levels of capacity developments were systematic, institutional and individual. The following tables 16, 17 and 18 outline the capacity development indicated by stakeholders at the three levels mentioned.

11.4.1 Biodiversity Systematic Development

- *Policy Framework*

Responses from stakeholders indicate that policy frameworks exist in these sectors, with Forestry as an exception due to being a newly established ministry. Existing Policy Frameworks are in place but are either very general and need to be more specific to encompass work that is currently being carried out.

- *Legal and Regulatory Framework*

Legal and Regulatory Frameworks exist in all sectors outlined, however the legal and regulatory framework in agriculture is very general and in most cases of no use. In fisheries the existing legal and regulatory framework mostly addresses biodiversity that is of commercial importance. Forestry also highlights similar problems where the existing legal and regulatory framework is very limited in scope. Education indicates that biodiversity is the least of their priorities in terms of legal and regulatory framework.

- *Management Accountability Framework*

All sectors indicate that Management Accountability Frameworks exist but are vaguely defined.

- *Economic Framework*

In terms of marketing produce all sectors have indicated limited market functions and are very much project based, still in development and inconsistent.

- *Systems Level Resources*

Limited System Level Resources exist. Resources need to be increased for a more productive operation.

- *Processes and Relationship*

Processes and relationships exist in the sectors but are very limited. There is no formal mechanism that links related ministries to each other. Ministries and departments tend to operate independently. Conflicts of interest exist in terms of monitoring biodiversity which restrains processes and relationships. However donor funded projects under the Department of

Environment utilise other sectors thereby necessitating the development of closer working relationship with other sectors including civil societies and non governmental organizations.

Table 16 Biodiversity Systematic Capacity Development

SYSTEMATIC CAPACITY												
Stakeholders	Policy Framework		Legal and Regulatory Framework		Management Accountability Framework		Economic Framework		Systems Level Resources		Processes and Relationship	
	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed
Agriculture	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes
Fisheries	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Forestry	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Law	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Labour and Commerce	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Environment	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes
Civil Society Forum Tonga	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Tonga Trust	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

11.4.2 Biodiversity Institutional Capacity Development

- *Mission /Strategic Management*

All sectors have established missions, corporate plans and annual management plans in place. However the effectiveness of implementing and understanding these documents by all staff of the institutions is still limited. The forestry corporate plan is still in draft form and will soon be submitted to cabinet.

- *Culture Structure Competencies*

Institutional structures exists in all sectors, however the management and effectiveness of these structures are often questionable. Strengthening culture structure competencies in all sectors is paramount.

- *Infrastructure*

Very limited infrastructure exists for all sectors. Infrastructure is very much needed for all sectors.

- *Human Resources*

Human resources exist in all sectors, however new trained human resources and retraining existing human resources are required to enable effective operation.

- *Financial Resources*

A limited financial resource is available to all sectors. The insufficient financial resources available to the sectors are often inadequately distributed, and operational needs are often neglected. All sectors rely on donor funding for operation.

- *Information Resources*

Information exists in all sectors, however the information is inaccessible and scarce.

Table 17 Biodiversity Institutional Capacity Development

INSTITUTION CAPACITY												
Stakeholders	Mission/ Strategic Management		Culture Structure Competencies		Infrastructure		Human Resources		Financial Resources		Information Resources	
	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed
Agriculture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fisheries	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Forestry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Law	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Labour and Commerce	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Environment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Civil Society Forum Tonga	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tonga Trust	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

11.4.3 Biodiversity Individual Capacity Development

- *Job Requirements*

Job descriptions are in place in all sectors, but are often not well defined. In some sectors the skills level is very limited.

- *Training Retraining*

Training and retraining of existing human resources in Tonga is very limited. Scholarships are offered by donors enabling a chosen few to be sent overseas for training.

- *Career Progression*

Scant opportunities for advancement exist in each sector.

- *Accountability Ethics*

Accountability is in place but is not well defined. Clear description of responsibilities is required to allow managers to undertake disciplinary actions. There is a need for delegation of responsibilities and more accountability.

- *Access to Information*

Limited information exists, however dissemination and awareness programmes are required. Information databases are needed to be in place for the public to utilise.

- *Personal Professional Networking*

Personal professional networking exists but is very limited depending on personal interests and involvement.

Table 18 Biodiversity Individual Capacity Development

INDIVIDUAL CAPACITY												
Stakeholders	Job Requirements		Training Retraining		Career Progression		Accountability Ethics		Access to Information		Personal Professional Networking	
	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed	Existed	Needed
Agriculture	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fisheries	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Forestry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Crown Law	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Labour and Commerce	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Environment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Civil Society Forum Tonga	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tonga Trust	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Most of the technical expertise in Tonga is within the government sector, therefore there is a need to develop the capacity within the civil society and non governmental organizations.

12.0 CONCLUSION AND RECOMMENDATIONS

12.1 STOCKTAKING REVIEW

The Stocktaking review of Tonga's implementation for UNCBD shows that institutional arrangements, legal frameworks, policies, strategic plans, stakeholder's participation, monitoring and evaluation and resources are in place but at a very early stage.

Most of the work towards biodiversity conservation is still at the infant stage and is mostly driven by government ministries such as the Department of Environment. However, there is a need for the biodiversity conservation effort in Tonga to be more cooperated for better usage of resources.

Existing frameworks were in place before Tonga was a party to the UNCBD, therefore frameworks are not for the direct implementation of the UNCBD. Rather, Tonga can build on the existing frameworks in order to effectively implement the UNCBD obligations.

Tonga is currently formulating its National Biodiversity Strategy and Action Plan (NBSAP). Tonga's NBSAP identifies strategies and actions vital for biodiversity conservation and fulfils Tonga's UNCBD obligations. However there is a need to mainstream the importance of biodiversity conservation into the National Strategic Development Plan. Goal 7 in Tonga's SDP8 addresses the environment, where one of the strategies weakly highlights conservation. The strategy is too broad to really address any biodiversity conservation work. Therefore it is vital to mainstream the NBSAP into the national development plan for decision makers to be more aware of the scarce state of the biodiversity upon which economic growth and the wellbeing of our society depends heavily.

The NBSAP Project involved the stakeholders in formulating the NBSAP. The participation of stakeholders is important in identifying the biodiversity issues of priority to Tonga. NBSAP Project and also other environment projects have established a great working relationship with their stakeholders, which is paramount to be maintained. Incentives are one strategy of maintaining the active participation of stakeholders.

Overall the Stocktaking Review highlighted the biodiversity efforts that exist in Tonga

12.2 THEMATIC ASSESSMENT

The thematic assessment identifies the gaps in terms of implementing the UNCBD obligation. Programmes and activities to address these gaps were prioritized. The result clearly shows Financial Mechanism as the highest priority which will enable the implementation of the UNCBD obligations. Other priorities include Awareness Programmes, Training, Legal Framework for biodiversity conservation and Facilities.

Informing the public about biodiversity conservation through awareness programmes ensures greater understanding. A legal framework specific for biodiversity conservation is needed to speed up existing conservation efforts. In order for Tonga to appreciate its biodiversity, training is required to educate its people about the importance of biodiversity. Facilities and capitals will also ensure effective operation.

The underlying cause of the biodiversity issues in Tonga is the lack of the overall capacity development due to limited human and financial resources. Therefore it is evident that in order to address the biodiversity issues raised in the NBSAP, overall capacity development is required at the level of human and financial resources and to be made available to all sectors.

Capacity development in all biodiversity sectors is required. The assessment shows that the existing capacity is limited. However, there is a lot of room to build upon the limited capacities for effective implementation of the UNCBD obligations.

12.3 RECOMMENDATIONS

The following are the recommendations:

- Relevant ministries to cooperate in implementing the NBSAP
- Funding Mechanism required to implement the NBSAP
- More biodiversity training required
- More Awareness programmes required specific to different sectors
- Facilities to be established
- Establish Biodiversity conservation legislation
- Gaps identified to be addressed
- Capacities in Tonga to be developed to effectively implement the UNCBD obligations



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