Republic of Kiribati

National Capacity Self Assessment Project

Assessing the capacity of the Republic of Kiribati to implement the United Nations Convention on Biological Diversity (UNCBD), United Nations Convention to Combat Desertification (UNCCD) and the United Nations Framework Convention on Climate Change (UNFCCC)

Project funded by GEF, implemented through the UNDP and executed by the Ministry of Environment, Lands and Agriculture Development of the Government of Kiribati

FINAL REPORT

November 2009

Executive summary

This final report of the Kiribati National Capacity Self Assessment (NCSA) Project presents an overview of the self-assessment approach taken, the main findings of the stock-take and thematic assessments, the cross-cutting assessment findings and a strategy for developing capacity to address needs and gaps identified during the assessments. The report is part of a series of reports produced under the Kiribati National Capacity Self Assessment (NCSA) Project funded by the GEF. The aim of the NCSA is for countries that are Parties to the UNCBD, UNCCD and UNFCCC, to assess their own capacities and capacity development needs to address the requirements of the three conventions. The report builds on previous three stock-take and thematic assessment reports targeting each of the three conventions and presents the findings of a national cross-cutting assessment exercise to identify environmental as well as capacity issues that cut across the three conventions and their thematic areas. The aim of the assessment is to; identify cross-cutting issues, identify opportunities for synergies and strengthening integrated and coordinated approach to environment management and sustainable development.

The assessment started with the engagement of a national consultant to conduct a synthesis of the stock-take and thematic assessment reports to identify the cross-cutting environmental and capacity issues. These were presented to a series of national consultation meetings and eventually during a national retreat on the islet of Biketawa, for further refinement.

This cross-cutting assessment report is the product of this process and begins by highlighting the main environmental and capacity issues identified in the three stock-take and thematic assessment reports. This is followed by the identification of environmental and capacity issues that are closely linked to and cutting across each of the three conventions and their thematic areas. The assessment looks at two types of cross-cutting issues. Firstly the environmental cross-cutting issues are those that are linked to all three conventions, involve more than one sector of the national economy and require coordinated and integrated action. The main cross-cutting environmental issues identified during the assessment include those caused by climatic factors as well as those that are anthropogenic.

These are very closely interlinked and include; the high level of vulnerability of the country's land, water and marine resources, people and economy to the negative impacts of climate change, rising levels of water in-security, unsustainable land management, loss of marine and terrestrial habitats leading to decline in ecosystem services and biodiversity needed to address basic needs for food, shelter and housing.

The national consultations identified 'increasing population pressure on resources' and 'limited alternative livelihood opportunities' as important root cause to many of the environmental cross-cutting issues. This is more prevalent on South Tarawa, the hub of government and commercial activities where about a third of the total population resides and giving rise to a population density recently estimated at 5,400 persons per square kilometer compared to the national average of 1,610. Urban drift is a key contributor to this and is putting extreme pressures on coastal resources and the sustainable use of the underground water resources.

Closely linked to these are the capacity issues that cut across the conventions assessed under the NCSA project and also across the various environmental issues and include; inadequate information management, limited financial resources, limited capacity to communicate, educate and raise awareness on key issues and influence behavioral change, limited coordination and integration amongst agencies and stakeholders to address environmental issues, weak enforcement of laws and regulations, limited capacity development opportunities, limited mainstreaming of environmental issues into national strategies, plans and programmes, limited use of traditional knowledge and practices in environmental management and limited capacity to cope with reporting requirements of the conventions.

The report ends with a presentation of the main capacity development actions needed to address the cross-cutting environmental and capacity issues. These actions are to be incorporated in the Kiribati NCSA Action Plan and Resource Mobilization Strategy and include:

Acknowledgement

This report has been made possible as part of the NCSA Project funded by the Global Environment Facility (GEF) and implemented through UNDP. The Government of Kiribati acknowledges the on-going support from the GEF through its implementing agency the UNDP, towards initiatives addressing national and global environmental issues.

The Environment Division of the Ministry of Environment, Lands and Agriculture Development wishes to thank the many national stakeholders who participated in and contributed to the development of the NCSA reports and the local consultants engaged to facilitate national consultations and write up the reports. Acknowledgement and thanks is also given to the Secretariat of the Pacific Regional Environment Program for assisting with technical advice and in-country training.

The NCSA findings will go a long way to assisting the Government of Kiribati to plan and implement capacity development programs and activities aimed at strengthening the country's capacity to implement Multilateral Environment Agreements (MEAs) particularly the UNCBD, UNFCCC and UNCCD.

Kam rabwa and thank you to one and all!

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Director

Environment Deprtment

Ministry of Environment, Lands and Agriculture Development.

Tables and Figures

Acronyms

DPRRM	Disaster Preparedness and Risk Reduction Management
ECD	Environment and Conservation Division
EDB	Equatorial Doldrums Belt
EIA	Environmental Impact Assessment
ENSO	El Niño Southern Oscillation
FCCC	Framework Convention on Climate Change
FSP	Foundation of the Peoples of the South Pacific
FTC	Fisheries Training Centre
GEF	Global Environment Facility
GoK	Government of Kiribati
GLUP	General Land Use Plan
HEIS	Household Expenditure Income Survey
ITCZ	Inter-Tropical Convergence Zone
KAP	Kiribati Adaptation Programme
KHC	Kiribati Housing Corporation
KTA	Key Thematic Area
LMD	Land Management Division
MDG	Millennium Development Goal
MEA	Multilateral Envi ronment Agreements
MELAD	Ministry of Environment Land and Agricultural Development
MFED	Ministry of Finance and Economic Development
MHMS	Ministry of Health and Medical Services
MISA	Ministry of Internal and Social Affairs
MPWU	Ministry of Public Works and Utilities
MTC	Marine Training Centre
NAP	National Action Plan
NAPA	National Adaptation Plan of Action
NBF	National Biosafety Framework
NBSAP	National Biodiversity Strategic Action Plan
NDS	National Development Strategy
NEMS	National Environmental Management Strategy
SOPAC	South Pacific Applied GeoScience Commission
SPC	Secretariat of the Pacific Community
SPCZ	South Pacific Convergence Zone
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
USP	University of the South Pacific
WSSD	World Summit on Sustainable Development

Contents

5.4 Loss of habitats and biodiversity (terrestrial and marine species) supporting food security and livelihoods
5.5 Land degradation
5.6 Decline in traditional knowledge
5.7 Rising population densities (mainly on South Tarawa)
5.8 Limited alternative livelihood opportunities (throughout the country)

6.0 Cross-cutting capacity issues.

6.1 Overlapping Requirement.

6.1.1 Develop or maintain necessary legislation or other regulatory provisions.

6.1.2 Develop national strategies, plans or programmes for the implementation of the three thematic areas and cooperate them into relevant sectoral or cross-sectoral plans, programs and policies.

6.1.3 Enforcement of policies and legislations.

6.1.4 Involvement of stakeholders and local communities/ build consensus among all stakeholders.

6.1.5 Collection of data and information.

6.1.6 Dissemination of information and data.

6.1.7 Monitoring, evaluation and reporting.

6.1.8 Training.

6.1.9 Information Exchange

6.1.10 Impact assessment and minimizing adverse impacts.

7:0. Assessment of cross-cutting capacity constraints

7.1. Low collaboration and supports by government ministries, institutions, local communities and private sectors whose main tasks are related to the three Rio Conventions.

7.2 Unavailability of data and information related to the 3Rio Conventions and their projects.

7.3 Continuous human and financial resources constraints.

7.4 Insufficient education and public awareness programme.

7.5 Inadequate strengthening and enforcement of policies and legal framework.

7.6 Limited training opportunities and less development of on-the-job training.

7.7 Mainstreaming of environment issues into national plans.

7.8 Limited utilization of traditional conservation practices and transfer of technology.

7.9. Untimely submission of reports and other documents required under the Convention.

7.10 Rising population in Kiribati.

8.0 Cross-cutting analysis.

8.1 Cross- cutting issues.

8.2 Setting priorities

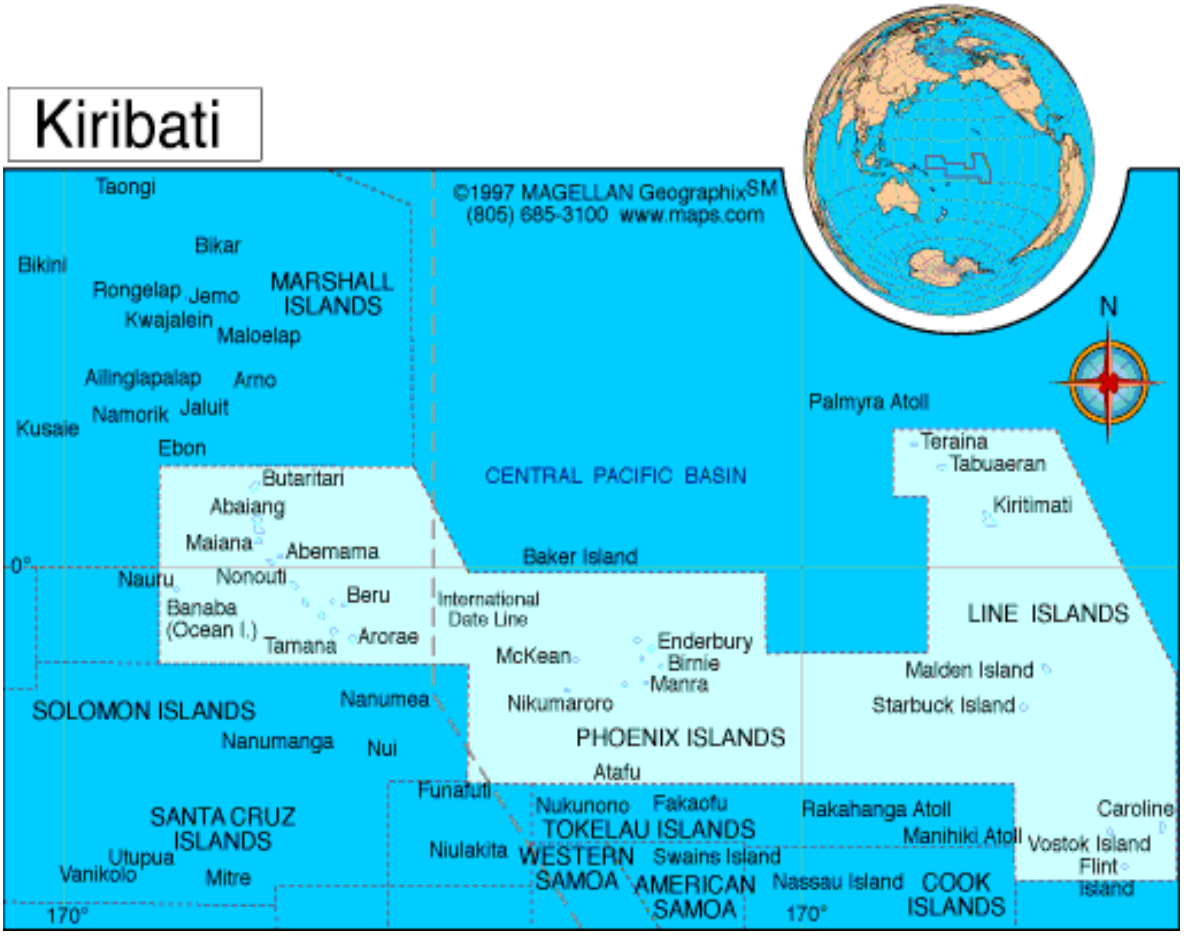
9 Annexes.

1. INTRODUCTION.

National Context - A small and very vulnerable oceanic nation

Straddling the equator in the Pacific, the oceanic nation of Kiribati comprises 33 atolls spread out across a vast area and EEZ of 3.5 million square kilometers with a total land area of just 800 sq km. The country is divided into three groups of atolls namely; the Gilberts, Line and Phoenix (See Map in Figure 1). Across the atolls the very small strips of land are a few kilometers at its widest sections and, on average are less than five meters at its highest point above sea level. Climate variability and weather continue to influence natural systems and socio-economic activities. Most of the country experiences modest levels of rainfall (…..per annum) however certain parts of the country such as ……are drier and prone to periods of drought.

Figure 1: Map of Kiribati



Source: www.infoplease.com/atlas/country/kiribati.html

Land in Kiribati is an extremely precious resource given their very limited area and the critical ecosystem services they provide in sustaining the environment, people and economy of the country. The very thin soils of Kiribati are derived from coral limestone are coarse textured and deficient in most essential nutrients. The average depth of the soil layer is twenty five centimeters with a relatively high pH of between six and ten. Their porous nature provides for very good drainage but if not enriched with organic matter will retain its high pH levels, be susceptible to high levels of leaching and generally not suitable for cultivation of many types of food crops. In terms of land space and potential for taking some pressure off South Tarawa, *Kiritimati* (Christmas) Island has been recently targeted due to its relatively bigger area of land and small population. It is said to be the largest atoll in the world and contains more than half of the total land area of the country.

Kiribati is blessed with rich marine resources that has sustained its people since time immemorial and has influenced its culture, traditions and way of life. The inshore fisheries continue to be a main source of food and livelihood while oceanic fisheries particularly tuna resources provides the country with much needed revenue from fishing licenses and catch sales. Lland and in-shore marine resources are intimately linked and also very vulnerable to disturbances from human activities, climate variability and climate change. Small disturbances can have knock-on effects resulting in degradation in habitats and ecosystem services that people and species rely heavily on.

Figure 2: Images of atoll environment in Kiribati

Coastal scene on North Tarawa

Building of sea walls – North Tarawa

The country's very vulnerable situation given its geographic characteristics and setting is exacerbated by the increasing human population pressure on natural resources and government services and the rising threat of extreme weather conditions due to the impacts of climate change. The total population in 2006 was estimated at 105,432. In terms of human impacts the main area of concern is South Tarawa,

the hub of government and commercial activities, where the population has risen from 1,671 in 1947 to 40,311 in 2005 and is expected to double in fourteen years time. The rise in population has been attributed to high fertility rates and increasing influx of people from the outer islands seeking employment, livelihood opportunities and basic services. This is placing extreme pressures on the limited land with beach mining and uncontrolled removal of coastal vegetation causing coastal erosion and loss of land. The high level of pollution from human activities is affecting the quality of the surrounding marine environment and underground water resources and posing serious risks to human health.

Another dimension of Kiribati's vulnerability is its relatively high diseconomies of scale and exposure to world market fluctuations. The narrow production base renders the national economy susceptible to external shocks. The majority of its national income is derived from offshore investments, fishing license fees and remittances from seafarers that make up the majority of i-Kiribati people working overseas. The public service is the biggest employer and there is a marked income disparity between South Tarawa and outer islands with limited reach of government services in remote areas. There is an increasing reliance on imports with rice being a major staple and cost item in family budgets.

Kiribati is extremely vulnerable to the predicted negative impacts of climate change. Rising sea levels and extreme events such as storm surges and king tides are a real threat to terrestrial biodiversity, quality of underground water resources and peoples very survival given the very low lying nature of the atolls and islands. There are already cases of flooding due to storm surges and king tides, attributed to gradual increases in sea level. Salinization of the underground water is also a growing problem. Increases in the intensity of storm surges coupled with mining of beach aggregate and removal of coastal vegetation is causing accelerated erosion of coastlines.

1.2 Addressing national interests within a global environmental management framework

Over the years the government of Kiribati has demonstrated its commitment to the global environmental and sustainable development agendas as it continues to struggle with addressing national issues and priorities. In addition to its commitment to the MDG, the Mauritius Strategy and the Pacific Plan, Kiribati has also ratified and acceded to a number of MEAs including the UNFCCC, UNCBD and UNCCD. On the national front the Kiribati government has recently developed the Kiribati Development Plan (KDP 2008 – 2011). With the theme; 'Enhancing economic growth for sustainable development' the KDP places special emphasis on growing the economy and also recognizes and emphasizes the importance of environmental management as one of its Key Policy Areas (KPA).

In addition to the KDP as the overarching development planning framework the Kiribati Ministry of Environment, Lands and Agriculture Development (MELAD) has developed a number of national environment strategies and plans that addresses its obligations under various MEAs. These are summarized in Table 1 below:

Table 1: National strategies and plans developed by Kiribati that addresses its commitments to various MEAs.

Strategy / Plan	MEA	Year completed
National Biodiversity Strategic Action Programme (NBSAP)	UNCBD	2007
National Action Program to address Land Degradation	UNCCD	2007
National Adaptation Programme of Action (NAPA)	UNFCCC	2007
National Profile of Chemicals Management Infrastructure	Stockholm Convention SAICM	2007
1st National Communication	UNFCCC	???

1:3 The NCSA approach and methodology

Kiribati adopted the NCSA approach and methodology recommended in the UNDP NCSA Tool Kit (2005 version).

The **purpose of the NCSA** is to enable each GEF eligible country to review its capacity needs to address priority national and global environmental issues mainly in relation to Climate Change, Conservation of Biodiversity and Land degradation, determine what actions are needed to strengthen management of these issues and to prepare a national capacity development strategy and plan of actions. The approach taken by Kiribati in implementing the NCSA project followed closely that which was recommended in the NCSA Guide (UNITAR) and includes the following main stages:

1: Inception
2: Stock-take and gap analysis
3: Thematic assessments (identify causes of gaps, capacity needs and capacity development actions within the scope of each of the three Conventions).
4. Cross-cutting assessment (identification of cross-cutting issues and potentials for synergies)
5. Development of a Final Report and a Capacity Development Action Plan.

NCSA Project Outputs

The main **NCSA Project Outputs** expected of countries include:

i) A Stocktake Report identifying previous and current activities relating to capacity building (such as enabling activities) for each of the three sectors.

ii) An account (report) of the process by which the NCSA was prepared, including stakeholder participation.

iii) A description (inventory) of capacity building needs in the three sectors with prioritization to the extent possible, and other related capacity needs.

iv) An identification of cross cutting issues and synergies

v) A plan of action to meet prioritized needs and a mechanism for monitoring and evaluating progress made in meeting those needs.

1.4 Inception, stock-take and thematic assessment phases

The inception phase took place between ……..(date). Prior to obtaining GEF funds from UNDP, the Director of Environment of Kiribati participated in a sub-regional workshop for Pacific Micronesian countries on the NCSA approach and methodology. This was organized and funded by SPREP. Following endorsement of the NCSA Project Document and receipt of funds from UNDP, the Environment Department recruited a Project Coordinator and arranged for in-country support from SPREP. Three thematic working groups were established to assist with the stock-take and thematic assessment of each of the Rio Conventions and three local consultants were recruited to work closely with the thematic working groups. Each consultant was contracted to focus on one of the three conventions covered in the NCSA. A national training workshop was held to introduce the thematic working groups and consultants to the NCSA. The training was conducted by SPREP Capacity Development Adviser, Frank Wickham. Each of the thematic working groups comprised members from government agencies and NGOs who contributed a lot to the stock-take and thematic assessment by way of providing information and participating in analysis and prioritization exercises. As a result of the inception workshop and following advice obtained from SPREP the thematic working groups agreed to combine the stock-take and thematic assessment exercise and reports. Three separate thematic assessment reports have been produced and their findings are summarized in this final report.

Stakeholder participation

During the course of the NCSA project there has been much work put into developing a capacity baseline information and analysis as a result of extensive consultation with and participation by many stakeholders throughout the country as well as abroad. Membership on the Thematic Working Group (TWG) ensured representation from key government agencies and NGOs. Assistance from Pacific regional organizations was possible through the Pacific Regional Support Mechanism for the NCSA, coordinated by SPREP and international help was obtained through the NCSA Global Support Programme overseen by UNDP and UNEP and based in New York.

Through the NCSA the government of Kiribati and stakeholders were able review environmental issues, take stock of progress in addressing these issues as guided by the Conventions, identify gaps in

implementation and meeting of obligations, identifying causes of these gaps and determining actions to enhance capacity and address the gaps. Capacity building activities undertaken during past GEF-funded Enabling Activities and the International Waters Project was also taken into account. The assessment of gaps in implementation and capacity needs was undertaken and capacity development actions recommended for the following three levels:

i) Systemic capacity – the enabling environment including policies, regulations and coordination mechanisms
ii) Institutional capacity – institutional mandates, strategies, resources, operational procedures
iii) Individual capacity – human resource development

1.5 Cross-cutting assessment

The cross-cutting assessment began after information was gathered and analyzed during the stock-take and thematic assessment phase. There are a number of ways of defining cross-cutting issues;

a) From the perspective of the Convention Articles and themes.

Some of the environmental and capacity themes and issues cut across two or all three of the conventions i.e. each of the conventions require Parties to address a similar or very closely related issue. E.g. Coastal zone management is important for Conservation (CBD), sustainable land management and mitigating the effects of drought (CCD) and mitigating the effects of climate change (CCC)

b) From the perspective of national environmental management

Some of the environmental and capacity themes and issues cut across a number of national environmental issues e.g. unsustainable water resources management or water in-security affects biodiversity, water resources, habitats and ecosystem services, poverty levels, livelihoods and Kiribati's capacity to adapt (resilience) to the impacts of climate change. Such an issue cuts across sectors, mandates and roles of government agencies. In the Kiribati NCSA cross-cutting issues are viewed from the perspective of the conventions as well as that of environmental management and sustainable development at the national level.

As cross-cutting issues are complex and multi-dimensional they require effective coordination amongst agencies, coordinated information management, joint research, sustained collaboration, cooperation and integrated management approaches. It is recognized that the absence of a concerted and sustained effort to address cross-cutting issues can lead to problems that are also multi-dimensional in nature e.g. limited cooperation between Ministry of Works, locals councils, communities, Ministry of Health, MELAD and other government agencies and NGOs in the area of water resources management can result in limited awareness of people on the causes and effects of human activity on quality of water resources, unchecked contamination of water sources, outbreak of diseases, removal of vegetation cover in catchment areas.

c) From the perspective of addressing national sustainable development challenges

This involved looking at wider social, political and economic issues that are also linked to environmental issues. E.g. Poverty levels and how it is affecting people and the environment. The Kiribati cross-cutting

assessment gave consideration to all three considerations when identifying environmental and capacity cross-cutting issues.

1.5.1 Approach and methodology

Identification of cross-cutting issues related to the implementation of the three conventions is based on issues being highlighted in the three Thematic Assessment Reports that the Working Team have reviewed and analyzed.

1.5.2 Cross-cutting assessment - stakeholder consultation approach.

The selected Working Group began its preliminary approach to the project by a training workshop in which they were introduced to the practicability of the capacity building needs assessment for the three specified thematic areas The training workshop is designed to enhance and develop capacity of local consultants and participants to identify environment and capacity building problems, their causes and root causes, in relation to the three Rio Conventions.

Following that training workshop after the local consultants completed their first draft, the report is distributed to all members of the designated working group of the three conventions (UNCBD, UNFCCC and UNCCC) for constructive review and comments.

In-depth Analysis Approach.

Based on the three thematic capacity building need assessment provided by the local consultants the working group went into a deeper analysis and review of the reports concentrating on the synergies of the thematic environment cross-cutting issues across the three Conventions. They also looked at root causes of cross-cutting capacity issues and options to provide basis for workable plans and effective methodologies to address capacity development needs. *(Refer, Annex 2)*

NCSA Retreat

A two day retreat was planned and convened on the islet of Biketawa on North Tarawa which enabled selected stakeholders to re-visit the draft findings of the Cross-cutting assessment report and identify areas for further refinement. The retreat was facilitated by the SPREP Capacity Development Adviser, Frank Wickham. In addition to revisions the retreat discussions also identified and elaborated on the cross-cutting environmental issues which are presented in this report.

4.0 Summary of Thematic Assessment Profiles

This section summarizes capacity building gaps as being identified in the thematic assessment reports of the United Nation Framework Convention on Climate Change, the United Nation Convention to Combat Desertification and the United Nations Convention on Biological Diversity. The analysis of the thematic assessment provides baseline for the formulation of programs and workable plans to narrowing and

filling up gaps existed in the three thematic areas. The gaps are considered specific to each thematic area, but there are also cross-cutting ones that would be analyzed later.

4.1 UNFCCC Profile.

Under the UNFCCC, the following has been identified as the main climate change issues;

4.1.1 Extreme vulnerability of underground water.

Taking into consideration the geographical formation and location of Kiribati; narrow stripped islands and clustering around the equator, it is then quite indisputable that ground water lense is likely to be easily affected by climatic changes or variations. Severe drought and extreme sunlight will surely aggravate the limited sources of ground water.

4.1.2 Poor design of private and community wells

This issue is ranked top priority; together with the preceding issue by NCCST, simply because well water is the major source of drinking and cooking purposes. Irrespective of the associated risks from well water, most households in Kiribati prefer to have their own wells. The situation is further aggravated by the traditional construction of wells which is incapable of preventing surface water run offs getting into the well; thus, allowing occurrence of bacterial contamination. Most of the wells are not properly sited because owners hardly ask for the proper spot; hence nearby sources of contamination can be a threat to the quality of such wells.

4.1.3 Limited awareness of the adverse effects of constructing poorly designed causeways.

In the late 1970s and early 1980s most, if not all, Island Councils included the construction of seawalls to address coastal erosion and ranked it number one priority amongst their rural development projects. Extensive, unabated and progressive coastal erosion and circulation change in the lagoon has been experienced especially on islands with poorly designed seawalls..

4.1. 4 Insufficient data and information on Climate Change for Kiribati.

Due to lack of information and data on Climate Change the Government of Kiribati recognized the need to establish information centre for Climate Change. It also encourages the sharing of information with other institutions, international, regional and even local source of information. To enhance Kiribati capacity to achieve its obligation under the convention, it is crucial that the grassroots people and those employed by the convention must have sound knowledge of climate change and its complexity.

4.1.5 Lack of collaboration between government institutions, NGOs and grassroots people

It has been noted that one strong factor for Kiribati incapability is the lack of cooperation between government institutions, NGOs, and grassroots people at the national and local levels. Relevant ministries are required to include main activities required under the convention in their respective Ministry Operational Plan (MOP) and in accordance to their budgetary allocations.

4.1.6 Absence of well equipped Observatory Station.

The frequent delay of information transmission to the general public is always caused by the less reliable equipment, the National Meteorological station is currently uses. To improve the provision of meteorological service to the public Kiribati Government has approved the establishment of a new observation station with update equipments. The only means of procuring a reliable and accurate data depends largely on the sufficiency of information collection. Observatory information from one source or station is not as good as that obtained from several stations. Likewise, insufficient and ineffective equipment is not as accurate as that obtained from the well functioning and sufficient equipments.

4 .1.7 Limited agricultural skill in producing exotic and local food crop.

The quality of the soil is so poor that only indigenous plants can yield agricultural products. .To grow newly introduced crops requires modern agricultural methods and technique which the local people do not have. With a poor and unfertile soil of coral islands farmers need to put on extra energy and efforts. Exotic agricultural food crops will be a great challenge for agriculturists and the people at large. Skill and knowledge will be most crucial for the successful planting of this exotic plants and the sustainability of indigenous plant high yield. Capacity building in this regard is seriously needed.

4.1.8 Decreased abundance of fish stock and culturally significant plants and trees.

As already mentioned, fish and copra are the two main exports for Kiribati. The quantity of copra now exported is not as much as those before the construction and operation of the national copra mill at Betio islet. The reduction in copra export and the stock reduction in fish implies significant impact on the economy of the country and the livelihood of the people.

4.1. 9 Poor design for causeway constructions.

Most of the islands in Kiribati have lagoon and are made up of small islets with passages in betweens. The passages provide good feeding ground for marine animal and allow fresh sea water flow in and out following the tide movement. The construction of causeways without culverts causes changes in the lagoon circulation, severe coastal erosion loss of marine habitat and resources. The local community who is a sole beneficiaries of the resource are ignorant of adverse impacts of causeways.

4.1.10 Less participation at regional and international forums on Climate Change.

Due to the limited knowledge and the complexity nature of Climate Change science the people of Kiribati need more frequent opportunities to participate in meetings, high and low profile meetings, training workshop and even researches. Climate change is a global concern that has adverse impact on the livelihood of the people. The Government of Kiribati recognizes that Kiribati is very vulnerable to Climate change and it is vital that Kiribati is given every possible chance to develop its capacity to accomplish its obligation under the UNFCCC.

4.2 United Nations Convention to Combat Desertification

The Kiribati NAP and NCSA has identified the following areas of capacity gaps for Kiribati to be improved in order to be able to achieve it's obligations under the Convention more successfully.

4.2.1 Inadequate policies covering issues of land degradation..

To date, there are no specific laws and regulations for the control of land degradation. A legislative review to identify relevant national legislation to address land degradation indicated that certain laws may be applied to a certain extent to alleviate land degradation problems. Specific laws to regulate land degradation need to be drafted and enacted so as to streamline activities in the right direction. The revised Environment Act 1999 is designed to provide an opportunity to expand the Act and Regulations so as to incorporate those are relevant for land degradation issues.

4.2.2 Increasing population pressure on land and sea environment.

An influx of population to urban areas in Tarawa (the capital) and Kiritimati (the second port of entry to the Republic for the Line Islands) has given rise to enormous pressure on essential services such as solid waste collection, water supply, sewage disposal, health services and other community essential services. Land and sea resources are therefore exploited at a very fast rate resulting in their depletion. Excessive use of natural resources causes loss of biodiversity resulting in the loss of valuable plants and tree

4.2.3 Increasing rate of coastal erosion due to the effects of wave action and currents.

Sea level rise has been observed by people living along coastal areas in Kiribati. Huge waves during high tides cause sea water flooding and coastal erosion. The receding coastal line has always resulted in the loss of valuable coconut, pandanus trees and substantial buildings and installations. In order to minimize the effect of coastal erosion sea walls are constructed along shores. The use of coral rock for the construction of sea walls will rid coastal areas and fringing reefs of rocks and stones.

4 .2.4 Improper disposal of waste and pollutants.

Rapid population growth, increase in imported packaged items, increase in business activities is creating a threat on environmental status of atolls. Uncontrolled littering, indiscriminate dumping of solid waste and improper control and use of pollutants is a health risk to atoll dwellers.

Seepage or leachate from uncontrolled rubbish tips has been known to pollute lagoon waters and underground fresh water lens. The problem is more severe in Tarawa where solid waste disposal has not been successfully managed. Medical waste from the main hospital and village clinics consisting of used needles, chemical containers and expired pharmaceuticals have been disposed carelessly on roadsides and adjoining bushes. Chemical pollutants such as waste oil, pesticides and chemical solvents have been

found on unoccupied land. Domestic laundry and dishwashing detergents are used in large quantities on South Tarawa and Betio.

Even though persistent organic pollutants (POPs) have not been identified in Kiribati, there is a belief that some f orms of POPs might be present in addition to those originating from burning of rubbish and wood fires. Minute quantities of PCbs might be found in old electrical transformers on Banaba and Kanton. If this would be so, the problem has to be considered nationally in consultation w ith regional environmental organizations and neighboring countries to adequately solve the problem.

4.2.5 Uncontrolled mining of beach sand and aggregates.

There is a great demand for raw materials to be used in construction works and for development purpose especially on South Tarawa and Betio. Beach sand and gravel are among the most needed ingredients for construction of buildings and installations. Mining activities along c2oastal areas particularly on Urban Tarawa are at an increasing rate that coastal erosion has been an everyday occurrence. Despite regular inspections by the staff of the Ministry of Environment, Lands and Agricultural Development mining of beach sand and gravel on commercial basis is still in progress.

4 .2.6 Legislative and regulatory framework.

To date, there are no specified laws and regulations for the control of land degradation. A legislative review to identify relevant national legislation to address land degradation indicated that certain laws may be applied to a certain extent to alleviate land degradation problems. Specific laws to regulate land degradation need to be drafted and enacted so as to streamline activities in the right direction. Whilst the Environment Act 1999 is undergoing amendments and Regulations being drafted, it might be an opportunity to expand the Act and Regulations so as to incorporate those that are relevant for land degradation issues.

4 .2.7 Land clearing for development.

Development activities are accompanied by clearing of land. The building of domestic or commercial buildings is preceded by clearing, leveling and surveying a piece of land intended for the purpose. The removal of trees and vegetation rids the area of ground cover exposing the land to erosion of top soil.

In urbanized regions of Tarawa, constant felling of trees and alteration of the topography of land by earth removal is a never ending process. Recent Government developmental projects implemented through bilateral and multilateral cooperation are taking their toll in the same direction. In spite of the recognition that deforestation is an unpreventable consequence of

development, it must be controlled in a manner that it would not reach a state that will be regarded as strategic or threatening. Agricultural programmes pose the same problem but to a lesser extent. With modern agricultural practices introduced in the country, using organic material for improving soil fertility and mulching, agriculture programmes are now central to the control of land degradation.

4 .2.8 Rubbish burning and bush fires.

Occasional bushfires are generally encountered during dry periods when most of the ground cover namely grass and low bushes are dying due to dehydration. When this happens, fires can be ca used by lighted cigarettes deposited on dry grass or from picnic fires.

Bush fires deprive land of essential soil trace elements that support plant growth and destroy enormous numbers of trees within the affected areas. This scenario is noticed on Kiritimati resulting in the destruction of birds' habitat and loss of biodiversity let alone land degradation.

Capacity building Gaps.

Analysis result o f the UNCCD issues above indicate the following capacity gaps to be developed during the course of implementing UNCCD in Kiribati

- Inadequate human resources for implementation.
- Lack of supporting funds
- Lack of skill and knowledge
- Difficulty in obtaining regional and /or international assistance.
- Insufficient inter-organizational cooperation and coordination.
- Inadequate public awareness and motivational programmes
- In adequate legislation on land degradation.

4.3 United Nations Convention on Biological Diversity

The UNCBD identifies the following capacity gaps to be improved in order to improve the performance of the national implementing agency.

4.3 .1 Lack of appropriate legal instruments to support designated conservation areas for the environment and biodiversity.

It is clear that the current law of Kiribati lack the potentiality of supporting certain activities under the UNCBD. Kiribati needs to develop appropriate law on conservation of biodiversity and environment. The development of these acts must be fully participatory in nature and should integrate traditional management practices of the natural environment and the resource.

4.3.2 Limited scientific research and studies being undertaken on the biodiversity in Kiribati

There is a strong need of more in-depth scientific research and study to be undertaken on the biodiversity environment in Kiribati. Output of such studies and researches will provide invaluable contribution to the establishment of biodiversity data-base, also contribute tremendously to developing the knowledge of community understanding through dissemination of information and data.

4.3.3 In sufficient incentives for local communities to rehabilitate land - replanting programmes.

As reflected in the previous stock-taking assessment report there has been limited incentives for forestation/replanting of culturally and economically significant plants/trees species by local communities. There is also limitation and lack of appreciation of economic and cultural values of terrestrial atoll resources (e.g trees, shrubs, herbaceous, vines, grasses and sedges that have cultural and economic values including uses for traditional medicine)

4.3. 4 Scattered-ness and isolation of islands coupled with high traveling cost and communication.

Kiribati is a small island nation that comprises of 33 small atolls including Banaba or Ocean Island the only uplifted phosphate limestone island, and Kiritimati, the largest atoll in the Pacific which is located in the Line Islands. The scattered-ness of these atolls and islands poses difficulties in terms of communication, transportation, trading and implementation cost of activities required under the convention. In most cases, community consultations and traveling is very costly, and means of transportation are often unreliable.

4.3.5 Insufficient support and motivation by responsible officers and ministries.

There is a limited cooperation and co-management between national government and local communities in areas of community-based management of natural resources. In most cases local communities are not involved in making plans and decisions. The top-down type of approach has been considered the most appropriate approach in dealing with communal related issues regardless of its negative impact on the community and main objectives of project.

4.3.6 Delayed release of advance funds for the project.

The completion of activities planned for the project, often delayed due to late release of funds from the Ministry of Finance. All activities required under the Conventions have time limit for implementation. The timely completion of projects under the convention depends on a timely receipt of advance funds from the Controller of project development funds in the country.

4.3.7 Weak enforcement of environment act and policing/control of activities with adverse impact on the environment

The revised Environment Act covers wider areas of environment concerns which were not reflected in the 1999 Environment Act. The revised act has been approved and read for the first time at the recent meeting of the *Maneaba ni Maungatabu*. There is a need to increase number of Environment Inspectors and to expand the service to the outer islands. The development of such act has been fully participatory and integrated traditional management practices of both the natural environment and resources.

4.3.8 Inadequate capacity building in managing protected areas.

At the rural and community level, the public is quite ignorant on the important of conserving and managing biodiversity. Although, traditional conservation practices and knowledge have been in place since time immemorial. Their emphases have been narrowly focused on certain resources that are culturally significant to society. This means thatour ancestors did not regard every living thing as equally important in terms of biodiversity context. The existing capacity for biodiversity management and conservation need to be expanded in all levels of capacity, individual, institutional and systemic. This can only be achieved through further training of the local staff at relevant and recognized local, regional institutions and even abroad. The local community who are the sole beneficiaries should also be included in this training program.

4.3.9 Low priority status in the current National Development Strategy (NDS)

The seven years National Development Strategy which is currently approaching its expiry period in 2007 does not cover substantially requirements of the 3Rio Conventions. This is due to the lack of understanding of the planners who formulated NDS and insufficient public awareness campaign on the conventions. For the UNCBD, there is section on natural resource development but almost nothing for conservation. The NDS recognized the importance of UNFCCC but uncertain of what to include in the NDS. For the UNCCD, there is no direct plans and strategies included in the NDS but little is stressed in some components of the Ministry of Health Operational Plan.

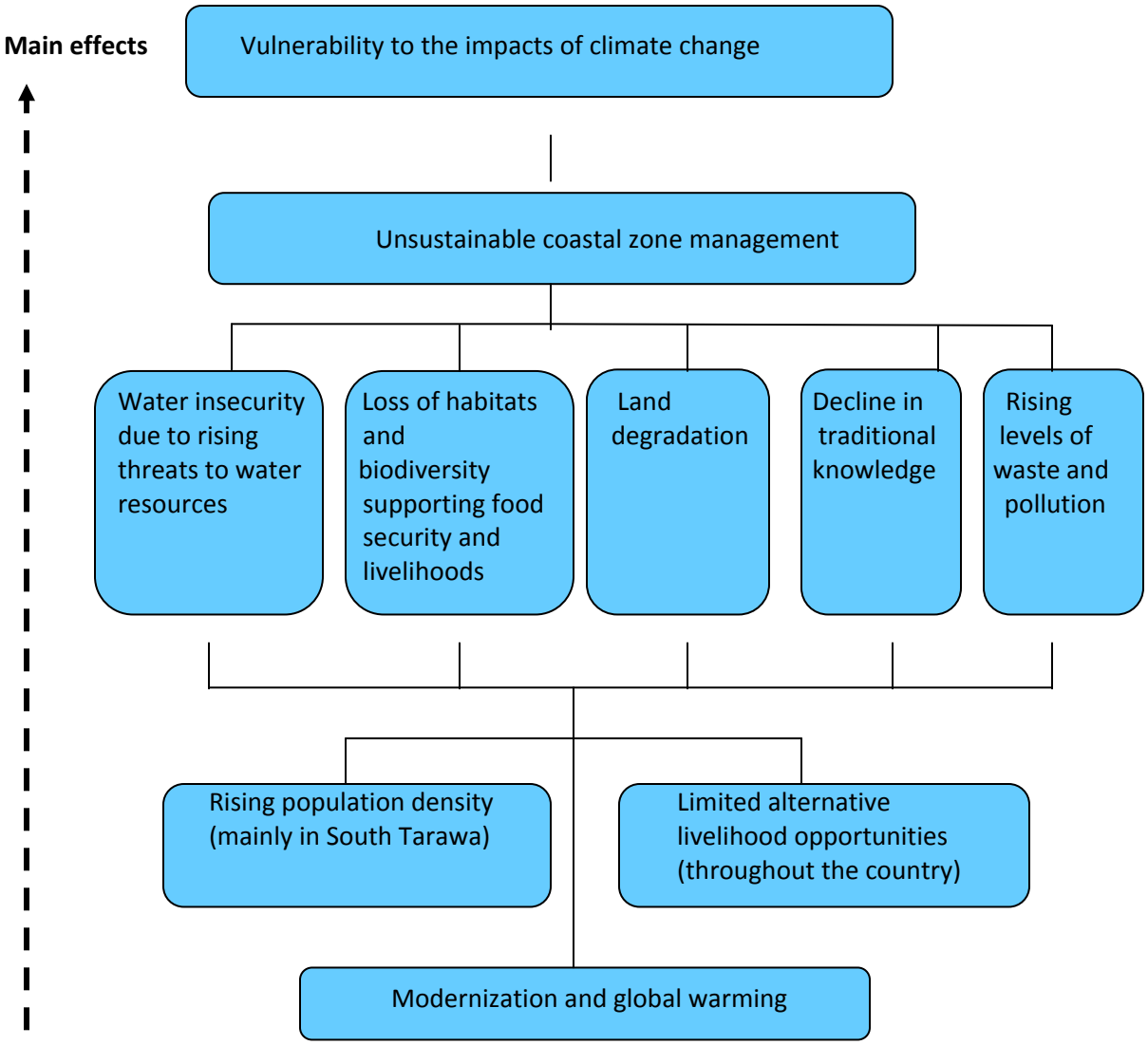
4.3.10. Inadequate capacity in preparing project document and report writing.

Adequate skills in Project Document Preparation and the Writing of Report are important requirements of the 3Rio Convention It is vital that Project officials and the Project Coordinator in particular should have acquired knowledge in preparing project document and comprehensive reports. Submission of narrative and financial reports within a given timeframe is vital for keeping the project moving on schedule as planned.

5.0 Main Cross-cutting environmental issues

Through a range of stakeholder consultations and NCSA team discussions that analyzed the thematic assessment findings, a number of cross-cutting environmental issues were identified. Figure 3 below presents a diagram depicting an overview of these issues. In the context of the unique and vulnerable ecosystems of Kiribati these cross-cutting issues are very closely interrelated.

Figure 3: Overview of Kiribati main cross-cutting environmental issues



5.1 Vulnerability to climate change

5.2

Government sees climate change adaptation (and disaster risk management) as a cross- cutting and urgent developmental issue for Kiribati.

President of Kiribati, Hon. Anote Tong – quoted in the Aide Memoir on the Kiribati Adaptation Project (KAPIII), November 2008.

Vulnerability is commonly described as a function of exposure to the impacts of climate change and resilience or coping capacity of those affected (IPCCC ……) Kiribati's high level of exposure can be attributed to its very low lying islands and very high dependence on the quality and quantity of underground water lens and rainfall and the growing recognition that the climate change scenarios predicting sea level rise and changing levels of precipitation over the next hundred years will negatively affect the quality of land and water quite significantly.

The government of Kiribati has embarked on a mission to strengthen resilience and adaptive capacity and is being assisted by donor partners including the World Bank and the governments of Australia and New Zealand, UNDP and the GEF. The impacts of climate variability and climate change will be far reaching for a nation with such a high degree of vulnerability. Adaptation in its broader sense does not only include strengthening coastlines and protecting water resources but also human health and development, enhancing livelihood opportunities and mobility of skilled human resources, reviving and enhancing traditional knowledge and introducing new technologies to improve agriculture, fisheries and land-use practices. This far reaching impact of climate change makes vulnerability and adaptation issues an important cross-cutting environment and sustainable issue for Kiribati.

5.2 Unsustainable coastal zone management

All of the Kiribati islands and atolls can be classified as being part of a coastal zone. Coastal zone includes all low lying islands and atolls and their surrounding lagoons and fringing reefs. Their management entails planning the use of and managing coastal resources in a way that supports maintenance of biodiversity and ecosystem services and that support human wants and needs. The approach requires an integrated and well coordinated approach that can happen through effective collaboration and cooperation amongst actors. Past SOPAC studies on coastal structures and coastal processes, water resources have revealed that decisions have been made about siting and design of coastal structures and land use with limited understanding of the consequences to the coastal zone. The uncontrolled removal of coastal vegetation not only results in declining biodiversity but also renders the coastlines very vulnerable to erosion and loss of land and the underground water lens exposed to increasing levels of salinization. One can immediately appreciate that the challenge of managing the coastal zone aligns with and combines the intent of the three Rio Conventions covered in the NCSA i.e. enhancing adaptation to climate change, minimizing land degradation and protecting biodiversity.

At the national level coastal zone management poses special challenges for government agencies, community organizations and NGOs to work in concert to address a range of issues that are very closely interrelated. At the moment there is limited progress in this area and there is unsustainable management of coastal zones. It is this very challenge and nature of the issue that has prompted national stakeholders to regard it as an important cross-cutting environmental issue.

5.3 Water in-security due to rising threats to water resources

Rainfall and underground water supports habitats, species and people on the very small islands. However such a precious resource is now being overused or polluted because of the porous nature of soils and low lying nature of the islands. Water in-security is regarded as a very serious environmental threat requiring

careful planning and management. Weather in Kiribati is controlled by the seasonal movements and annual variations of the Inter-tropical Convergence Zone and the Equatorial Doldrums Belt. The country has experienced long droughts of up to 16 months with an average frequency of 6 to 7 years. Average yearly rainfall in the Gilberts ranges from 1,300 mm in the south to 2,000 mm on Tarawa, near the equator, and to over 3,200 mm in the northernmost islands while it is less than 1000 mm in Kiritimati in the Line Islands.

ENSO events are common with an average frequency of 6 to 7 years. Drought emergencies have been declared in the past and some islands have also been abandoned. The government has designated four atolls as growth centers including; Beru, Butaritari, Tabiteuea North in the Gilberts and Kiritimati Island in Line Islands group. Except for Kiritimati the other atolls still require a survey of water resources and urgently need to be done. The natural variation in rainfall, the frequent prolonged droughts add to the difficulty imposed by the dispersed geography of the nation in managing water resources.

There has been no comprehensive study carried out of actual use in Kiribati from well, reticulated or rainwater storage systems. If a low estimate of consumption rate of 50 L/person/day of reticulated water is assumed for South Tarawa then demand has already exceeded the current estimated sustainable yield of Bonriki and Buota groundwater source reserves. In some of the Outer Islands and North Tarawa, there are relatively large fresh groundwater reserves capable of sustaining higher populations than currently, however, in most cases the actual quantities of water available for extraction remain to be ascertained. (*SOPAC 2005)*

Pollution levels due to human and animal waste have increased considerably in South Tarawa area due to increasing populations with groundwater and seawater testing showing increasing levels of e-coli bacteria. There is also a concern of increasing levels of pollution from chemicals and leachate from the rubbish dumps. Limited access to income opportunities have resulted in many families not being able to afford large rainwater tanks to supplement household water needs. Initiatives in the past to construct communal water tanks to be shared by families have not been very successful due to poor design and maintenance and there is renewed attempts to improve such systems. The national government with the assistance of donor agencies are providing water tanks to families in Tarawa and other communities and this should increase over time.

5.4 Loss of habitats and biodiversity (terrestrial and marine) species supporting food security and livelihoods

In South Tarawa and Kiritimati the increase in human populations is resulting in gradual loss of habitats and biodiversity. Areas of pandanus and coastal species are being cleared to make way for housing and increasing demand for fuelwood.

Kiritimati (Line Islands, Kiribati) supports globally important populations of many seabird species including the largest breeding populations of two threatened species – Te ruru (Phoenix petrel, *Pterodroma alba;* Endangered) and Te bwebwe ni marawa (white-throated storm-petrel, *Nesofregetta fuliginosa;* Vulnerable). These and other seabirds and one landbird species are increasingly being threated by an increasing human population (5000+) and the impacts of mammalian pests, including the recent arrival of black rats (*Rattus rattus*). Poor planning of migration has led to widespread degradation of remaining

habitats of the Kiritimati Reed-warbler (*Acrocephalus aequinoctialis)* due to habitat loss from fires, clearing for coconuts, development and habitat modification, e.g. proliferation of the weed *Pluchea indica* (shrubby fleabane, Asteraceae) following fire (Birdlife International, 2009)

5.5 Land degradation

In December 2008 the Kiribati government endorsed the country's National Action Programme (NAP) to address land degradation. The NAP identifies the causes and effects of land degradation and the main actions to address the root causes.

Need to summarize here the main causes and effects of land degradation and proposed actions, as outlined in the Kiribati NAP.

5.6 Decline in traditional knowledge

Need a section here (Nenenteiti stressed this cross-cutting issue during the workshop at Biketawa)

5.7 Increasing populations with limited alternative livelihood opportunities (throughout the country)

> In the Kiribati context poverty is best defined as one's lack of access to opportunities and hardship, the so called 'Poverty of Opportunity'. According to the study carried out by the Pacific Regional Department there was general agreement that while poverty does not exist in Kiribati, hardship does with its most widespread definition of 'lack of access to opportunities'. This means lacking access to better educational and economic opportunities, social services, formal employment etc. Those facing the greatest difficulties include the unemployed, people with limited education, large families, elderly people who live apart from their families and those living in crowded conditions, (SPC/ ADB, 2004 cited in Republic of Kiribati MDG Report 2007 pp 10).

The above caption summaries the livelihood and poverty situation in Kiribati. This situation places Kiribati in a grave situation in the context of the UNFCCC, UNCBD and the UNCCD. Increasing populations experiencing the 'poverty of opportunity' are very vulnerable to build resilience to the expected impacts of climate change, place more pressure on existing land and marine resources causing land degradation and loss of biodiversity.

Since 1963 the average exponential growth rate of the total population of Kiribati has been 1.8% while that of Outer Islands has been 0.9% and that of South Tarawa is 4%. These figures reflect the impacts of internal, inward migration from Outer Islands to South Tarawa. If these trends continue, the total population of Kiribati is expected to exceed 113,000 and South Tarawa is likely to have well over 60,000 people by 2020.

Families rely on wages, remittances from overseas workers mainly in the maritime industry, sale of copra and marine products and handicrafts. Only 20% of the labour force participates in the formal wage economy. 80% of paid employment is with government or SOEs with 64% of all cash jobs based in South Tarawa (UNDAF – Kiribati Report 2002). The traditional subsistence economy remains important for food and general livelihood security. This is likely to continue as the labour force is growing more rapidly than population. With the majority of the population aged twenty or below, high youth unemployment, and few new jobs, practical policies are needed to address improvements to the livelihoods of the growing numbers of young I-Kiribati who will remain in the informal sector.

6:0 Cross-cutting capacity issues

The NCSA cross-cutting assessment team met to review the three thematic assessment reports, listing and describing overlapping requirements and functions to be performed for the three Conventions and select priority. (*See Annex 1 for the list of requirements.)*

6.1 Overlapping requirement.

Develop or maintain necessary legislation or other regulatory provisions.

Due to the ad hoc nature of existing legislations and strategies on the conservation of biodiversity, climate change and land degradation in Kiribati it is crucial that appropriate legislations are put in place as required under the convention. The limited existing policies and legislations for the three thematic areas provide insufficient legal bindings and control over the required performance of each thematic areas. The revised 1999 Environment Act has been approved by government and currently enforced mainly on Tarawa where main environment problems are severely existed.

6.1.2 Develop national strategies, plans or programmes for the implementation of the three thematic areas and cooperate them into relevant sectoral or cross-sector plans, programs and policies.

Due to the lack of appropriate strategies and collaboration between sectors that are involved in the implementation of each convention, it is crucial that each Contracting Party, develop national strategies and programmes in accordance with their specific conditions.

6.1.3 Enforcement of policies and legislations.

Enforcement of existing laws, legislations and policies is distracted due to low understanding of the community on the positive outcome of such legislation, policies and strategies. Based on the three profiles of thematic areas it is generally agreed that there is a need to encourage enforcement of existing legislations, strategies and action plans

6.1.4 Involvement of stakeholders and local communities/ build consensus among all stakeholders.

It is appropriate that all stakeholders within the community are mobilized and identified. They should be involved in the process of decision making and implementation.

6.1.5 Collection of data and information.

It is essential to have sufficient data and information on any subjects related to all thematic areas concerned. There has been some researches and studies carried out in previous years, their reports and findings are not properly looked after. There has been some reports on conservation of biodiversity but are scattered over different offices ministries and to get hold of them is often discouraging.

The Contracting Party shall establish, maintain and develop programmes for scientific researchers to undertake in-depth study as appropriate as possible and subsequently linked to the implementation of

the three thematic areas in Kiribati. The information collected provides the basis of developing the capacity building of local community in Kiribati.

6.1.6 Dissemination of information and data.

The majority people at the grassroots level up to the policy makers are ignorant on the importance of the three conventions. It is crucial for all stakeholders to be fully aware of and have a better understanding of UNCBD, UNFCCC and UNCCD. The collection of information and data related to each convention will facilitate the sharing of technical and scientific information among stakeholders at the national, regional and international levels. Awareness is a fundamental element of all conventions and to make information and data available will further enhance the knowledge of local communities and those at the level of decision makers.

6.1.7 Monitoring, evaluation and reporting.

For the three Conventions, monitoring, evaluation, and reporting are the most fundamental requirements, vitally important for assessing capacity building of the national executing agency to implement requirement of the Conventions.

(i) Monitoring and evaluating:

Very little is done locally on monitoring and evaluating the progress of programs under the conventions due to low capacity on monitoring by those employed as implementers of the program./Very often, monitoring is carried out by regional implementing agencies such as UNDP, SPREP, SPC, SOPAC and others. Each of these agencies has its own methods for monitoring and evaluating, that is why sometimes national coordinators and those involved in the project are unwilling to carry out such essential requirements on their own initiatives.

As a Contracting Party Kiribati for the purpose of it's respective programs and with the assistant from regional technical advisors monitored through sampling and other technique all components of each program, concentrating more on areas that require urgent actions.

(ii) Evaluation

In the same manner, Kiribati evaluate the progress and achievement of each convention activities using methods recommended by regional implementer through constructive interviews, survey questionnaires, and consultations Findings from monitoring and evaluation process are incorporated in the final report which is separately produced as part of this project (NCSA) The evaluation covers all components of the three thematic areas.

(iii) Reporting.

The final report of this project shall incorporate findings from monitoring and evaluation programs and effectiveness of the program. National Coordinators submitted their quarterly narrative reports together with financial report on regular basis. Depending on a timely submission of report to the regional implementing agency, the next advanced budget for the next action plans shall be released.

One major component for NCSA is the final NCSA report for Kiribati which will incorporate all report and findings to illustrate the overview of the project covering the Stock-Take and Thematic Assessment, the Cross-Cutting constraints and Action plan. The report will be produced after the completion of other NCSA components.

6.1.8 Training.

Establish and maintain programmes for scientific and technical education and training to measures for the identification of specific needs and to develop capacity building of local communities to fulfill Kiribati's obligation under the Rio Conventions.

6.1.9 Information Exchange

The contracting Party shall facilitate the exchange of information from all publicly available sources including results of technical, scientific researches. It shall also, where feasible, include repatriation of information.

6.1.10 Impact assessment and minimizing adverse impacts.

Introduce appropriate arrangement to ensure that environmental consequences of its programmes and policies that are likely to have significance adverse impacts on the overall performance of the thematic areas are duly taken into account. Also introduce appropriate procedures requiring environmental impact assessment of its proposed projects that are likely to have significant adverse effects.

Functions to be performed.

Based on the list of requirements of the three conventions the following are set of functions to be performed in order to meet such requirements:

- organizing and formulating policies, legislations, strategies and programs;
- implementing and enforcing policies, legislations and strategies often through projects, notably by mobilizing and managing all required resources;
- building consensus and partnerships among all stakeholders;
- collection of information on knowledge for each thematic areas;
- monitoring, evaluation, reporting and learning.
- provision of sufficient budgetary allocations for on going activities as required under the convention.
- incorporate traditional skills wherever applicable within new introduced technologies.
- assess vulnerability and adaptation of stakeholder
- maintain high level consultation with high ranked workers of the government.

7.0 Assessment of cross-cutting capacity constraints

Based on the UNCBD profile above, the following cross cutting capacity building constraints are considered common to all three (3) Rio Conventions. The analysis of cross cutting capacity constraints provide and identify ways to effectively promote linkages and synergies to meet requirement of the three Conventions.

7.1. Low collaboration and integration by government ministries, institutions, local communities and private sectors whose mandates and work programmes are related to the three Rio Conventions.

Collaboration and co-management between national government sectors and stakeholder at the national level has been very low and often critical especially in areas of community-based management of projects funded by GEF. In most cases people are more attentive to their own agenda before attending something else. The local communities who are the sole beneficiaries of the projects are often not involved in the decision making process and thus create the habit of sitting-back listening without saying a word at all.

7.2 Limited availability of data and information related to the three Rio Conventions and their thematic areas.

There is lack of technical database and information on the three Rio Conventions and the thematic areas. Collection and dissemination of information to a wider community through targeted representatives of the grassroots people is always problematic due to scattered nature of the islands. The community outreach programme is always costly and a time consuming exercise.

7.3 Continuous constraints on financial resources.

It has been stressed through series of community consultations that major cross-cutting problems for the implementation of the 3 Rio Conventions is the limited financial resources. The successful implementation of the Conventions depends entirely on the availability of financial resources especially with local communities at the national level. There is a real incremental cost brought about by the need to adapt to climate change.

Inadequate funding resources and untimely receipt of funds could in some ways affects the timeframe implementation of the Conventions required activities and obligations.

7.4 Insufficient communication, education and public awareness programme.

Formal and informal community outreach program to raise public awareness and understanding on the three Conventions is restricted to more urbanized areas. This is due to high transportation costs between the capital and outer islands, that caused by the remoteness and isolation of the islands in Kiribati. Radio media and also weekly newspaper provide vitally important role in reaching out to the outer islands, provided that there is sufficient budget being allocated.

7.5 Inadequate strengthening and enforcement of policies and legal framework.

Kiribati is currently considering the formulation of legal framework related to and as required under the three conventions. The current Environment Act 1999 is being reviewed as part of NBSAP systemic assessment, with the intention to integrate other missing components of the three conventions. The current policies and legal framework do not imply much effect on all conventions.

7.6 Limited training opportunities and opportunities for on-the-job training.

On-going training for un-qualified as well as qualified staff members working under the convention is absolutely necessary. The effective implementation of the convention requires skillful commitment and capability of staff. On the job technical and administrative training are also important for the development of capacity building of staff members working under the convention and those fully involved with the implementation of the convention such as members of the selected Steering Committee.

7.7 Limited mainstreaming of environment issues into national plans.

Implementation of conventions without mainstreaming into the National Development Strategy (NDS) will prevent effective outcomes of the convention. Not all three conventions are fully reflected in the current Ministry Operational Plan which reached its expiry period (2007)

7.8 Limited utilization of traditional conservation practices and transfer of technology.

The Convention recognizes that traditional conservation practices and other intellectual property right have influence on the implementation of the three thematic areas on which capacity building assessment is based. With this recognition it is recommended that convention undertake exchange and repatriation of information in a more systematic manner and does not run counter to its objectives.

7.9. Untimely submission of reports and other documents required under the Convention.

Submission of Report is a very important requirement of the 3Rio Conventions which must be completed within a given time frame as set by GEF. The repeatedly belated submission of the report often caused late receipt of additional budget of the project and delayed completion of the project. The constraint can be applied also to Monitoring and Evaluation reports.

8:0 CROSS-CUTTING ANALYSIS

8.1. Capacity building cross-cutting issues.

The following table demonstrates capacity building cross-cutting analysis based on the above cross-cutting environmental constraints in three levels of capacity that is Individual, Institutional and Systemic Levels. Some issues are not direct capacity building issue but contribute tremendously to the effects of capacity cross cutting issues. An example of this is population increase in Kiribati.

Setting priorities

The Working Group agreed to the application of the following criteria to use as judging tools for prioritizing the above identified cross cutting capacity building. The process of prioritization, therefore apply the following criteria: (i) promotion of Synergism, (ii) how sustainable the development goal is-the National Development Strategy, (iii) the scope covered-national, island, villages and communities, (iv) viability and sustainability, and (v) pro-community participation. Each criterion carries a range of 1-5 points to set their priority ranking.

Table 2. Kiribati Cross-Cutting Capacity Issues - Prioritization Matrix

Priority (#, or High, Medium, or Lower)	Cross-cutting Issue	Synerg-ism	NDS	Scope	Viability/ Sustainability	Pro-community participation	Ranking
M	Limited collaboration between executing agent and government institutions, NGOs and other recognized organizations.	5	2	4	3	5	19
M	Unavailability of data and information related to the 3 Rio Conventions and their projects.	4	3	3	4	5	19
M	Continuous financial resources constraints.	4	5	4	3	3	19
H	Insufficient communication, education and public awareness program.	5	5	5	4	4	23
H	Inadequate strengthening and enforcement of policies and legal framework.	5	5	5	5	4	24

H	Limited training opportunities and less development of on-the-job training.	5	5	5	5	5	25
L	Limited mainstreaming of environment issues into national plans.	4	2	3	3	4	16
L	Limited utilization of traditional conservation practices and transfer of technology.	2	3	3	2	5	15
L	Lack of experience and understanding in writing national reports for each of the three conventions.	3	1	2	3	3	15
H	Limited effort to reduce the high rate of population growth in Kiribati.	5	5	5	4	5	24
H	Limited ability of government to plan and implement alternative livelihood activities in the outer island to minimize urban migration.	5	5	5	5	5	25

Criteria applied; *(1) Promotes synergisms*

(2) Alignment with Sustainable Development Goals

(3) Scope (geographic coverage - national, island, village, community)

(4) Level of Urgency

(5) Pro-community participation

It is argued that the increased population in Kiribati is a major root cause of all environmental and capacity building problems. The Working Group decided to identify limited capacity to address population increase as a capacity building cross cutting issue.

8. ANNEXES.

Annex 1.

List of requirements under the Conventions.

Biodiversity	Climate Change	Land Degradation.
1.National biodiversity conservation planning. 2.Identify and monitoring biodiversity and its conservation. 3.In-situ conservation, including protected area system management. 4.Preserving indigenous and local knowledge innovations and practices. 5. Ex-situ conservation of biodiversity. 6 Developing and introducing economical and social incentives. 7. Providing scientific and technical education and training. 8. Raising understanding and awareness. 9. Utilizing environmental impact assessment regulations to support biodiversity conservation. 10. Regulating the handling of living modified organisms. 11. Regulate access to and transfer of genetic resources.	1.Preparing National communications. 2.Developing national climate change programme. 3. Preparing and managing greenhouse gas inventory, including emission database management. 4. Assessing vulnerability and adaptation. 5. Developing and implementing adaptation plans and measures. 6. Assessing mitigation options. 7. Research and systematic observation of climate and other functions. 8. Developing and transferring technology. 9. Improve decision making, including assistance for participation in international negotiations. 10. Education, training and public awareness raising. 11. Information and networking, including databases.	1. Education and Public awareness. 2. The transfer acquisition, adaptation and development of economically, socially and environmentally appropriate technology. 3. Training and technology regarding alternative, renewable energy sources. 4. Promotion of alternative livelihoods including training in new skill. 5. Training for collection and analysis of data for disseminating and using early warning information systems, covering drought and food production. 6. Systems to collect, analyze and exchange information 7. Effective early warning and advance planning for periods of adverse climatic variation. 8. Systems for research and development. 9. Forging technical and scientific co-operation with regional and international institutions.

12. Regulating the commercialization and ensuring benefit sharing from genetic resources. 13. Managing information notably through clearing house mechanisms. 14. Implementing the Catagena Protocol on Biosafety. 15. Accessing financial resources.	12. Institutional capacity-building, notably through secretariat or focal points 15. Enhancement of the enabling environment.	10 Joint research programs for the development of appropriate technologies.

Annex 2. Capacity Issues, Gaps and Proposed Actions.

Important Capacity Issues.	**Requirements.**	**Capacity Barrier**	**Capacity Needs**	**Capacity Opportunities**	**Proposed action for Addressing issues.**
1. Limited Collaboration between sectors.	Article 10 (e) Encourage cooperation between governmental authority and private sector in developing methods for sustainable use of biological resources	Scatteredness and isolation of islands coupled with high traveling cost. Lack of support and motivation by responsible officers and ministries.	Need to visit people on regular basis, running training workshop for key stakeholders on the island.	Full involvement of stakeholders in planning and implementation	Improve collaboration among relevant national governments and relevant CROP agencies.
2. Limited data and information	Article 17 …..shall facilitate the exchange of information……	Absence of comprehensive research undertaken on biological	Produce and disseminate more information to local communities	Develop Clearing House Mechanisms on scientific information of biodiversity.	Improve and enhance knowledge and understanding on the status of

		resources in Kiribati.			biological diversity among different sectors of society and the general public.
3. Insufficient public awareness campaign.	Article 13: Public education and awareness	High cost of the media available in the country.	Arrange for display of more effective public awareness campaigns.	Media training for those working under the convention and search for aid funds from funding agencies.	Develop biodiversity outreach program to meet different levels and needs of the general public.
Insufficient educational materials for school junior and secondary level		Insufficient budget reallocation.	Develop multi media resource kits for biodiversity conservation issue Staff work with conservation to build up capacity on educational skills	Training on educational skills to conservation/environment staffs	Incorporating conservation topics in school curriculum.
4. Inadequate human and funding resources	Article 10: para.1&2 Financial resources.	Insufficient budget provisions for conservation in the annual recurrent budget.	Increase budgetary allocation for conservation..	Search for aid donors and writing of project document.	Increase national budgetary allocation to fund for the protection and management of biodiversity
5. Lack of appropriate legal framework and policies in relation to biodiversity conservation in Kiribati.	Article 6 (a): General measures for conservation and sustainable use	Inadequate enforcement of environment act and policing/control of activities with adverse impact on the environment	There's need for a well designed legal framework aimed to the protection of biodiversity and sustainable use	Review and revise existing regulations for the protection of biodiversity and environment.	Enforce and enact an environment legislation that allows for the protection of species, viable populations and associated habitats of ecological, natural heritage and cultural significance
6. Limited training opportunity for staff members working under the convention.	Article 12 (a) Research and Training	Limited budgetary allocation for training and capacity building enhancement	There is a special need to develop training program for scientific and technical education for conservation and sustainable use of biological diversity.	Search for courses available at higher level education, tertially and university programs.	Identify and provide appropriate capacity building programs to local experts, who are working in the field of biodiversity protection.

7. Limited incorporation of all planned activities relevant for implementing general measures of the convention in the Ministry Operational Plan (MOP)	Article 9 (a) Ex-situ conservation.	This is given a low priority status in the National Development Strategy.	Collaborative implementation of both the Ministry Operational Plan and obligations under the Convention is vital for enhancing capacity building.	Look for technical training opportunities in relation to conservation of biological resources	Ensure that any strategic plan set for biodiversity conservation are incorporated in a National Development Strategy
8. Lack of intellectual property transfer and combination with modern conservation technology.	Article 16 Access to and transfer of technology,	Change of lifestyle from traditional subsistence to cash economy	Restoration of traditional conservation practices and use them along with modern conservation technology.	Encourage research on traditional conservation practices.	Develop and restore the use of intellectual property along with modern conservation practices.

9. Absence of well managed conservation areas.	Article 8 (a) Establish a system of protected areas where special measures need to be taken to conserve biological diversity	Lack of capacity building in managing protected areas	Establish conservation or protected area as marine and terrestrial protected areas.	Lack of capacity building in managing protected areas	Establish M.P.A and conservation areas.on the islands.

THE NATIONAL CAPACITY DEVELOPMENT ACTION PLAN

1. Purpose of the Capacity Development Action Plan.

The purpose of the Capacity Development Action Plan is to:

1) Enable and guide the national stakeholders to take ownership of and implement capacity development actions aimed at achieving targeted capacity outputs that in turn will lead to the achievement of environmental outcomes and goals. These in turn can contribute to the achievement of Kiribati SDP Goals.
2) Enable the National Government and agencies responsible for achieving KSDP Goals and environmental Strategies and Action Plans to seek ways and means to support the capacity development actions.
3) Provide capacity development targets and indicators so that progress with future capacity development work can be monitored and evaluated.

4) Enable donor partners as well as regional and international organizations to be aware of the capacity development actions needed to be taken by the government and the people of the Kiribati Islands so that they will be able to support the actions

2. Methodology for Developing the Action Plan Matrix.

The development of the Action Plan Matrix is based on the Thematic and Crossing Cutting assessment reports that were compiled by local consultants and reviewed by the Working Committee through series of mini workshops. The three sets of drafted Log-Frames were developed by the Working Committee through Community consultants and workshops. Professional assistance is provided by SPREP Secretariat in Samoa. They are presented in matrix similar to that outlined in a typical Logical Framework. If it is successfully implemented it will also contribute tremendously to the achievement of Capacity Outputs which in turn contribute to the achievement of Environmental outcomes and objectives.

3. Capacity Development Action Plan Matrix

The following Capacity Development Action Plan covers the three thematic reports and cross-cutting assessment reports mentioned above. They are presented in matrix similar to that outlined in a typical Logical Framework.

The Action Plan matrix is a tool for implementation, monitoring and evaluation the progress of the project. It is also used to present an overview of the national capacity self-assessment project, and identifies workable plans that would enable Kiribati to successfully achieve it's obligations under the Rio-Conventions. The performance indicators and means of verification in the Action Plan Matrix are used only at the level of Capacity Outputs and Environmental Outcomes. *(The three sets of log-frames are appended as annex (i). (ii) and (iii)*

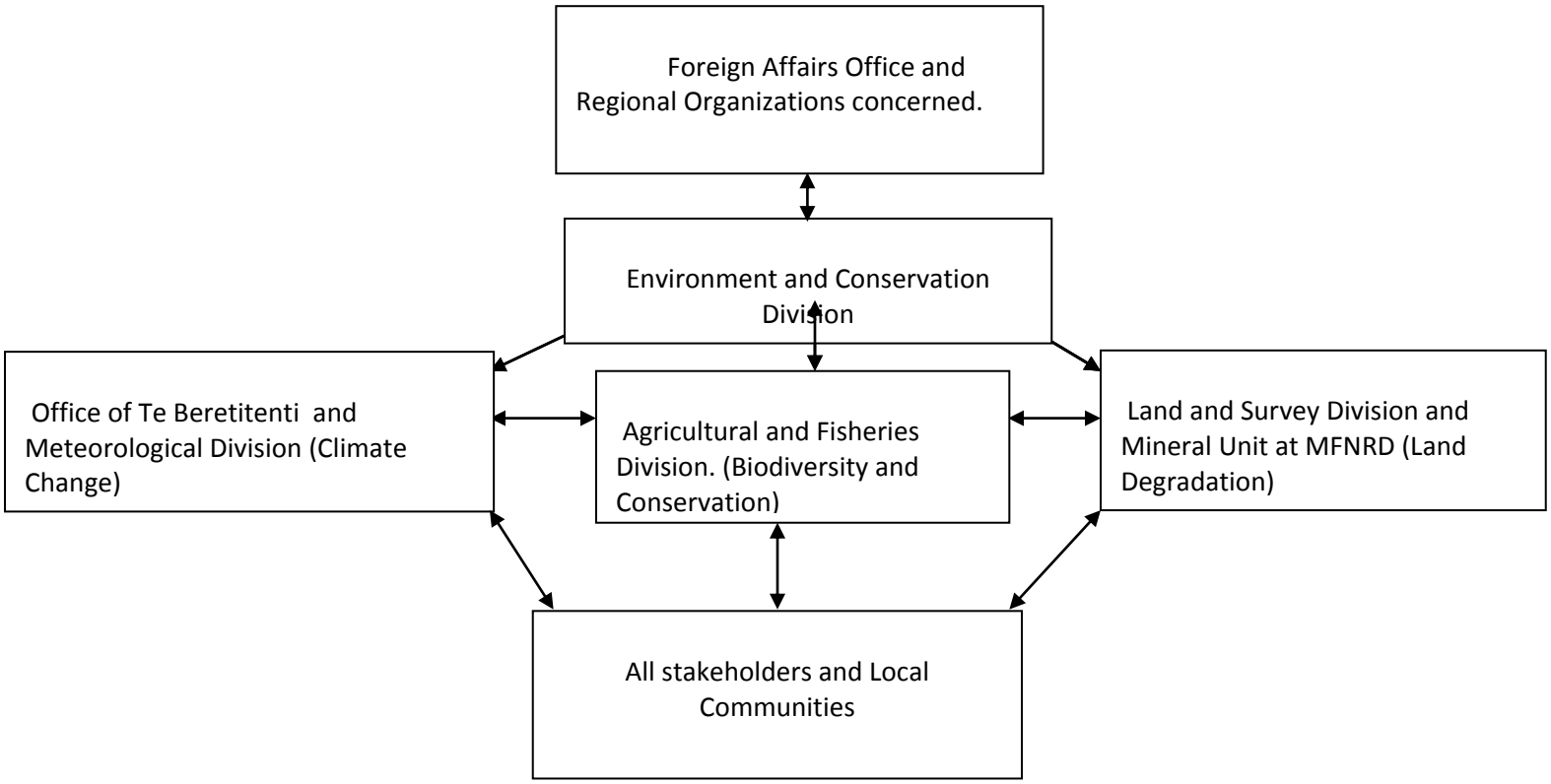
4. Mainstreaming the Action Plan

The Action Plan identifies responsible agent for all activities listed in the work-plan. The Ministry of Environment Lands and Agricultural Development (MELAD) is a local implementation agency who plays a major role in the implementation of the action plan. There are governmental departments and units that would be engaged more directly in the implementation of certain components of the action plan such as the Fisheries Division to increase abundance of marine resources in the country; Meteorological Division, to provide data and information on climate change and weather forecast; Local Government Department, to improve participation of local communities in the implementation of projects on the islands through Island Councils; Lands Division, to protect land mass from further degradation; Agricultural Division, to increase **land** productivity and encourage reforestation activities; Attorney General Office, to formulate appropriate legislative framework to support the three conventions; Curriculum Development and Resource Center, to design appropriate syllabus on the three conventions for use in all levels of education in Kiribati; Public Work Department, to produce suitable and more environmental friendly designs for seawalls, causeways and architectural plans; Public Utility Board, to encourage use of renewable energy and conservation of water and Ministry of Health and Medical Services, to maintain good health of the people on the islands and to prevent spread of epidemic from time to time.

4.1 Institutional arrangement.

It is inevitable that Capacity Development cannot be archived satisfactorily with a single handed performances, it is only through harmonious performances between all sectors in the government and communities. The following diagram presents the institutional arrangement to be put in place

to coordinate and monitor progress in the implementation of the Capacity Development Action Plan.



5.0 Monitoring and Evaluation mechanism.

Monitoring and evaluation mechanism for measuring the progress in implementing activities involve a selected working group consist of representatives from key stakeholders, local counterpart, project officers, regional and local implementing agencies and government focal point for each convention.

6.0 Linkages with other national plans and strategies.

The Capacity Action Plan incorporated other plans and strategies being identified such as NBSAP, NAPA including Ministry Operational Plan and National Development Strategy concentrating on capacity improvement and enhancement. Some of these activities are common to all strategic plans stated and need no further explanation. It is vitally important that they are incorporated in the development of Capacity Building Action Plan.

7.0 Capacity Development Action Plan Matrix

The following Capacity Development Action Plan is based on the thematic assessment report and the cross-cutting analysis for the three stated conventions, United Nations Framework Convention on Climate Change (UNFCCC), United Nations Convention on Biological Diversity (UNCBD) and United Nations Convention to Combat Desertification (UNCCD) The proposed actions include specific need for the three conventions as reflected in the cross cutting analysis above, The actions will address common issue to conventions.

Capacity Action Plan.

	Measurable Indicators	**Means of Verification**	**Assumption**
Development Objective: The Government and the people of Kiribati acquire the capacity appropriate for the implementation of their obligations under the 3Rio Conventions.			

Immediate Objective: In 2010 the government of Kiribati accomplish its obligations under the conventions.			
Environment Outcome:			
1. Existing laws and policy reviewed.	New laws drafted and policy reviewed.	AG's Office Report and Local government gazettes.	The people aware of the adverse impact of human activities.
2. Capacity to plan and manage conservation and MPAs improved through training workshops	Two training workshops took place in Tarawa for local communities.	Project reports and work plan.	The local community plan and manage their own conservation and MPAs areas.
3. Capacity to collect data and information improved.	Easy access to reports and other documents on natural environment and resources.	Library report on the number of students and people using the documents.	The people takepart in research and survey program at the local level.
4. The people gained better understanding of the conventions through public awareness program.	No. of people take part in the implementation of the action plan increased**.**	Project quarterly or annually progressive reports.	The people take active role in the implementation of the action plan.
5. National Budgetary allocation increased and overseas aid funds received.	Amount of budget granted increased	The Annual National Budget Document. Report on development projects approved.	Implementation of projects completed as scheduled.
6. The Capacity for writing report and project document acquired.	No. of quality reports produced.	New projects approved and implemented.	Local community receive benefit from the project.
7. Training opportunities available for officers involved in the implementation of the action plan	3 Officers take courses overseas on different specific areas	Report from Education, PSD and Foreign Affairs.	The officers concerned received further training to improve capacity building.
Capacity Output			
1.1 New Laws and Legislation for the protection of natural environment and resources completed.	**Three new laws approved and enacted.**	**AG's Office report and Minute of Parliament sitting.**	**The people aware of the importance of the natural environment and sustainable use of the resources.**

1.2 MPAs and Conservation Areas established.	**Two conservation areas established in the Gilbert Group and eight MPAs**	**Report from the Fisheries Division, Agricultural Division and Environment and Conservation Division.**	**The local community manage and monitor their conservation areas and MPAs.**
1.3 First hand information collected through intensive studies and research focused on the status of natural environment and resources.	**First hand information and data available**	**Report from Education and Research Agencies in Kiribati.**	**The people take part in the collection of information and gain sufficient knowledge to undertake research later.**
1.4 More effective public awareness programs initiated and performed.	**Two drama groups registered, effective radio programs produced every week and three different types of publication published and distributed.**	**Report from BPA and the popularity of radio program and a play by drama groups.**	**The local community acquire better knowledge on the 3Rio Conventions**
1.5 Adequate overseas and local aid funds available	**% of overseas aid increased and so to the National Annual Budget.**	**Report from the Planning Office, and national budget document**	**Project completed as scheduled.**
1.6 Capacity to write reports and Project Document improved.	**Report are complete on time as required.**	**Assessment report from donors.**	**More skillful report writers available on the island.**

Capacity Development Actions

(Capacity output 1.1: New Law and legislations for the protection of natural environment and resources completed.)

Actions.	**Responsible Agency**
1.1.1 Draft appropriate legislations for the protection of natural environment and resources.	**AG's Office, Agricultural Division, Fisheries Division and Environment and Conservation Division.**
1.1.2 Island Council formulate bylaws suitable for the protection and sustainable use of the resources	**MISA (Island Councils) and ECD.**

(Capacity output 1.2: Conservation Areas and Marine Protected Areas established.)

1.2.1 Designate suitable sites for Conservation Areas in the Gilbert Group.	**Agricultural Division, Island Council and Environment and Conservation Division**
1.2.2 Designate suitable sites for Marine Protected areas in the Gilbert Group.	**Fisheries Division, Island Councils and Environment and Conservation Division**
1.2.3 Training Workshop for local communities focused on the importance of Conservation Areas and Marine Protected Areas	**Fisheries and Agricultural Divisions and Environment and Conservation Division.**

1.2.4 Produce pamphlets and Facts sheets describing how to manage the protected areas on land and atsea.	**Ministry of Education (CDRC) Environment and Conservation Division**
(Capacity Output 1.3: First hand information collected through intensive research and studies on the status of natural environment and resources)	
1.3.1 Conduct deeper research on the status of environment and natural sources in Kiribati	**University of the South Pacific, Fisheries and Agricultural Division**
1.3.2. Publish report and finding of the study and make it available to the public and those involved in decision making.	**Environment and Conservation Division, Publication Authority and National Library.**
*(Capacity Output 1.4: More effective public awareness programs initiated and performed***)**	
1.4.1 Establish and register local drama groups and provide necessary training to improve their performing capacity.	**Environment and Conservation Division**
1.4.2 Produce pictorial pamphlets to demonstrate main functions of the conventions.	**CDRC, and Environment and Conservation Division**
1.4.3 Produce effective radio programs and air them through the media.	**BPA. New Air FM and Environment and Conservation Division**
(*Capacity Output 1.5 Adequate oversea and local aid funds available)*	
1.5.1 Seek for funding agencies outside Kiribati and tap on any aid fund available.	**Ministry of Environment Land and Agricultural Development and Planning Office**
1.5.2 Increase budgetary allocation in the National annual Budget	**Planning Office and Ministry of Environment Land and Agricultural Development.**
(Capacity Output 1.6: Capacity to write report and Project Document improved)	
1.6.1 Organize training workshop on report writing.	**Environment and Conservation Division.**
1.6.2 Organize training workshop on Project Document writing.	**Planning Office and Environment and Conservation Division**
1.6.3 Seek external aid funding for workshops.	**Environment and Conservation Division**

8.0 ANNEX

Annex 1

Climate Change.

Intervention Logic	Verifiable Indicator	Means of Verification	Assumption
Development Objective: People and environment of Kiribati adapting to the effects and mitigating the causes of climate change.			
Immediate Objective: By the year 2012 the government of Kiribati completed strategies and regulations on mitigation and adaptation.			
Environmental Outcomes			
1. Better adaptation through improved resilience and reduced vulnerabilities to the effects of climate change.	Number of adaptation activities planned and implemented at all levels, national and international	Reports, regional and international agreements, national programs and activities undertaken.	Availability and increase in external funding. Kiribati/Community still want to adapt.
2. Effective mitigation of the causes of Climate Change and use of clean and efficient energy sources (solar energy sources)	GHG emissions maintained below national targets. Number of energy efficiency initiatives	2nd National Communication, national reports. Research documents, renewal energy systems.	Availability of activity, data, methodology from IPCC and training. Funding availability and government commitment to mitigation.
3. Inclusion of climate change science in national education curriculum	Number of primary and secondary schools teaching climate change in their science and social science subjects.	School reports from all levels of education National education curriculum.	% increase of knowledgeable people of the science of climate change and implement adaptation and mitigation activities,
Capacity Output:			
1.1 Improved understanding of climate change across sectors of the population.	Increase use of climate change information to guide decision-making at community and government levels.	Reports, documents, surveys and result of academic research being conducted on climate change in Kiribati.	IPCC continues to exist and KMS continues to provide scientific data and information. Strong government support for climate change initiatives.
1.2 Enhanced capacity at all levels to undertake V&A Assessments prioritize and implement adaptation actions	NAPA completed and endorsed by cabinet. No of stakeholders trained in V&A Assessments and no. of adaptation projects implemented. Meteorological information and data available	Reports, document, surveys. NAPA documents Adaptation project reports.	Funding availability. Strong government and stakeholder support for climate change initiatives.
1.3 Enhance capacity to undertake research and conduct systematic observation in areas of meteorology, hydrology and climatology		Research reports 2nd National Communication Meteorology Dept Reports Water Dept Reports	Funding availability. Strong government support and availability of data and information on climate change

Capacity Development Actions.	Responsible Agency
(Capacity output. 1.1 Improved understanding of Climate Change across sectors of population.	
1.1.1 Develop effective awareness through radio programs.	Environment Division at the Ministry of Environment, Lands and Agriculture Development (MELAD)
1.1.2 Formulate suitable curriculum for use in all levels of education throughout Kiribati.	Curriculum Development and Resource Centre at the Ministry of Education and Sport Development, Environment Division and Environment Division.

1.1.3 Organize Training workshops for local communities and all stakeholders	Environment Division. Island Councils, Churches, Unimwane and recognized organizations in communities including drama groups,
(Capacity output 1.2 Enhance capacity at all levels to undertake V&A assessments, prioritize and implement adaptation actions)	
1.2.1 Training and up skilling of two Meteorological/Environment staff.	Meteorological Division , Environmental Division and P.S.Office
1.2.2. Reviewing regulations EIA regulations and incorporate climate change considerations.	Attorney General Office, Environment Division (MELAD) and Meteorological Division
1.2.4. Purchase equipment for Meteorological Division.	Meteorological Division, Ministry of Finance and Planning Office/Donors
1.2.5. Implement Vulnerable &Adaptation (V&A) projects.	Environment Division (MELAD) Island Council and local stakeholders
(Capacity Output 1.3. Enhance capacity to undertake research and conduct systematic observation in the areas of meteorology, hydrology and climatology.)	
1.3.1. Invite expert to organize training workshops for MET officers and undertake research studies in meteorology, hydrology and climatology. 1.3.2. Disseminate data and information on meteorology. Hydrology and climatology to all schools in the country (Kiribati).	Meteorological Division. Environment Division and PSD at the Office of the Beretitenti. Meteorological Division, CDRC at the Ministry of Education and Island Councils through MISA.
(Capacity Output 2.1 Enhance capacity to plan and to undertake inventories of Green House Gas Emissions technology Assessments scenarios development.)	
2.1.1 Organize training workshop on the Assessment of GHG Emissions Technology for MET and ECD Staff. 2.1.2 Invite expert to set-up plans for the assessment of GHG Emissions.	Environment and Conservation Division and Meteorological Division.
(*Capacity Output 2.2 Strengthened Capacity to prepare for natural disasters including cyclone and drought and carry out disaster risk management.)*	

2.2.1. Improve management efficiency of coastal areas on the island. 2.2.2. Involve local communities in the process of coastal management activities and in making decisions on coastal protection. 2.2.3. Establish a Disaster Unit in the Environment Conservation Division in collaboration with Public Work Department. 2.2.4. Improve water systems and establish sufficient water reservoirs on the islands.	Environment Conservation Division. Island Councils and Local communities. Environment Conservation Division, Agricultural Division, Local communities and Public Works Department. Environment and Conservation Division, Public Works Development and Local Government Unit at MISA. Public Works Department (PUB), Island Council and Local Communities.
(Capacity Output 2.3 National government increase level of support for Renewal Energy (RE) initiatives and programs and national stakeholder have increased capacity to adopt and maintain clean and RE technology.	
2.3.1.Increased budgetary allocation to the Ministry concerned for developing RE initiatives by the local communities. 2.3.2.Promote utility of solar energy and alternative renewable energy through written media and radio programs, 2.3.3 Organize training workshops for local	The Ministry of Communications, Transport and Tourism. Kiribati Solar Company, Environment and Conservation Division at MELAD and Broadcasting and Printery Authority.
communities on the use of renewable energy. 2.3.4 Demonstrate use of new solar technology (for cooking, lighting and etc) to the public. .	Kiribati Solar Company, Environment and Conservation Division As above.
(Capacity Output 2.4 Enhance capacity to adopt and implement practices and technologies that are energy efficient.)	
2.4.1. Encourage members of the local communities to adapt themselves to new practices and environment through series of consultations and training workshops.	The Office of Te Beretitenti, Solar Energy Company, Environment and Conservation Division and Island Councils (MISA)

Annex 2.

Biodiversity Conservation

Intervention Logic	**Verifiable Indicator**	**Means of Verification**	**Assumption**
Development Objective: The people of Kiribati protect biodiversity and the natural resources used in sustainable manner. .National Development goals achieved through effective environment protection and good management on environment.			
Immediate Objective: Eight marine protected areas and terrestrial conservation areas established and enforcement of conservation legislation on the outer island enforced in 2012. Conservation of biological diversity improved through strengthened capacity at all levels.			

Environmental Outcomes			
1.Marine biodiversity improved, protected and used sustainably	% increase in the numbers of MPA established in 2012	Fisheries Annual Report And Implementation report on MPAs in Kiritimati.	Community will help to maintain MPAs. Revenue increased from fishing licence fee..
2.Coastal erosion and loss of biodiversity minimized.	% increase in coastal areas protected and 6 conservation areas established in the country.	Lands management reports. Number of reclaimed areas occupied and number of coastal plants/tress planted.	Local communities are involved in management planning and participate in replanting programs.
3.Water resource maintained and protected	Increased number of water storage.. Reduction in water-borne diseases.	PUB annual report. Report on chemical used for water purification.	Availability of Water tanks., more water catchments are built for public use.
4.Invasive species prevented, controlled and eradicated.	Number and names of new species being detected and eradicated.	Wildlife Annual Report Findings of scientific research conducted.	Availability of eradicating tools. Increase public awareness program
5.Culturally and commercially important plant species protected and populations increasing.	% increase in types and numbers of species conserved through ex-situ and in-situ conversation.	Agriculture Report, DSAP and NBSAP Reports and strategies.	Increase training opportunities for local communities on importance of plants and replanting endangered species.
Capacity Output 1.1Government and stakeholders have the capacity to identify, plan and manage marine protected areas.	3 marine protected areas established in Kiritimati and 5 in Kiribati including the Phoenix islands. Legislation for Marine Protected Areas enforced.	Fisheries reports, marine document for Kiribati and Finding from marine scientific surveys conducted.	Budgetary allocation increased and overseas funding is available. Support from local community available.
2.1 Government and local communities have the capacity to protect coastlines and identify, plan and manage terrestrial protected areas.	3 conservation areas established in Kiritimati and 5 in the Gilbert and Phoenix groups	Annual progressive report of Land Division and Environment and Conservation	Budgetary allocation increased. Improve understanding of local community on the important of conservation areas.

3.1Enhance capacity to manage and protect water catchments, maintain water quality, improve storage facility and use.	Increase number of water catchment on Tarawa and a number of wells being constructed on the islands.	Report from Water and Sanitation Division.	More officers to undertake deeper studies on hydrology. People are getting better water quality and have easy access to main water supply.
4.1 Capacity developed and strengthened at all levels to control and eradicate invasive alien species.	Number of invasive alien species in the country decreased.	Results of scientific survey on livestock in the country.Report from the Agriculture Division	Appropriate legislation on importation of alien animal ispecies is in place and enforced.
5.1 Enhance capacity at all levels for the protection and sustainable use of culturally and commercially important plant species.	By the year 2010. 2 botanical gardens established in Kiritimati and two on Tarawa.	Report on medicinal plants and herbs produced by Maurin Kiribati Association.	People plant medicinal plants in their backyard and surroundings. Provide shade and greenish ground cover for barren places.

Capacity Development Actions	**Responsible Agency**
(Capacity Output1.1 Government and stakeholders have the capacity to identify, plan and manage marine protected areas.	
1.1.1 Conduct workshops for local communities on the importance of Marine Protected Areas (MPAs)	Fisheries Division, Environment and Conservation Division, The Ministry of the Line and Phoenix Development and Island Councils.
1.1.2 Establish a working group to produce materials on marine resource suitable for all levels of schools and community at large.	Curriculum Development and Resouce Centre (CDRC), Environment and Conservation Division.

1.1.3 Design and launch media campaign based on the importance of MPAs	Broadcast and Publication Authority (BPA), Environment and Conservation Division and Newair FM 89 and other newspapers in the country.
1.1.4 Establish Marine Protected Areas in the Line islands and the Gilbert Group.	Fisheries Division, Environment and Conservation Division and Island Council through MISA.
(*Capacity Output 2.1 Government and local communities have the capacity to protect coastlines and identify, plan and manage terrestrial protected areas.)*	
2.1.1. Translation of suitable material to local vernacular on the importance of coastal protection ,	Ministry of Education and Ministry of Environment, Lands and Agricultural Development.
2.1.2 Create a website on Biodiversity (Clearing House Mechanism)	TSKL . Environment and Conservation Division, (MELAD)
2.1.3 Designate and Establish Conservation Areas on Kiritimati and Gilbert group	Ministry of Environment, Land and Agricultural Development and Kiritimati Island Council.
(Capacity Output 3.1 Enhance capacity to manage and protect water catchments, maintain water quality and to improve storage facility and use.)	
3.1.1 Train local communities on the construction of better protected wells for use at home and in the community. 3.1.2 Establish working team in the community to look after water supply and maintain good quality of drinking water for the community 3.1.3 Construction of water catchment on all islands.	Water and Sanitataion Division, Public Work Department, Environment and Conservation Division at MELAD. Local Community, Ministry of Internal and Social Affairs, Ministry of Environment and Conservation Division. Local Community, PWD and Environment and Conservation Division.

(Capacity Output 4.1Capacity developed and strengthened at all levels to control and eradicate invasive alien species.)	
4.1.1 Review legislation on the importation of alien species and quarantine policy. 4.1.2. Purchase suitable tools for eradication activities. 4.1.3. Increase budgetary allocations for the control of alien species invading the country. 4.1.4. Produce fact-sheets on alien species present on the island and general information on their lives and adverse impacts on the biodiversity.	AG's Office, Envrionement and Conservation Division. Agricultural Division and Fisheries Division Environment and Conservation Division, Agricultural Division , Fisheries Division and Shipyard Boiler shop. Ministry of Finance and Economic Planning, Environment and Conservation Division Environment and Conservation Division. Fisheriea and Agriculture Division.

(Capacity Output 5.1 Enhance capacity at all levels for the protection and sustainable use of culturally and commercial important plant species.)	
5.1.1. Conduct research on the number of trees, plants, herbs and shrubs that have cultural and commercial values to the community. 5.1.2. Establish nurseries for commercially and culturally important plants and trees on the islands 5.1.3. Organize four (4) Training workshops on traditional conservation skills/practices. 5.1.4. Produce booklet on traditional conservation methods. 5.1.5. Replant endangered species of medicinal and commercially important plants.	Agriculture Division, Environment and Conservation Division Agriculture Division, Environment and Conservation Division and Island Councils Agriculture Division. Environment and Conservation Division. Curriculum Development and Resource Centre, Environment and Conservation Division. Maurin Kiribati Organisation, Agriculture Division and Environment and Conservation Division.

Annex 3

Land Degradation

Intervention Logic	**Measurable Indicators**	**Means of Verification**	**Assumption**
Development Objective: The people live a better life through good management of water resources and wise use of land.			
Immediate Objective; Establish management mechanism for the protection of water and land, The wise use of land resources attained through collaborative enforcement of the existing regulations.			
Environment Outcomes			

1.Coastline are stable and protected	Reports and no. of complaints launched from affected victims.	Report on community Consultations, workshops and mwaneaba meetings	% of sea level rise decreased and protection of shoreline improved
2.Pollution minimized, controlled and good quality of water maintained	Less frequency of water-borne diseases. Two land filled waste dump site established on Kiritimati.	Report on Public Health Services, Water and sanitation report	Members of the public develop capacity on sustainable use and protection of water

3.Sustainable agriculture achieved and soil fertility improved.	% increased on home mixed garden and no. of barren areas reduced.	Report of Taiwan Mission Home Mixed Garden and Agriculture	More vegetable used in private houses and boarding schools.
4.Operational land system and policy are put in place.	Proper drainage system developed place and use of imported fertiliser abandoned.	% of homes mixed garden use organic manure for fertilizer .	People appreciate inclusion of vegetables as additional stable food.
5.People and biodiversity are able to mitigate and adapt to the effects of draught**.**	No. of dependants on imported stuff reduced and sustainable use of the resource is in practice..	Report of Town Planning Authority and Statistic record on importation	The effects of draught is lessen through adaptation and mitigation..
Capacity Outputs.			
1.1 Government and stakeholders having improved capacity to protect coastlines and use them in a way that minimizes coastal erosion.	No. of reclaimed areas increased. A number of coastal trees and plants planted.	Annual report from Land and Survey Division. Agriculture Report on the development of replanting program.	Coastline protected and erosion minimized.
2.1 Enhanced capacity to manage waste and minimize pollution of land and water resources.	Waste and water resource management established on the islands.	Annual report from Island Councils and Water and Sanitation Unit.	The people have the capacity to manage water resource and waste.
3.1 Capacity developed and strengthened to promote and implement sustainable agriculture using modern and traditional technology.	No. of home mixed garden increased., importation of fertilizer ceased and the use of organic fertilizer is encouraged.	Agriculture Annual Report. Custom annual report on imported chemical.	The people use modern and traditional technology for sustainable agriculture.
4.1 Capacity of Government and stakeholders strengthened to plan and use land for development purposes in a sustainable way.	No. of waste land decreased, replanting programs for coastal trees and plants is progressing.	Agriculture Annual Report and DSAP Quarterly report.	The land is used sustainably and will be more productive.
5.1 Strengthen capacity at all levels to prepare for and manage drought situations.	10 local communities established their own disaster commissions.	Island Council annual report and annual report from the Planning Office.	The people are able to manage their own affairs during a severe draught.
Capacity Development Actions. *(Capacity Output 1.1 Government and stakeholders having improved capacity to protect coastlines and use them in a way that minimizes coastal erosion)*			
1.1.1 Replant endangered species of important plants on coastal areas.		Agricultural Division, Environment and Conservation Division.	
1.1.2 Organise training workshop waste management on the islands.		Environment and Conservation Division, Technical Drawing Section and Island Councils.	
1.1.3 Provide standard design for the construction of		Environment and Conservation Division, Technical	

private seawalls on the islands.	Drawing Division
(Capacity Output 2.1 Enhance capacity to manage waste and minimize pollution of land and water resources)	
.2.1.1 Establish management mechanism in villages to take control over waste and human harmful activities.	Local Communities, Environment and Conservation Division.
2.1.2 Provide a more hygienic designed wells for underground drinking water.	Technical Drawing Division
.2.1.3 Organise a public demonstration for a new design for underground drinking water.	Technical Drawing Division, Island Councils and Environment and Conservation Division.
(*Capacity Output 3.1 Government and stakeholders have the capacity to protect coastline and identify, plan and manage terrestrial protected areas)*	
3.1.1 Training workshop on the importance of Land conservation areas.	Agricultural Division, Environment and Conservation Division
3.1.2 Establish Conservation areas at suitable sites on the islands	Agricultural Division. Island Councils and Environment and Conservation Division
3.1.3 Establish a management group to control all activities for the Conservation Area.	Environment and Conservation Division, Local Community and Agricultural Division.
3.1.4 Seek for foreign aid to meet cost of equipment and initial cost that will incur in the initial stage of the project.	National Government, Environment and Conservation Division and Planning Office.
(Capacity Output 4.1 Capacity developed and strengthened at all levels to prevent, control and eradicate invasive alien species)	
4.1.1 Review and strengthen existing policy on the control of importation of alien species.	Quarantine Division, Custom Division and Environment and Conservation Division.
4.1.2 Recruit TA to provide voluntarily assistance on eradication methodology.	Foreign Affairs Office and Environment and Conservation Division.
4.1.3 Seek foreign aid to pay for the cost of proper tools to be used during eradication.	Foreign Affairs Office and Environment and Conservation Division
4.1.4 Recruit a short term TA to assist identifying alien species and their possible adverse impact on land and sea.	Agricultural Division and Environment and Conservation Division.
(Capacity Output 5.1 Enhance capacity at all levels for the protection and sustainable use of culturally and commercially important plant species.)	
5.1.1 Document the un-documented oral traditions that contain traditional conservation skills and cultivation methods.	Cultural Division, Environment and Conservation Division and Local communities.
5.1.2 Identify trees, plants, herbs and shrubs that are endangered but are culturally and commercially important.	Local Communities, Cultural Division and Agricultural Division.
5.1.3 Organise a three days workshop focused on the revival of important plant species that are extinct or becoming extinct.	Agricultural Division, Environment and Conservation Division
5.1.4 Seek for foreign aid funds for the workshop - transport and stationary.	Foreign Affairs, Planning Office and Environment and Conservation Division.