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## **NATIONALASSESSMENT REPORT**

On the Implementation of the BPOA, MSI+5, MDGs and Rio+20 for  
Sustainable Development in **KIRIBATI**

*Prepared for*

**MINISTRY OF FINANCE AND ECONOMIC  
DEVELOPMENT (MFED)**

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## Acronyms and abbreviations

AUSAID	Australian Agency for International Development Assistance
BPOA	Barbados Programme of Action
CAP	Chapter
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CLPB	Central Land Planning Board
Cm	Centimeter
CO <sub>2</sub>	Carbon dioxide
ECD	Environment Conservative Division
EPU	Energy Planning Unit
EU	European Union
GCCA	Global Climate Change Alliance
GLUPS	Ground level unclosed projections
ICC	International Climate Change
ICCAI	International Climate Change Adaptation Initiative
IMF	International Monetary Fund
KAP	Kiribati Adaptation Project
KCCM	Kiribati Country Coordination Mechanism
KIRIWATSAN 1	Another name for Outer Islands Water & Sanitation Project Phase 1
KIT	Kiribati Institute of Technology
KNCC	Kiribati National Council of Churches
KSEC	Kiribati Solar Energy Company
KW	Kilowatt
KWH	Kilowatt Hour
Mauri	Kiribati word for “good health”
MCTTD	Ministry of Transport & Tourism Development
MEA	Multi-Environmental Assessment
MDG	Millennium Development Goals
MPWU	Ministry of Public Works & Utilities
MELAD	Ministry of Environment, Lands and Agriculture Development
MFMRD	Ministry of Fisheries and Marine Resources Development
MHMS	Ministry of Health and Medical Services
MISA	Ministry of Internal and Social Affairs
MoE	Ministry of Education
MRF	Material Recycling Facility
MSI+5	Five Year Mauritius Strategy for Implementation
NAPA	National Adaptation Program of Action
NGOs	Non-Government Organizations
NZAid	New Zealand Aid
ODF	Open Defecation Free
OTEC	Ocean Thermal Energy Conversion
PPTA	Project Preparatory Technical Assistance
PUB	Public Utilities Board
PV	Photo-voltaic
Rio+20	United Nations Conferences on Sustainable Development

SOPAC	South Pacific Applied Geoscience Commission
SPREP	Secretariat of the Pacific Regional Environment Programme
STSISP	South Tarawa Sanitation Improvement Sector Project
Te Beretitenti	President of Kiribati
TVET	Technical Vocational Education and Training
UNCSD	United Nations Conference on Sustainable Development
UNDP	United Nations Development Program
UNFPA	United Nations Fund for Population
UNICEF	United Nations Children's Fund
μs	Symbol for the microsecond
USAid	United States Aid
WB	World Bank
WASH	Water, Sanitation & Hygiene
WEU	Water Engineering Unit
WHO	World Health Organization

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## 1 Introduction

This National Assessment Report is the outcome of the stocktaking carried out in May to June 2013 by two local consultants, commissioned by the Ministry of Finance and Economic Development. The stocktaking focused on the programs and implementation requirements identified in the BPOA, MSI+5, MDGs and Rio+20 in terms of how as well as the extent to which they have been adopted and implemented by Kiribati. These programs include but are not limited to the following:

- (a) climate change and sea level rise;
- (b) natural and environmental disasters;
- (c) management of wastes;
- (d) coastal and marine resources;
- (e) freshwater resources;
- (f) land resources;
- (g) energy resources;
- (h) tourism, biodiversity;
- (i) transportation and communication;
- (j) Human Resource Development; and
- (k) Health.

The scope of the stocktaking covers the period 2005 to date (or June 2013) and it pays particular attention to national policies, plans, laws and regulations, and other measures that have been adopted, influenced, actually developed and implemented by the country in the spirit of the above mentioned programs. Implementation issues/gaps, emerging challenges/issues to the sustainable development of Kiribati, national monitoring & coordination mechanisms for development assistance/programs and Kiribati's post 2015 sustainable development priorities were also covered in the assessment.

The stocktaking involved desk reviews and consultations with key stakeholders at the national level. The desk reviews were based on sector specific reports and national reports on Sustainable Development. Key documents reviewed include national strategies, action plans and policy documents from all economic sectors relevance to Sustainable Development and the UNCSD. As part of the stocktaking, a three day workshop was also conducted and was attended by Government ministries' senior officials and representatives from the UN Joint Presence office in Kiribati. Desk review findings were also validated by the workshop.

Analysis of the programs' implementation status was based on six progress rating assessment criteria and the individual programs' priority actions or prescribed implementation requirements. This method is apparently qualitative but to facilitate the assessment, the program's progress rating is computed or estimated by dividing the number of completed

prescribed actions (or implementation requirements) by the total number of actions prescribed for the program and then multiplied by 100 to get the progress rating in percentage. Fuller details of these progress rating assessment criteria is provided in annex2.

The report structure follows the UN Cooperation in Kiribati standard structure with seven main sections: *Section 2* has two parts: (a) the first part presents the country context in terms of its geographical characteristics, population and demography, political and economic situations; whilst (b) the second part presents the global programs and national framework for sustainable development. *Section 3* presents Kiribati's progress in connection with the implementation of the Global Sustainable Development Programs, including National Monitoring & Coordination Mechanisms for Overseas Development Assistance/Programs. *Section 4* presents the Emerging Challenges/Issues to sustainable development whilst *Section 5* presents Kiribati's post-2015 Sustainable Development Priorities. The report's Conclusion and Recommendations are covered under *Section 6 and Section 7*, respectively.

## 2 Background

### (a) Country Context

**Geographical Characteristics:** Kiribati is a remote Pacific nation made up of 33 low-lying atolls widely dispersed (21 inhabited). These islands are scattered over a total land area of only 811 sq km, but spread over 3.5 million sq km. With a maximum height of 3 to 4 meters above sea level, the island atolls are highly vulnerable to the potential impacts of rising sea level. This is compounded by its remoteness, scarcity of fresh water, limited vegetation, costly and difficult transport and communications. Fortunately, Kiribati generally escapes the major climate change-related threat of cyclones due to its specific geographic location that spans the equatorial belt. The average mean temperature is 29 degrees centigrade and rainfall varies from 1,000 millimeters per year in the South to 3,000 millimeters per year in the northern group. Significantly Kiribati suffers coastal erosion and lack of fresh water (DRMP, 2012).

**Population and Demography:** Kiribati population was estimated at 103,058 in 2010 with a marginal annual growth rate of 2.2% and urban growth rate of 4.4%, with life expectancy at birth 63.2 years, and under five mortality at 49 deaths per 1000 live births, a crude birth rate of 31.1 and a crude death rate of 7.8 per 1,000 population. Infant mortality rate (per 1,000 live births) in the same year was calculated at 45. The latest National Census (2010) indicates that 36% of the total population was under 15 years, 79% fell between 15 and 59 years and the remaining 5% were 61 years and older (National Statistics Office, 2010).

**Table 1. Key Development Indicators, Kiribati**

Indicator	Measure	Year
Human development index	0.5	2006
Adult literacy rate (%)	92.0	2005
Proportion of people living below national poverty line (%)	50.0	2006
Total health expenditure (% of GDP)	12.5	2008
Literacy rate (%)	91	2005
Life expectancy at birth (years)	61.0	2007
Crude birth rate (per 1,000 people)	10.7	2010



Crude death rate (per 1,000 people)	6.3	2010
Infant mortality rate (per 1,000 live births)	47.0	2006
Number of maternal deaths in one year*	3	2011

Source: *MHMS (2011)*.

**Political Context:** Kiribati is a democratic and stable country which attained constitutional independence from the United Kingdom in July 1979. Kiribati has a two-tier system of government at central and local levels. The central Government (Maneaba ni Maungatabu) consists of 44 democratically elected members, led by the President. The attorney general holds a seat ex officio, and the Rabi Island Council nominates one additional member. The reason is that although Rabi Island is part of Fiji territory, many of the residents were originally from Kiribati's Banaba Island. The President, vested with executive authority by the constitution, is limited to three four-year terms. The local level consists of 23 elected and appointed councils, 3 in urban areas and 20 in the outer islands. Kiribati has enjoyed the political stability since its independence in 1979.

The policy statements of the present government, when first elected up until now, have been translated into the Kiribati Development Plans for 2008-2011 and 2012 – 2015, respectively. As explained later in the report, the country's 2005 – 2015 national framework for sustainable development has been based on these national development plans.

**Economic Performance:** In 2012 Kiribati was ranked 122 on the Human Development Index, one of the world's poorest and least developed countries, which faces significant challenges to achieve sustainable development. Gross Domestic Product (GDP) stands at €109mm (2010), expanded by an estimated 2.3% per annum. GDP per capita is one of the lowest of the Parties to the Nauru Agreement (PNA) nations at €1,047. The country still remains vulnerable to wider economic constraints including global economic downturns as well as an increasing population causing general reduction in GDP per capita. Kiribati development is constrained by its small size, remoteness and geographical fragmentation, infertile soil, limited exploitable resources and rapid population growth (KCCM, 2012; IMF, 2013).

Kiribati major income are: earnings from the Revenue Equalisation Reserve Fund (RERF assets stood at about 3½ times of GDP in 2012); sale of fishing license contributes about 29% of GDP; tourism provides over 15% of GDP; remittance from Kiribati citizens employed on foreign fleets about 15% of GDP; export earnings mainly from copra contributes 4 per cent of GDP; Foreign financial aid from the EU, UK, US, Japan, Australia, New Zealand, Canada, UN agencies, and Taiwan accounts for 20-25% of GDP; fishing sector contributes around 10% of GDP. Fishing is also an important subsistence activity, with over 80 % of households involved in fishing. Fish consumption per capita per year is high by global and Pacific standards (between 72 kg and 207 kg for the entire country) (IMF, 2013).

## (b) National Programs for Sustainable Development

### Barbados Programme of Action (BPOA)

Following the United Nations Conference on Environment and Development (UNCED), held in Riode Janeiro, Brazil in 1992, a special meeting referred to as The United Nations Conference on the Sustainable Development of Small Island States (SIDS), was convened in Bridgetown, Barbados,

from 25 April- 6 May 1994. The UN General Assembly (UNGA) Resolution 47/189, which established the Conference, set a number of objectives including, *inter alia*, a review of current trends in the socio-economic development of Small Islands Developing States (SIDS); defining a number of specific vulnerabilities of SIDS and specific actions and policies relating to environmental and development planning to be undertaken by these States, with help from the international community; as well as identifying elements that SIDS need to include in medium and long-term sustainable development plans. The Conference produced and adopted the Barbados Programme of Action (BPOA) for the Sustainable Development of Small Island Development States and the Barbados Declaration. The BPOA priority areas and specific action necessary for addressing the special challenges faced by Kiribati like other SIDS include the following:

- climate change and sea- level rise
- natural and environmental disasters
- management of wastes
- coastal and marine resources
- freshwater resources
- land resources
- energy resources
- tourism resources
- biodiversity resources
- national institutions and administrative capacity
- regional institutions and technical cooperation
- transport and communication
- science and technology
- human resource development

In addition, the BPOA identified cross-sectoral areas requiring attention: capacity building; institutional development at the national, regional and international levels; cooperation in the transfer of environmentally sound technologies; trade and economic diversification; and finance ([en.wikipedia.org/wiki/Barbados\\_Programme\\_of\\_Action](http://en.wikipedia.org/wiki/Barbados_Programme_of_Action)).

### **Mauritius Strategy for Implementation (MSI+5)**

The Mauritius Strategy for Implementation was established by UN High Level International Meeting held in Port Louis, Mauritius from 10 to 15 January 2005. At the UN high level segment of the 65<sup>th</sup> Session of the UN General Assembly on 24-25 September 2010, Members States agreed to undertake a 5-year review of the Mauritius Strategy (MSI) for the Further Implementation of the [Barbados Programme of Action](#) for the Sustainable Development of SIDS (BPOA), pursuant to UN General Assembly Resolutions 63/213 (UNCSD, 1994; 2010).

The MSI+5 set forth actions and strategies in 19 priority areas, which build on the original 14 thematic areas of BPOA. MSI+5 thematic areas include trade, sustainable production and consumption (as called for by the JPOI), health, knowledge management, and culture – all of which are intended to support SIDS in achieving internationally agreed targets and goals, such as the Millennium Development Goals (MDGs). In line with the MDGs, the MSI framework puts in place measures to build resilience in SIDS (UNCSD, 2010).

### **Millennium Development Goals (MDG's)**

The Millennium Development Goals (MDGs) are eight time bound international development goals that were officially established following the Millennium Summit of the United Nations in

2000, following the adoption of the United Nations Millennium Declaration. The goals which should be achieved by the year 2015 are:

1. Eradicating *extreme poverty and hunger*;
2. Achieving *universal primary education*;
3. Promoting *gender equality and empowering women*;
4. Reducing *child mortality rates*;
5. Improving *maternal health*;
6. Combating *HIV/AIDS, malaria, and other diseases*;
7. Ensuring environmental *sustainability* and
8. Developing a *global partnership for development*.

*Source: UNCSD (2000).*

### **UNCSD (also known as Rio+20)**

UNCSD (2012) provides that the United Nations Conference on Sustainable Development (UNCSD), also known as Rio+20 or Earth Summit 2012 was the third international conference on sustainable development aimed at reconciling the economic and environmental goals of the global community. At the Rio+20 Conference held in Brazil from 20-22 June 2012, participants (World Leaders and representatives), agreed that in order to reduce poverty, key priority areas for action are:

1. decent jobs;
2. energy, sustainable cities;
3. food security;
4. water and sustainable agriculture; and
5. oceans and disaster readiness.

### **Kiribati Development Plans (KDPs)**

Following independence in July 1979, Kiribati has identified its development priorities in a number of planning instruments developed through national consultative processes. Among these are the National Medium-Term Development Strategy (MTDS: 2001-2003); National Development Strategy (NDS: 2004-2007); KDP (2008-2011); and KDP (2012-2015). These planning instruments identify those sectors critical for long term policy actions and investments and in varying degrees serve to focus sector specific strategies and plans.

*The KDP 2008-2011* was strongly aligned with the Millennium Development Goals (MDGs) and the principles of the Mauritius Declaration (MSI+5) on small island states and the Pacific Plan. The KDP focused on six key priority areas namely; human resource development, economic growth and poverty reduction, health, environment, governance and infrastructure.

*The current KDP 2012-2015* with a theme – ‘Enhancing Economic Growth for Sustainable Development’ set out a strategy to invest in Kiribati’s main assets - its people and to transform the lives of I-Kiribati through further development of the economy and their capabilities. The theme reflects the Government’s policy direction, and the vision of “A vibrant economy for the people of Kiribati” and its ultimate goal of pursuing economic growth. The KDP 2012-2015 is an expansion of the previous KDP (2008 – 2011) priorities. To note, climate change and sea level rise is now the focus of the Government of Kiribati (MFED, 2012).

Despite these early efforts to set national sustainable development frameworks, the country continues to advance without the benefit of an elaborated comprehensive policy and strategy to guide its sustainable development. The previous and current KDPs reflect priorities of the

Global Development Agendas which are further translated into Ministries Operational Plans (MOP).

Ministries operational plans, strategies and policies specific to ministries own sectoral priorities provide the operational direction and the framework for national sustainable development actions.

Additional to the Global and Regional Development Agendas, Kiribati has signed on to a series of regional and multi-lateral agreements associated with the sustainable development agenda as it relates to the primary economic sectors, including the Pacific Plan. In relation to specific Multi-lateral Environmental Agreements (MEAs), Kiribati is party to the global and regional Multilateral Environmental Agreements. MEAs, whether global or regional, make obligations of participating states and require the taking of specific measures for compliance. Among these requirements include:

- (a)enactment of implementing legislation;
- (b)establishment of specific enabling administrative/institutional arrangements;
- (c)public awareness and education;
- (d)environmental management measures; and
- (e)regulation and enforcement.

## 3 progress on Sustainable Development+ Implementation Issues

### A) Progress & Implementation Gaps/Issues

Since its Adoption of the Barbados Plan of Action, as well as other development plans and programmes geared towards achieving sustainable development, Kiribati has initiated a set of comprehensive national plans, policies and strategies, as well as participated in various regional and international initiatives with sustainable development as the focus. The list of international and regional accessions and ratifications above bears testimony to Kiribati's long term commitment to the sustainable development agenda. At the national level, Government through its ministries, public organizations, non-government organizations, communities and development partners, has been fully committed to a path of Sustainable Development. The preceding paragraphs discussed and summarized progress to date and the gaps limiting implementation of the sustainable development agendas.

**Climate Change and sea level rise:** According to the South Tarawa Study (2012), climate change and sea level rise have serious negative impact, such as:

- Coastal erosion
- Depletion of marine resources
- Lack of water and poor water quality

The MELAD is the leading ministry to implement activities in relation t the reduction and elimination of the negative impact of climate change and sea level rise on the people of Kiribati. Other key players in the sector include MPWU, MELAD, MISA, MFMRD, MCTTD and MOE.

*In line with the requirement for the ratification of or accession to the United Nations Framework Convention on Climate Change, Montreal Protocol on Substances that deplete the ozone layer and other related legal instruments, Kiribati's actions include:*

- i) Kiribati accessed to the Vienna Convention on 23 November 1992. In July 23, 1993, Kiribati accessed to the Montreal Protocol and entered into force on 30 July 2004. The Montreal Protocol is a mechanism for implementation of the Vienna Convention. It is a landmark international agreement designed to protect the stratospheric ozone layer and was originally signed in September 1987. The Montreal Protocol underwent several amendments and adjustments processes which were entered into force during the Meeting of the Parties between 1987 and 2002.  
([http://en.wikipedia.org/wiki/Vienna\\_Convention\\_for\\_the\\_Protection\\_of\\_the\\_Ozone\\_Layer](http://en.wikipedia.org/wiki/Vienna_Convention_for_the_Protection_of_the_Ozone_Layer))
- ii) Ratification of the UNFCCC on 7<sup>th</sup> February 1995. The Convention was agreed upon and adopted by the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, during its Fifth session, second part, held at New York from 30 April to 9 May 1992,
- iii) Endorsement of Kyoto Protocol to the UNFCCC on 7<sup>th</sup> September 2000. The Kyoto Protocol was adopted at the third session of the Conference of the Parties (COP 3) in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005. The detailed rules for the implementation of the Protocol were adopted at COP 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords." Its first commitment period started in 2008 and ended in 2012 (*unfccc.int* › Kyoto Protocol › Status of Ratification of KP). The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets,
- iv) Acceded to the Copenhagen Accord which was only noted by UNFCCC in February 2010. Recalling the 2009 Male' declaration as the founding document of the Climate Vulnerable Forum, created at the initiative of the Republic of Maldives, and the 2010 Ambo Declaration, agreed under the leadership of the second Forum chair, the Republic of Kiribati, (<http://daraint.org/2011/11/14/2748/climate-vulnerable-forum-declaration-adopted/#sthash.1rWiMvcY.dpuf>),
- iv) Adoption of the Ambo Declaration at the Tarawa Climate Change Conference on 10 November 2010. The Declaration calls for more and immediate action to be undertaken to address the causes and adverse impacts of climate change. The purpose of the conference was to support the initiative of the President of Kiribati, Anote Tong, to hold a consultative forum between vulnerable states and their partners with a view of creating an enabling environment for multi-party negotiations under the auspices of the UNFCCC. It was slated to be a non-legally-binding agreement between the nations to present at the larger international climate change summit, COP16 in Cancun, Mexico,
- v) Establishment of the National Framework on Climate Change and endorsement of the Climate Change Adaptation in Feb 2013 to replace the 2005 Climate Change Policy Statement and Strategy, and
- vi) Ratification of a Multilateral Agreements, including the International Climate Change Initiative (ICCAI) with Australia and the Global Climate Change Alliance (GCCA) with European Union. These are currently being implemented across the Pacific as regional projects (pers.comm.M.Foon, 2013).
- vii) Endorsement of the Pacific Island Framework for Action on Climate Change 2006 –2015 at the PIFACC Leaders meeting in 2006.

#### Progress Rating

Overall, the progress is very good given that over 60% of the work required have been implemented with some that are still ongoing and some in the pipeline for implementation.

#### Implementation Gaps/Issues:

- a) Kiribati needs to consider signing the following agreements: Doha Amendment to the Kyoto Protocol agreed by Kyoto Parties in 2012.

*In line with the requirement to monitor, survey and collection of data on climate change and sea level rise, actions undertaken include:*

- i) There were several studies conducted since 2005 on data collection on climate change and sea level rise which includes the following:
- South Pacific Sea Level and Climate Monitoring Project,
  - Pacific Climate Change Science Project,
  - Pacific Island Global Observation System Project, and
  - Kiribati Climate Risk Profile 2006

*In line with the requirement for the assessment of socio-economic impacts of climate change, climate variability and sea level rise, actions undertaken include:*

(i) Economic assessments of climate change impacts include the following:

- Economic impacts of Climate Change on Low Islands Tarawa Atoll, World Bank 2000,
- Economic Analysis of Adaptation to Climate Change, and its Application to KAP II, 2006, and
- Vulnerability assessments to the Fisheries Sector in the Pacific in 2012.

(ii) Social assessment of climate change impacts:

- Assessment of social responses and changes due to climate change impacts, 2007 – KAP I.
- Climate Change impacts on Children in the Pacific: Kiribati and Vanuatu – Technical Report of UNICEF – 2011.

#### Implementation Gaps/Issues

- More economic assessments are required on macro-economic sectors such as infrastructures, water, and related areas as it appears to be very limited since 2005 and to date.

*Formulation of comprehensive adjustment and mitigation policies for sea level rise in the context of integrated coastal area management*

There has not been any distinct and comprehensive policy in place already planned to address sea level rise and climate change impacts in the context of integrated coastal area management. However there were policies established that are in part (i.e. have sections or specific strategies) addressing sea level rise/climate change on coastal area management; and these include:

- (i) Climate Change Adaptation Policy and Strategy, 2004, and  
(ii) Kiribati Integrated Environment Policy, 2012.

*In line with the requirement for the development of adequate response strategies, adaptation policies and measures to minimize the impact of climate change, climate variability and sea level rise by mapping climate change vulnerable areas and developing computer-based information systems covering results of such surveys, assessments and observations, Kiribati has adopted the Adaptation Project which supported the following actions:*

- i) Planting of mangrove seedlings by local communities on selected islands that are prone to coastal erosion, including, Notoue and Buota in North Tarawa, Bonriki and Buota on South Tarawa and on the Outer Islands: Makin, Butaritari, Maiana, and Aranuka,  
ii) Rehabilitation of coastal roads (40 kilometres of main road) in South Tarawa to withstand rising sea levels and storm surges caused by climate change.

- iv) There is current work supported by the Kiribati Adaptation Project that will develop the National Coastal Management Plan to consider adequately sea level rise and climate change impacts.

#### Implementation Gaps/Issues

Due to expensive cost of satellite maps and more detailed LiDar maps – the work of devising and developing strategies to minimize impacts based on these computed maps of vulnerable areas has only been conducted for South Tarawa only through the work of KAP II. This work is called ***Integrated Coastal Hazard Risk Assessment***.

In addition to the above, there is also a comprehensive tool that has been developed for calculating (assessing) the likely impacts of Kiribati islands coastal areas from sea level rise and other climate change parameters. This tool, developed by NIWA, is called ***Coastal Calculator***.

*In line with the requirement to improve public and political understanding of the potential impacts of climate change, Kiribati has undertaken several activities with very limited budget;*

- i) Timely provision of briefing papers to any member of public students, researchers, civil servants, MPs, Ministers, cabinet, HE President, etc,
- ii) Production and updating of National Document containing all relevant information about Kiribati and its issues with Climate Change,
- iii) Setting up of national websites containing relevant information on climate change,
- iv) Setting up of Communication Strategy on Environment with a section on how to communicate Climate Change issues,
- v) Setting up of National Communication Plan at Office of President with a purpose to communicate relevant GoK Policies related to Climate Change,
- vi) KAP survey on knowledge and understanding of people on climate change and its impacts,
- vii) Inputs and participation in activities of the Parliament Climate Change Committee;
- viii) Outer-island Consultations,
- viv) Workshops ([www.environment.gov.ki](http://www.environment.gov.ki) and [www.climate.gov.ki](http://www.climate.gov.ki)).
  - Documentaries with support from Regional Organizations/Donor Agencies such as Ausaid, etc; and
  - Kiribati Events in overseas Conferences,
- x) Under the KAP, Kiribati has carried out risk based community consultation and training to build the capacity of communities to manage the effects of climate change and natural hazards by supporting the development and adoption of a national Coastal Management Policy as well as the development and implementation of locally managed Adaptation Plans,
- xi) In 2010, Kiribati hosted an International Conference in Tarawa to focus attention on the climate change impact in the Pacific,
- xii) In 2011, Kiribati conducted a National Summit on the Climate Change as part of the development of the National Framework on Climate Change, and
- xiii) Adoption of SPC whole of Island Approach where 2 pilot islands are being selected for integrated in CCA activities.

*In line with the requirement for the formulation of comprehensive strategies and measures (including preparation, facilitation and collection of information) on adaptation to climate change that would contribute to a better understanding of the range of issues associated with the development of methodologies to facilitate adequate adaptation to climate change, Kiribati has formulated national strategies on climate change with a view to contribute to development of better methods/approaches aimed at assisting adaptation. These responses are as follows:*

- i) There have been institutions formed by Government that deals with collection of information, assists understanding and develops methodologies and this includes:
  - the Climate Change Study Team (CCST) that further developed initially and now a higher level body has been formed within the OB called the Kiribati National Expert Group.
  - establishment of the Kiribati Joint Implementation Plan (KJIP) to guide the implementation of the Disaster Risk Management Plan and the National Framework for Climate Change and Climate Change Adaptation Framework.
- ii) Under the KAP, Kiribati has carried out risk based community consultation and training to build the capacity of communities to manage the effects of climate change and natural hazards by supporting the development and adoption of a national Coastal Management Policy, as well as the development and implementation of locally managed Adaptation Plans,
- iii) In 2010, Kiribati hosted an International Conference in Tarawa to focus attention on the climate change impact in the Pacific,
- iv) In 2011, Kiribati conducted a National Summit on the Climate Change as part of the development of the National Framework on Climate Change, and
- v) Adoption of SPC whole of Island Approach where 2 pilot islands have been selected for integrated in CCA activities.

The CCST has developed several national guidelines and methodologies e.g. National Methodology for Vulnerability Assessments, Guideline for Mainstreaming CC into operational plans, etc.

#### Progress Rating

Kiribati progress to mitigate and adapt to climate change and sea level rise is very good demonstrated by its heavy commitments and effort to address emerging issues as a result of the negative impact of climate change on our small atoll islands. Kiribati is in the right path towards achieving sustainable development, however its effort has been constraint by its geographical location (smallness and poor soil) and lack of resources, such as capacity in terms of natural resources, skills and funds. Although, Kiribati has approached climate change issues aggressively using various approaches and strategies, as well as attempting every possible avenues (providing education at all levels, purchasing lands overseas and protecting the land) to prepare for the worse. These actions clearly indicate government's concern and care for the future of its people.

#### Implementation Gaps/Issues

The findings of this stocktaking reflect gaps which include: a lot of data on climate change and sea level rise are existed and geo reference systems but fragmented across sectors. In addition, the recent efforts in addressing climate change and sea level rise risks are project oriented. The support from key stakeholders and the wider community to address risks was limited due to the fragmentation of relevant information and most communities do not access information.

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

Traditionally disaster arrangements have focused upon acute impact events invariably categorised as 'natural' and 'man made'. However, events which may be classified as chronic and result from social, economic and environmental pressures have the potential to be as damaging to sustainable development and community vulnerability as acute impact events. Acute impact events which threaten Kiribati arise both from 'natural' sources, such as inundation, drought, coastal erosion, plague or epidemic or from 'technical or manmade' sources, such as maritime disaster (including oil spill), fire or explosion, aircraft accidents etc or chronic events arising from social, economic and environmental factors which include declining



rural production, urbanization, HIV/AIDS, migration from islands, families with no access to land, deteriorating natural environment, waste management and pollution control (UNDP, 2010).

There are several key players working together to address natural and environment disasters, including MELAD, which is the leading ministry, the OB, MPWD, MFMD and MoE.

*In line with the requirement to establish and/or strengthen disaster preparedness and management institutions and policies, including building codes and regulatory and enforcement systems, in order to mitigate, prepare for and respond to the increasing range and frequency of natural and environmental disasters and promote early warning systems and facilities for the rapid dissemination of information and warnings, Kiribati's actions include:*

- i) Establishment of the Environment and Conservation Division (ECD) within the Ministry Environment and Agricultural Development (MELAD with the authorised mandate to safeguard the natural environment: air, water, land upon which life depends, and to protect human health.
- ii) Establishment of the Disaster Risk Management Unit (DRMU) within the Office of the President. The DRMU has the authorized mandate to deal with the natural and manmade disasters affecting the natural resources and environment.
- iii) Establishment of the Kiribati Joint Implementation Plan (KJIP) for Climate Change and Disaster Risk Management Plan (DRMP), which is currently in draft and scheduled to be completed by Sept 2013. This should be the implementation plan for National framework on Climate Change and DRMP (Office of the Beretitenti, 2013).
- iv) The 2007 amendments of the Environment Act 1999 has been approved by Parliament and adopted. The Act provides the mandate for the ECD, including the protection and replenishment of natural resources; protection of island biodiversity, minimize and control of waste and pollution, improve and expand quality and supply of ground water, monitor and control coastal erosion, mitigate urbanization in particular South Tarawa and on Kiritimati, and combating and controlling impacts of development origin.
- v) In 2002, Kiribati signed the Stockholm Convention on Persistent Organic Pollutants and ratified it in September, 2004. The Convention entered into force in Kiribati on December, 11, 2004. The objective of the Stockholm Convention was "to establish sound management of hazardous chemicals, and especially those 12 chemicals, namely aldrin, chlordane, DDT, dieldrin, dioxins, endrin, furans, hexachlorobenzene, heptachlor, mirex, PCBs and toxaphene which are known to cause serious human health effects such as cancer, birth defects and reproductive problems which are known to be spread through the world as a result of past uses (Fisheries, 2012).
- vi) Establishment of the National Disaster Risk Management Council whose members comprise all secretaries from government ministries, Meteorological Office, KANGO, and Kiribati Red Cross Society Secretary General. The Council is mandated to oversight the implementation of disaster activities, policy formulation and review of existing disaster policies and ensure timely report of disaster issues to the Minister, H.E. President (DRMP, 2012).
- vii) In January 2013, OB through its local partner on disaster management, the Kiribati Red Cross Society, has supported the placement of two emergency containers in Betio as part the disaster preparedness activities.

*In line with the requirement to strengthen the capacity of local broadcasting to assist remote rural and outer island communities within countries and among neighboring countries during disaster events, Kiribati actions and responses are, as follows:*

- i) The NDRMP provides an overarching, high level view of disaster risk management arrangements for Kiribati and facilitates the relationship between the National Disaster Management Act (revised 2012) and other national and international laws,
- ii) NDRMP strongly emphasizes and explicitly outlines that:
  - the DRM should involve every organizations (public or private, big or small) and individuals, with communities invariably taking the role of front line disaster risk managers. Hence a balance must be struck between resourcing and educating communities and government agencies.
  - irrespective of whether at a national or island level the management of disasters is a shared responsibility, including the Broadcasting and Publication Authority and other Media Services, each party contributing particular skills and knowledge which collectively when managed and coordinated can reduce vulnerabilities, empower communities and minimise damage to development.
  - Civil Society has a major role to play not only in response but participating in planning and risk reduction, with representation on key committees.
  - all government departments have some role to play in responding to disasters; however in regards to disaster risk reduction all departments play a significant role. Examples, the broadcasting and publication authority and other media services, land use planning, garbage collection and disposal, health education, coastal protection works, school curriculum that teaches gender equality, traditional coping mechanisms and community disaster management. These are part of the prevention infrastructure, and
  - humanitarian organisations particularly the accredited NGOs (Kiribati Red Cross Society) and other stakeholders play well-defined roles in disaster risk management, whilst private sector organisations have a major role as their services and resources can play a pivotal role in prevention, response and recovery activities. In particular, essential service providers such as electricity and communication providers are expected to ensure that they can maintain continuity of supply.

*In line with the requirement to integrate natural and environmental disaster policies into national development planning processes and encourage the development and implementation of public and private sector pre- and post-disaster recovery plans, drawing on the capacity of the United Nations Department of Humanitarian Affairs and bearing in mind the International Decade for Natural Disaster Reduction, Kiribati actions include:*

- i) Endorsement of the National Disaster Risk Management Plan in October 2012 which strongly aligned to the Hyogo Framework for Action that approved by World leaders following the Second World Conference on Disaster Reduction in January 2005 and draws on the National Disaster Act 1993, National Disaster Management Plan 1995 and the 2010 Draft National Disaster Plan. The NDRMP is also aligned to the Pacific Disaster Risk Reduction and Disaster Management Framework for Action 2005–2015, which was developed with a regional specific focus and endorsed by the Pacific Leaders in Madang, Papua New Guinea in June 2005 (Office of the Beretitenti, 2012),
- ii) Strengthening government and community capacity to manage the effects of climate change and natural hazards by supporting the development and adoption of a national Coastal Management Policy, as well as the development and implementation of locally managed Adaptation Plans,
- iii) Supporting and assisting the government in managing, monitoring and evaluating the Program, and
- iv) A shift from the focus of disaster management and response to the wider considerations of disaster risk reduction following the World Conference on Disaster Reduction in 2005.
- v) Kiribati President Anote Tong told The Associated Press on February 2013 that his Cabinet endorsed a plan to buy nearly 6,000 acres on Fiji's main island, Viti Levu. He said the

fertile land, being sold by a church group for about \$9.6 million, could provide an insurance policy for Kiribati's entire population of 103,000, however this plan may not be necessary to get everyone settle on the land (Field, 2013, [http://worldnews.nbcnews.com/\\_news/2012/03/09/10618829-as-sea-levels-rise-kiribati-eyes-6000-acres-in-fiji-as-new-home-for-103000-islanders?lite](http://worldnews.nbcnews.com/_news/2012/03/09/10618829-as-sea-levels-rise-kiribati-eyes-6000-acres-in-fiji-as-new-home-for-103000-islanders?lite)).

#### Progress Rating

Kiribati progress in addressing natural and environmental disasters was good, however many policies require early updating, such as the existing Disaster Act and most of the data and information on activities being implemented were not available. Some measures required are not in place, particularly emergency fund and proper materials and tools needed to assess the actual impact of natural and environmental disasters.

#### Implementation Gaps/Issues

- a) The absence of a national land use planning process that incorporates environmental risks criteria.
- b) The lack of technology that will guarantee adequate and timely forecasting information with a view to reducing economic loss from natural and technological hazards, and to minimize human suffering from natural and technological hazards.
- c) Existing legislations and political mechanisms on disaster should be aligned with the new NDRMP. However, many legislative initiatives and political mechanisms were still mainly focused on disaster management.

**Management of Waste:** The threat arising from poor solid waste management is made worse due mainly from the increase of waste generated from imported goods as a result of economic and urbanization growth, limited availability of suitable land for landfills which exacerbated by customary land tenure, remoteness resulting in high costs for returning recyclable wastes items making recycling operations not a viable option, lack of appropriate domestic legislations and national policies that deals with the importation of non-environmentally products such as plastics including poor enforcements and monitoring, limited institutional and human resources capacity and the lack of recycling operations available nationally for specific types of wastes items. Therefore the amount of solid waste that is generated is constantly increasing as well as the different types of waste in the waste stream (Kiribati, 2013, p.2).

The MELAD is responsible to look after management of waste with the support of other key partners, including MHMS, Local Councils, MPWD, MoE, MFRD, Office of Attorney General, MFED, Private Sector and NGOs.

*In line with the requirement for the development of incentives (fiscal and policy, etc.) to encourage imports with low waste or degradable waste content, Kiribati has undertaken the following actions:*

- i) Cabinet approval of the Kiribati Integrated Environment Policy (KIEP) in June 2013 which provides an 'enabling environment' for the development of incentives to encourage imports with low waste or degradable waste content.
- ii) Extend the scope of the wastes recycling (PET bottles, batteries, and brass) to cover also e-waste and bulky wastes. This will impose import tax on all these items cover for their sound disposal after their lifetime.

*To support the development of regulatory standards and measures to prevent, control and monitor pollution from all sources, including sewerage, disposal sites, hospital effluent and other toxic and hazardous wastes, Kiribati has undertaken the following actions:*

- i) Establishment of the Environment and Conservation Division (ECD) under MELAD with and mandated under the Environment Act 1999 (amended 2007) with its key responsibility to effectively enforce it at the national level. This Act has specific provisions that regulates littering, pigsty wastes, excessive emission from vehicles (black smoke), pollution of water, waste disposal on land and at sea, pollution from premises/public places, polluting activities that harm the environment and the duty to cleanup should anyone found doing so,
- ii) Conducting environmental auditing (private & government premises) required under the Act,
- iii) Attending public complaints on waste and pollution issues [bad odor from pigsty, manhole odor discomfort, illegal dumping],
- iv) Monitoring and enforcing illegal activities under Environment Act 1999 (amended 2007),
- v) Betio Town Council (BTC) Jet inspection (Joint Enforcement Taskforce comprising of representatives from Councils, Police and Health departments),
- vi) Boarding foreign vessels ensuring waste management practices is observed onboard – garbage/waste oil not thrown overboard,
- vii) ECD joined the BTC waste management committee to ensure enforcement of the waste management policy,
- viii) Providing technical support to TUC/BTC for waste management improvement,
- ix) Attending public complaint lodged with ECD on waste and pollution related issues,
- x) Assisting and supporting Health Care Waste Management Committee,
- xi) Advising the general public on sound disposal practices (waste category, hazardous/toxic level),
- xii) Providing assistance to the general public in their complaint on irregular waste collection from councils, and
- xiii) Controlling impacts of wastes from any local activities or from environmentally significant activities prescribed under the Environment Act through a licensing system.

*Ratification and implementation of the Basel Convention on the control of trans-boundary movements of hazardous wastes and their disposal, 1972 convention on the prevention of marine pollution by dumping wastes and other matter and related regional conventions. Actions undertaken by Kiribati include:*

- i) Implementation of the Sanitation and Public Health and Environment Project (SAPHE), which supported the 'Kaoki Maange' Recycling Project funded by UNDP in 2003. This project helped the Betio Town and Teinainano Urban Councils in cleaning up rubbish from all over South Tarawa and Betio Town Council.
- ii) On 02 October 2007, the first national waste management strategy was developed and the removal of the scrap metal by Lagoon Motors in 2008.
- iii) Kiribati is also party to a number of pollution related conventions including hazardous and toxic chemicals. These conventions such as the Basel Convention and Stockholm Convention to name a few provide funding support with technical assistance to Kiribati in areas where waste management and pollution prevention are concerned, and
- iv) On 04 June 2012, the NZ Deputy Secretary for the International Development Group of the New Zealand Ministry of Foreign Affairs and Trade, signed a partnership agreement to support the Kiribati Solid Waste Management Initiative.

*To support public awareness and education campaigns to gain public support for the control of wastes at the source, the value of reuse, recycling and packaging, converting wastes into resources, Kiribati has undertaken actions as follows:*

- i) Introduction of the “Kiribati TeBoboto” and national clean-up campaigns on South Tarawa, a very successful car wreck clean-up and the Green Bag Pre-paid System initiative. This initiative helped to build the attitude, pride and care of the communities, especially in the urban environment of South Tarawa,
- ii) Involvement of civil societies, private companies, including Aia Maea Ainen Kiribati (AMAK), MOEL (Private Business) and the Foundation of the Peoples of the South Pacific Kiribati (FSPK), in the community consultation, public and community awareness and the distribution of the green bags, MOEL (one of the local biggest trading companies) has been involving and continues to do the distribution of the green-bags to small stores/shops on South Tarawa. The public awareness and community consultations are still ongoing and will continue to ensure it is widely publicized and get support from the public.
- iii) Organizing national clean-up activities on voluntary basis (coinciding with international environmental event, e.g. Cleanup the world);
- iv) MELAD has taken the initiative liaising with all Government ministries/SOE/schools to join the fortnightly clean ups. Ministries, SOEs and schools have also been allocated with cleaning sites for their own voluntary cleanups;
- v) Consultation on the amended environment act through all levels (government, NGOs, public, etc.) was widely carried out throughout Kiribati before the amendment was passed in 2007. The intention of the public consultation was to ensure that the people are well informed and their issues and views are incorporated in the amendment of the Environment Act,
- vi) ECD through its Media and Public Awareness Units (MPAU) is responsible in facilitating outreach programs at the national level to different levels of societies through formal and informal education, communication and public awareness,
- vii) Since 2005, number of awareness programs had been conducted as normal routines of MPAU. One of the most important emphasis of these outreach programs is to help raising awareness to the local people on the environment act through effective public campaigns, local community consultations, schools visits, mass media awareness programs, workshop and trainings, etc,
- viii) ECD had been conducting number of outer island visits for the purpose of facilitating consultations with local communities of the islands,
- viv) MELAD & Environment week campaign was conducted and coordinated by ECD annually since 2008 until last year where a number of campaigns were carried out on South Tarawa on the environment act (2007 amendments), including other environmental regulations. These campaigns focused on advocating the environment act and also provisions under this act. Educating people on the important guidelines to ensure communities have clear understanding and able to comply with it.

*In line with the requirement of introducing clean technologies for treatment of wastes at source and solid wastes, Kiribati with the support of New Zealand and Japanese Technical Cooperation Project for promoting Regional Initiative has undertook the following:*

- i) Implemented activities on Solid Waste Management, such as:
  - Rehabilitation of the 3 existing landfills, which is still ongoing, including the construction of the site manager’s hut inside the landfills and fencing;

- Installation of a temporary storage inside the landfill for e-wastes accidentally disposed inside the landfill;
  - Equipment and machineries required for the rehabilitation work such as the front loader and 2 sheep foot rollers for compacting the waste inside the landfills have now been used.
  - Introduction of green-bags which are specifically designed (similar to normal rubbish bags) but with local wordings written on them) and they are meant for inorganic waste only, not for organic matter.
  - Use of three compactor trucks in collecting green-bags based on schedules that have also been developed for different villages on South Tarawa;
- ii) Introduction of the bulky waste collection system (EOL vehicles and e-wastes). The machines have helped in removing so far over 150 abandoned vehicles on South Tarawa and Betio to a Material Recycling Facility (MRF) yard and there is more to be collected before a certain tonnage is reached before they can be exported overseas for recycling. This project is handled by the Lagoon Seawall Enterprises, a local company owned by the Kiribati Protestant Church who is engaged in the removal of the bulky waste.
- iii) Collecting unused or broken machines and put them into 2 ship containers (40ft) placed inside the MRF (mainly e-wastes, such as photocopying machines, video recorders, televisions, desktop computers, printers etc) collected from Government departments and some from the private sector.

*Development of information systems and database for waste management and pollution control, monitoring the types and quantities of wastes, for both sea and land sources of pollution;  
Provision of port reception facilities for the collection of wastes to prevent pollution from ships*

At present, there has been no mechanism in place.

*Formulation and enforcement of national laws and/or regulations to ban importation of hazardous wastes (including wastes for recycling and recovery operations) from members of the Organization of Economic Cooperation and Development (OECD). In response to this, Kiribati has developed*

- i) Councils' adoption of Waste Management Manuals for landfill management.
- ii) Cabinet's approval of the Kiribati Integrated Environment Policy (KIEP) in June 2013 which provides an enabling environment for the development of incentives to encourage imports with low waste or degraded waste content.
- iii) Extend the scope of the wastes recycling (PET bottles, batteries, and brass) to cover also e-waste and bulky wastes. This will impose import tax on all items imported.
- iv) Kiribati ratified the Basel Convention on the 7<sup>th</sup> of September 2000.

#### Progress Rating

The progress to date in waste management is good, about 50% of the work has completed with almost 20% are ongoing and some in the pipeline for implementation. Kiribati is in the right path to address waste issues although the work has been very slow. In the absence of a centralized data base system, it is very difficult to trace accurate progress. Progress rating given is based on the total outputs done compared with the actions required to be implemented.

#### Implementation Gaps/Issues

Notable gaps and issues include: the absence of electronic and centralized data base for proper recording of achievements and contributions of all key stakeholders, lack of resources, community's less involvement, existing policies are outdated and not enforced.

**Coastal and Marine Resources:** Kiribati has declared its Exclusive Economic Zone (EEZ) based on UNCLOS criteria. Kiribati is comprised of coastal zone without hinterland. As a result, human livelihood is dependent on and imposes grave strains on coastal marine resources, which have been overexploited in certain islands, especially in Urban Tarawa, with dire consequences on the quality of human life. Fish is the principal food for Kiribati people. However, certain fish stocks, including shell fish, are depleting, causing serious concern for the livelihood of the urban population. Ongoing coastal erosion could result in sedimentation of coral reefs and an increased load of particles suspended in sea columns. These may prove unhealthy for corals and fish stocks. The principal players to improve Coastal and Marine resources include MELAD, FMRD, MPWD and MoE.

*In line with the requirement to establishing and strengthening institutional, administrative and legislative arrangements for developing and implementing integrated coastal zone management plans and strategies for coastal watersheds and Exclusive Economic Zones; and also integrating them, Kiribati actions include:*

- i) Declaration of 1033 hectare of coastal and lagoon areas at Nooto Village at North Tarawa. This includes establishment of Bye Laws and also included under the Environment Act 1999(2007) to be protected,
- ii) Kiribati ratifies this Ramsar Wetland Convention this year 2013,
- iii) the Development of the National Protected Areas Policy and Systems Plan has created the framework for the establishment of a functional and representative network of marine protected areas which is geared towards species conservation as well as maintaining the integrity of certain critical habitats of the country,
- iv) The establishment of a Coastal Zone Management Authority for more comprehensive and integrated planning and management of the Coastal Zone of Kiribati with the view to increase income from marine resources, and
- v) KAPIII seeks to strengthen Kiribati's ability to provide people with safe water and maintain resilient coastal infrastructure. It extends on the achievements of KAPI and KAPII, which piloted a number of critical adaptation measures such as mangrove planting, construction of sea walls and rainwater harvesting.

*In support of the afforestation and reforestation programs to ensure watershed and coastal protection and reduce land degradation, actions undertaken include:*

- i) Under KAP II Project (2009 - 2012). There were 6 islands visited (Makin, Butaritari, Maiana, Aranuka, North Tarawa, South Tarawa). Mangrove seedlings planted on these selected islands were 34,277, as follows:
  - Makin (2270), Butaritari (3732), Aranuka (6561), Maiana (4436), and South Tarawa (17278)
- ii) Under KAP III (2013-2016) three selected islands were supported that are mostly affected by erosion. These islands include Abemama, Marakei, Abaiang, Beru, Nonouti, Tabiteuea Meang and Maiaki. There were 2958 mangrove seedlings planted on these islands, as follows:
  - On Abemama, 1064 mangrove seedlings were planted by the communities from three villages, Baretoa, Tanimainiku and Tabontebike Maiaki.
  - On Marakei, 429 mangrove seedlings were planted, villages involved include Norauea, Raweai and Rawannawi Meang, and
  - On Abaiang, 465 mangrove seedlings were planted in three villages, such as Tebunginako, Aonobuaka and Takarano. These places were selected because they are greatly affected by the sea erosion. The people of these islands were encouraged to keep on planting mangroves and to keep monitoring them overtime.

**Freshwater Resources:** The impacts of climate change have caused changing patterns in high tides, sea level rise, drought and saltwater intrusion into the country's water lenses. The impact of these natural threats to the water lenses of Kiribati is increasingly compounded by the environment degradation activities of the country's fast increasing population, especially in densely populated areas. So, to safeguard its water resources from depletion and contamination, Kiribati has implemented all of the six stated requirements for the implementation of the freshwater resources program.

*In line with the requirement to develop, maintain and protect watershed areas, water distribution networks and appropriate water catchment systems, Kiribati has undertaken the following actions:*

- i) Monthly monitoring of water reserves through boreholes since 2009;
- ii) Water resource assessments for all the islets of North Tarawa, and Tamana and Tab North islands in 2009/2010 through the Kiribati Adaptation project;
- iii) Hydrogeological assessments to be conducted on the 16 target outer islands in the Gilbert Group under the KIRIWATSAN project – with 4 completed as of June 2013;
- iv) The 2011 PPTA study which has identified immediate actions for the protection and conservation of Water Reserves in South Tarawa (where about 50% of the total population live);
- v) Rehabilitation of the Buota Water Reserve (which also included some leak detection work on PUB water reticulation system there); leak detection and repair of PUB's water reticulation system at certain pilot areas in Betio before full implementation throughout South Tarawa (now to be undertaken under the third or 2012 – 2016 phase of the Kiribati Adaptation Project); construction of the Taborio or Immaculate Heart College's infiltration gallery; improving governance and management of the Bonriki Water Reserve Area (the major water source for the entire South Tarawa residents), development of a National Rainwater Harvesting Guideline, construction of community rainwater harvesting systems (with total storage of 954k liters) on Banaba Island, including Buota village in North Tarawa (which is planned to be done under KAP III), and several communities (including public schools, church halls and Government quarters with a total storage capacity of 58k liters) in Betio and Bairiki or South Tarawa (respectively); and rehabilitation of the Tungaru (or national) Central Hospital's (13 meter high) overhead tank stand, including the tanks (a 25k liter for the portable PUB water and a 10k liter for the saline water for toilet flushing) under the Kiribati Adaptation Project between 2009 and 2013;
- vi) Construction of rainwater harvesting systems (with a total storage capacity of 560k liters) for 17 communities on South Tarawa under the NZAid Urban Development program, together with 700,000 liters of rainwater harvesting systems for 7 community buildings on Kiritimati Island – i.e. between 2011 and 2013 - and the planned rainwater harvesting systems for the Betio and Tungaru Central Hospitals, including Kiritimati and South Tarawa Urban Areas (expected to be constructed in 2014, if not late 2013) ; and
- vii) The Water Engineering Unit of the Ministry of Public Works & Utilities undertaking regular national surveys and monitoring of community rainwater harvesting systems in Kiribati since 2012.

*In line with the requirement to promote water conservation and prevent water contamination through integrated national water plans, use of incentives and regulatory measures, community involvement in the conservation management strategies, etc., the following national policies, plans and measures have been developed and implemented by Kiribati, including related actions taken:*



- i) At the inaugural Asia Pacific Water Summit, in Beppu, Japan, in December 2007, Te Beretitenti, His Excellency Aote Tong, reaffirmed his government's determination to protect, conserve and use water resources wisely and adopted "*Water for Healthy Communities, Environments and Sustainable Development*" as the theme for the Kiribati National Water Policy;
- ii) The National Development Strategy 2003-2007 and the Kiribati Development Plan 2008-11 which contained policies and goals that called for the need to raise the quality of life by improving supply and quality of water, ensure sustainable use of water resources, promote community participation for better use of water resources, provide sound infrastructure and services at reasonable costs, rehabilitate and expand existing water supply systems, improve collection/storage/treatment/distribution of water, rehabilitate the sewerage and sanitation system and improve its operation and management, improve maintenance standards for government assets, and ensure that all future construction projects comply with the Environment Act;
- iii) The 2008 National Water Resources Policy and accompanying 10 year Implementation Plan;
- iv) The 2009 South Tarawa Water Master Plan which has been reviewed and is now superseded by the existing 2011 – 2030 Kiribati Water & Sanitation Roadmap;
- v) Establishment of the National Water & Sanitation Coordination Committee in 2009 whose members are selected from stakeholder ministries and Non-Government Organizations (NGOs) like the Ministry of Health & Medical Services (MHMS), Ministry of Environment, Lands & Agricultural Development (MELAD), Kiribati Council of Churches (KCC), etc.;
- vi) The 2012 – 2015 Kiribati National Development which contains key policy outcomes and outputs which require implementation and enforcement of water protection and conservation measures, together with the consolidation of national water quality monitoring programs; improved national capacity and enforcement/coordination mechanisms for the protection of water quality and quantity in the country; and increased coverage and maintenance of water & sanitation infrastructure, including community involvement in the maintenance work;
- vii) The on-going (2013) water legislation review undertaken as part of the Public Utilities Board Ordinance review which, among others, aims to improve water governance and service management;
- viii) Application of the Bangladesh Community Led Total Sanitation (2012-2013) approach on South Tarawa and the outer islands, through the KIRIWATSAN project, as a means of involving members of the community in water and sanitation management;
- ix) The ongoing USAID-SPREB Climate Change Adaptation Project which will focus on the implementation of groundwater adaptation initiatives in the outer islands and the use of an integrated management approach; and
- x) His Excellency Te Beretitenti (President) recently declaring Kiribati to be an Open Defecation Free (ODF) country by end of 2014 as a way of safeguarding the scarce water resources of the country from such widespread unhealthy practice.

*In connection with the requirement to adopt appropriate standards for the management of freshwater resources, including forecasting models for effective water management, planning and utilization, Kiribati has adopted, developed and implemented the following measures, including related actions taken:*

- i) Development and implementation of the 2010 Kiribati National Building Code (which builds on the 2006 National Building Act) which does not only set out construction engineering standards (which are heavily influenced by Australian and New Zealand standards) for water and sanitation/sewerage structures/systems but also makes it legally compulsory for all residential, government and commercial buildings to comply with these standard requirements;

- ii) As for water quality (bacterial, nitrates, etc.), Kiribati adopts and uses WHO's or the World Health Organization's standard; for water salinity its acceptable national standard is 2,500µS/cm;
- iii) Through technical assistance provided under the SOPAC HYCOS Regional Project and the Kiribati Adaptation Project (phase II) or KAP II, the Water Engineering Unit of the Ministry of Public Works & Utilities (MPWU) has established a monitoring spread-sheet database for the Buota and Bonriki water reserves which has continued to be updated and used to inform water related management decisions (including plans) since 2009;
- iv) However, forecasting models for the Bonriki water reserve will be developed by the upcoming 'Bonriki Inundation Vulnerability Assessment' project which is expected to start by end of 2013.

*To strengthen procedures to monitor and respond to the impacts of climate change and variability, drought and sea level rise, Kiribati has undertaken the following actions and measures:*

- i) Laid down procedural requirements in both the 2010 Kiribati National Building Code and building permit (for building new houses in Urban Tarawa) which make it mandatory on every new building to have a good rainwater harvesting system or good gutters and rainwater tanks;
- ii) Since 2010 Government has been producing annual reports on the status of water reserves, especially those that feed Urban Tarawa;
- iii) The 2010 Tarawa Water Master Plan and recent 2011-2030 Kiribati Water & Sanitation Roadmap have made long range forecasts (i.e. 10 to 20 years) on the country's water supply and demand, including adaptation and management measures;
- iv) In 2010 more rain gauges were built around the country and since that year Island Water Technicians, for islands that don't have Metrological Officers, have been doing the reading and reporting of rainfall for these islands;
- v) The 2010 Drought Methodology and Response Action Plan for South Tarawa and that for the outer islands which is planned to be developed soon under the USSKAP project.

*For the requirement to develop and acquire appropriate technology and to train for cost effective sewerage disposal, desalination and water collection to provide high quality portable freshwater; etc., Kiribati has developed and implemented water and sanitation projects to see into this requirement. Under the ongoing 2011-2019 South Tarawa Sanitation Improvement Sector Project (STSISP) the following either have been or will be undertaken:*

- i) Enhancing community engagement in, and public awareness of, hygiene and sanitation;
- ii) Rehabilitation and upgrading of sanitation infrastructure;
- iii) Capacity development (to both MPWU and PUB) in sector planning, and operations and maintenance of urban water supply and sanitation services; and
- iv) Establishment of a sanitation maintenance fund to facilitate the long term sustainability of the South Tarawa sanitation infrastructure put in place by the project.

Under the 2011 – 2014 or phase 1 of the Outer Islands Water & Sanitation Project (also known as KIRIWATSAN 1), the following either have been or will be undertaken:

- i) Conducting hydro-geological assessments of groundwater resources,
- ii) Assessing existing water and sanitation infrastructures, repairing faulty structures when appropriate and installing new rainwater harvesting systems with safe storage facilities, and
- iii) Enhancing capacity at community level to build strong governance structures that will ensure sustainable operation and maintenance of the water and sanitation infrastructure

facilities, and conducting an intensive training/awareness raising campaign on WASH issues throughout the outer islands.

Under phase 2, the project will undertake to do the following:

- i) Draw directly on the hydro-geological studies/designs in order to build pumps using the appropriate technology and access groundwater in a safe and sustainable way,
- ii) Draw on the governance structures to ensure that there is a cost-recovery mechanisms allowing communities to manage, operate and repair water and sanitation facilities put in place by the project past the life of the project, and
- iii) Use the results and recommendations from assessments and from community consultations to build the technologically appropriate and socially acceptable sanitation facilities.

*The final requirement for the implementation of the freshwater resources program is “Capacity building on the effective allocation of the limited water resources” for which Kiribati has done the following:*

- i) Ongoing leak detection and asset management training (both theory and hands-on) to PUB staff under KAP III water improvement program;
- ii) Under the ongoing STSISP’s capacity building program on Urban Water & Sanitation Sector Planning and Operation & Maintenance of Urban Water & Sanitation Services , two Civil Engineer University Awards are provided, together with Technical Assistants to provide on the job training in the said areas;
- iii) Allowing PUB staff to participate in the existing International Cooperation Agency (JICA) bilateral training program on a) Operation & maintenance of sewerage facilities, b) Sewerage Engineering and c) Treatment of Domestic wastewater techniques;
- iv) Training for Outer Island Water Technicians in 2010 covering a whole range of issues especially on their routine works (plumbing, reading and reporting rainfall, measuring groundwater salinity level, etc.); and
- v) Collaborating with the Kiribati Institute of Technology (KIT) to revive the long dormant (i.e. since 1985) Plumbing course, that is customized to the plumbing work needs and challenges of both PUB and MPWU Water Technicians, starting in April 2013.

#### Progress Rating

Having significantly seen into all of the six prescribed requirements or conditions for implementing the freshwater resource program at a national level, it may be fair to give a rating of “very good”<sup>1</sup> in terms of the progress made by Kiribati in implementing this program.

#### Implementation gaps/issues

Imperatively, external funding support for the implementation of the BPOA/MSI in Kiribati should continue. Besides, increased utilization of less expensive Technical Assistants from within the country and from around the Pacific region should be encouraged whilst expensive overseas Technical Assistants may only be brought in to fill in the gaps. Not only that but the program should also assist in the training of locals to fill in these gaps after the completion of the project. Only then can we guarantee the sustainability of the infrastructure and services, hence the benefits, derived from the program. To ensure equitable distribution of these benefits, there is no other formula but ‘to do away with business as usual’ whereby both development partners and national governments should pay equal attention to all parts (i.e. all inhabited islands and all villages within the islands) of the country rather than the selected few

(islands/villages/communities) where, the two believe, the development assistance will make the 'most' impact.

**Land Resources:** Kiribati recognizes the urgent need to strengthen national capacity to address the rapidly growing problem of land degradation. The extremely small and vulnerable land areas and terrestrial ecosystems of the inhabited atolls and islands are being degraded at a rapid rate as a result of human activities and climatic factors. To address these issues, Kiribati has implemented several national projects and initiatives to help to achieve sustainable use and proper management of land resources. The MELAD is the leading ministry to oversight the management of land resources with the support of relevant ministries and department, including the MWUD, MFMD and MISA.

*In line with the development and improvement in national databases for land-use planning and management; and dissemination of information such as lands' carrying capacity, economic and environmental value, etc. to relevant community groups – e.g. youth, women, etc., Kiribati has done the following:*

- i) Upgrading and improvement of 1998 Kiribati Land Information System KLIS (upgraded 2009).
- ii) Past projects (AusAID) have supported the establishment the Lands' Information System data base for recording and archiving old land records, although there are still manual registers currently operationalised, the crucial land court minutes and reports are kept manually and electronically.

*In line with the comprehensive monitoring programs for coastal and marine resources, including wetlands, in order to determine shoreline and ecosystem stability, and also document and apply, as a basis for integrated coastal zone planning and decision making, traditional knowledge and management practices that are ecologically sound and include participation of local communities, Kiribati actions include:*

- i) Establishing of counterparts at Nooto Village at North Tarawa Island. This village helps in looking after the wetland area and also reporting illegal turtle harvesting on the whole North Tarawa Island. The community of Nooto Village did continue on planting mangroves to help in protecting their coastal areas,
- ii) Completion of the updating and reviewing of Land Planning Ordinance 2011 and now awaits Cabinet's approval in mid-2013,
- iii) On going review of GLUPs by CLPB and DLUPs by LLPB and development of land uses and improve management within water reserve areas, and
- iv) Afforestation and reforestation programmes to ensure coastal protection and reduce land degradation, which involved planting of mangrove trees by local young people and children,

*In line with the requirement for developing/strengthening national capabilities for the sustainable harvesting and processing of fishery resources, including provision of training and awareness programmes for coastal and marine resources managers (of government and local communities), Kiribati actions include:*

- i) In September 2010, a Sandwatch Foundation joined with the ESAT Curriculum Development Resource Centre of the Ministry of Education, Ministry of Fisheries and Marine Resource Development and the UNESCO Cluster Office for the Pacific States to launch Sandwatch in Kiribati and hold a Sandwatch training workshop. During the workshop participants identified four main issues impacting the beaches, including poor sanitation practices, beach erosion, sand mining and poor garbage disposal practices. The Sandwatch workshop was particularly timely since a review of the school curriculum is

planned in Kiribati. Participants are mainly teachers as the course would be included in the school curriculum

([http://www.sandwatch.ca/index.php?option=com\\_content&view=article&id=60:kiribati&catid=3:the-pacific&Itemid=2](http://www.sandwatch.ca/index.php?option=com_content&view=article&id=60:kiribati&catid=3:the-pacific&Itemid=2)), and

- ii) National Consultations, the CCST (Climate Change Study Team) was carried in 2005 to review the land planning and development processes. The CCST identified 10 priority areas towards sustainable development, including awareness, water resources, inundation/coastal erosion, health impacts, agriculture, family planning, fisheries, waste management, overcrowding, and miscellaneous other option (KAP 11, 2011).
- iv) Workshops with local planning authorities 2010.

*In line with the requirement for the ratification and implementation of regional and international conventions for the protection of coastal and marine resources, Kiribati has undertaken the following actions:*

- i) Ratification of the CBD (Convention on Biological Diversity) in 1994;
- ii) On going review of GLUPs by CLPB and DLUPs by LLPB
- iii) Ongoing development of land uses and improvement of management within water reserve areas.
- iv) PoWPA Project (Programme of Work on Protected Area). A project runs for 4 years starting from 2008 until to date (2013) and it aims at identifying potential sites needed to be protected in the Gilbert, Line and Phoenix Group. In relation to this activity, Cabinet has approved a Key Biodiversity Area Analysis Report 2012 which covers both terrestrial and marine use scientific criteria and local knowledge that contributes to national initiatives, such as Fisheries Policy. The key issue highlighted in the report was identification of islands with biodiversity richness to be protected.
- vi) NBSAP (National Biodiversity Strategic Action Plan) and national reports. There is a national report to be submitted by Kiribati every 4 years with the review of the NBSAP to be part of the strategic plan for implementation of biodiversity conservation nationally.
- vii) Part of KAPIII will build skills within communities to manage the effects of climate change and natural hazards by supporting education programs, facilitating the preparation and implementation of locally managed adaptation plans, strengthening institutions and building and maintain stronger infrastructure.
- viii) Cabinet's approval and endorsement of the Ozone Layer Protection Regulation under the Environment Act. The Regulation is an important commitment by Kiribati in its effort to fulfill its obligations under the Convention.
- viv) Inclusion of Ozone Depleting Substance (ODS) national priorities identified by relevant national stakeholders in the Kiribati Integrated Environment Policy 2012 – 2015 (MELAD, 2012)

#### Progress Rating

The progress to date is good given that there has been little commitment to address land issues. This is clearly demonstrated by the outdated legislations in place, town plans are in place but not enforced resulting in overcrowding of Betio and South Tarawa. Land resources are crucial to Kiribati development and contribute to many sectors, therefore immediate attention to put in place appropriate measures to protect land degradation and erosion would help other sectors to boost sustainable development.

#### Implementation Gaps/Issues

- Strengthen capacities of land planning authorities through legislative reforms,
- Limited public awareness,
- Enforcement of existing land legislation,
- Data updating & recording (capacity),

- Existing land registers are old and require replace or adoption of electronic register systems, and
- Limited land resources.

**Energy Resources:** As Kiribati is vulnerable to oil price external shocks, the finite nature of fossil oil and the pollution it brings with it, including the destruction it causes to the ozone layer and its impacts on climate change/variability and sea level rise, Kiribati has taken a number of actions and initiatives that are in line with the three requirements prescribed for the implementation of this program on a national level.

*In connection with the requirement for “Public Awareness & education programmes, including consumer incentives to promote energy conservation” Kiribati has undertaken the following actions:*

- i) Public awareness in 2009/2010 and again in 2013 through pamphlets and posters which promote renewable energy were distributed to schools and the communities at large. Also in early 2013, the Energy Planning Unit (EPU) of MPWU mounted an energy efficiency campaign on Urban Tarawa which involved visits and demonstrations at the main public places, including government offices. In the same vein, renewable energy has also been mainstreamed into the primary schools’ curriculum; and plans are now in place to do the same for secondary schools.
- ii) In terms of consumer incentives, tax incentive, which may involve lowering customs duty for renewable energy appliances, is now under consideration.

In promoting energy efficiency and environmentally sound energy sources through the use of renewable energy or energy-efficient technologies, these actions and initiatives have been taken:

- ▶ Energy Audit & Energy Efficiency Campaign at Government Buildings in 2011;
- ▶ Installation of energy efficient lights at Government Buildings & public street lights starting in 2012 and continuing on this year, 2013;
- ▶ Households Energy Survey also this year, 2013;
- ▶ 2013 – 2014 World Bank/PUB Solar PV Grid (Grant Agreements and Project Agreements signed on 25 March 2013) which will install and connect a 516 kilowatt solar PV system to PUB’s diesel power grid and, in effect, reduce: i) PUB’s diesel generators consumption in the amount of about 230,000 liters per year or \$290K/year; result in ii) 15,500 tons CO<sub>2</sub> reduction over the 20 year life of the project and iii) 850,000 kWh of clean energy per year; and do iv) capacity building or hands-on training to staff of PUB, KSEC (or Kiribati Solar Energy Company), KIT or Kiribati Institute of Technology) and local contractors on the installation and maintenance of large scale PV grid systems;
- ▶ The ongoing 2012 – 2014 Japan/PUB Solar PV Grid which will install and connect a 500 kilowatt Solar PV System to PUB’s existing electricity or diesel power grid and produce the same kind of environmentally safe outcomes and results as also expected from the WB/PUB PV Grid project;
- ▶ The ongoing 2012 – 2013 EU Solar project for Outer Islands which will put in place solar systems for 3238 homes, 120 for teachers’ residences, 100 for small businesses, 30 for community halls, 6 for Senior Secondary Schools, 1 mini-grid for Poland/Kiritimati and 1 grid connected PV for training purposes to be located at KSEC’s headquarters in the capital, Tarawa;
- ▶ Government has set its fuel reduction targets for electricity to try and reach by 2025 as follows: South Tarawa 45% reduction, Kiritimati Island 60% reduction, Rural public infrastructure 60% reduction, Rural public and private institutions 100% reduction;

- ▶ The 2009 Kiribati National Energy Policy, including its accompanying implementation plan which is still in draft, which basically promotes energy efficiency, conservation and use of alternative renewable sources of energy;
- ▶ The 2008 – 2011 Kiribati Development Plan which promoted increased use of renewable energy and energy-efficient technologies and appliances as one of the strategies for economic development;
- ▶ The 2012 – 2015 Kiribati Development Plan which also promotes increased use of renewable energy as an integral part of the national infrastructure development strategy;
- ▶ The 2009 Amendment Act to the PUB Ordinance (CAP 83, 1977) to allow, for the first time since the country's independence in 1979, the users of PUB electricity to use renewable energy (e.g. solar, wind, etc.) in addition to or in place of PUB electricity, if they like; and
- ▶ Supporting the formal establishment of the International Renewable Energy Agency (IRENA) in Sharm El Sheikh/Egypt in 2009 and becoming a member in May 2013 to demonstrate Kiribati's full dedication to promote energy efficiency and environmentally sound energy sources or renewable energy and energy-efficient technologies.

*“Strengthening of research capabilities in the development and promotion of new and renewable sources of energy – e.g. wind, biomass, solar, etc. – including technologies to encourage efficient utilization of non-renewable sources of energy”* is the third or last requirement for the implementation of the renewable energy resources program on a national level. Kiribati has a long way to go before it becomes self-sufficient and able to fulfill this requirement on its own. However, in trying to fulfill this requirement, Kiribati has managed to secure external assistance (both financially and technically) to undertake the following research-related activities in the country:

- i) 2009 – 2012 Wind Resource Assessment at Kiritimati;
- ii) Ongoing Wind Feasibility study in Tarawa and Abaiang islands to be completed by end of 2013;
- iii) Biofuel Energy Feasibility Study recently completed in Kiritimati Island; and
- iv) Ongoing Ocean Energy (OTEC and Tidal Energy) Feasibility study to be completed by end of 2013.

In addition, through AusAid and NZAid training awards, Kiribati has managed to send two senior staff of the EPU/MPWU to undertake Master level researches on renewable energy, focusing more on wind and solar energy in Kiribati. One of these researches was successfully completed in 2009 whilst the other was completed in 2012. The third senior staff of the EPU/MPWU completed her renewable post graduate diploma program, which also involved a lot of advanced research work in renewable energy, in 2011.

#### Progress Rating

Kiribati has implemented all of the three prescribed requirements for the implementation of the renewable energy program. However, not enough public awareness and education on energy conservation has been done nor has there been any incentive put in place to promote energy conservation. Likewise, development of local capacity in renewable energy-related researches has been minimal. Accordingly, the overall implementation progress score that may be awarded to Kiribati for this program is “not enough progress”.

#### Implementation Gaps/Issues

This “not enough” implementation progress is directly linked to the level of both local and external funding support accorded to the program. It is, therefore, imperative that both the Kiribati government and development partners allocate more funding support towards national

public awareness and education programs on energy conservation as well as local capacity development in advanced renewable energy-related researches (i.e. through master, doctoral and similar research programs) that are relevant to Kiribati.

**Tourism Resources:** Kiribati has unique cultural and natural attractions that simply need to be developed (e.g. by turning them into tourism products and creating a conducive policy and legal framework, including the necessary infrastructure to support tourism), show-cased and promoted to the world in order to bring in tourists. Its strong culture (e.g. traditional canoes for transport, dancing, handicraft making, etc.) and pristine natural white beaches, especially in the outer islands, huge waters and rich marine and fisheries environment (as in the Phoenix Islands Protected Area – PIPA), the incredible number and species of birds and sanctuaries (as in Kiritimati) are but few examples of the country’s natural attractions. To develop and sustain these unique and attractive cultural and natural tourism resources, Kiribati has taken actions and initiatives that are in tune with the requirements for the implementation of the BPOA/MSI Tourism Resources program on a national level.

*One of the implementation requirements is to ensure that “tourism development and environment management are supportive to one another”. Actions and initiatives taken by Kiribati in line with this requirement include:*

- i) The use of the law to regulate and safeguard against destructive practices and acts to the ecosystem of Kiribati, including marine and fisheries resources – e.g. Environment Act, Fisheries Act, Wildlife Ordinance;
- ii) Having the Phoenix Islands Protected Area in the World Heritage list as a conservation management strategy to protect and preserve the entire ecosystem in the area;
- iii) Turning the Phoenix Islands Protected Area into a tourism product.

With regards to the required *national plans and policies to be integrated to ensure sustainability of tourism – e.g. through effective land-use planning and coastal zone management; environment impact assessment and continuous monitoring of all tourism projects and activities; proper management and protection of eco-tourism attractions; sound construction guidelines and standards; etc.* - Kiribati has made the following progress:

- i) Government’s policy for sustainable economic, social and environmental development is used as the focus of the 2009 – 2014 Kiribati National Tourism Plan;
- ii) The revised Land Planning Ordinance (now ready to be drafted) which is expected to improve land use planning and management in Kiribati;
- iii) The ‘Mauri’ Mark Accommodation Standard which sets the minimum standard for tourist accommodations in Kiribati;
- iv) The 2006 National Building Act and 2010 Kiribati National Building Code which set construction engineering guidelines and standards for residential, government and commercial (including tourism) buildings;
- v) The Kiribati National Tourism Office’s 2012 – 2015 Strategic Plan which will guide calls for the need to tighten regulation of tourism fish attractions in Kiritimati and Nonouti and also provide support and guidance to MFMRD on issues relating to the preservation of these fish stocks on the islands;
- vi) *The Environment Act 1999* which requires all infrastructure development projects, including tourism projects, to undergo environment impact assessment;
- vii) *The 2010 Development of Land Planning and Development Guidelines* to encourage sustainable and integrated use, management and conservation of land;
- viii) Potential tourist attractions or sites in Kanton have been identified (April 2013) and also included in the land-use plan for the island;



ix) Protection of tourism resources under the Fisheries Act, Environment Act and Wildlife Ordinance to mention those in the main.

For the promotion of eco-tourism as well as nature & cultural tourism, identifying & facilitating establishment of their niche markets, and involving local populations in the identification and management of natural protected areas set aside for eco-tourism, Kiribati has done the following:

- i) Ongoing promotion of ecotourism, including nature/culture tourism which promotes homestay and activities such as scuba diving, surfing, watching (and taking part in) traditional dance, handicraft making, sightseeing and visits to war relics, game fishing and birds watching;
- ii) Establishment of the Kiribati Tourism website, [www.kiribatitourism.gov.ki](http://www.kiribatitourism.gov.ki), since 2009 through which all tourism products of Kiribati are showcased and promoted to the world;
- iii) Participation in World Expositions and Trade Shows to showcase and promote Kiribati tourism products to target countries or niche markets.

In connection with measures/regulations adopted to protect its cultural integrity, government has been voicing its support for the protection of the country's intellectual property right (which include traditional knowledge and practices of value to the people of Kiribati) in the national, regional and international arena but no national laws/regulations or similar measures have been established to this effect.

#### Progress Rating

Kiribati has not only failed to fully implement each of the implementation requirements but has also been completely unable to establish measures/regulations to protect its cultural integrity. The more realistic progress score applicable for this program is, therefore, "bad progress".

#### Implementation Gaps/Issues

Lack of technical and financial capacity are the very underlying causes of Kiribati failure to fully implement this program. Promotion of Kiribati's tourism resources and products through renowned word Television or TV companies like CNN or BBC and having the right Technical Assistants (in terms number, level and mix of knowledge & skills) to help Kiribati in creating a conducive tourism environment to boost tourism in the country are such eventualities which could have made a big difference if Kiribati had the human and financial resources. Imperatively, both the national government and development partners should allocate more resources towards this program or the development and sustainable management of tourism resources in Kiribati.

**Human Resource Development:** Education and training are crucial components of the human resource development. Education, in particular, enables development and is crucial to helping people overcome poverty. It also contributes to equity, health, governance, sustainable development and empowering women. MoE in partnership with the Australian Government through AusAID, has been committed to enhance improvement of the quality of education. Thus, a larger portion of AusAID aid programme goes to Education (MoE, 2012).

In 2012, the Kiribati Education Sector Strategic Plan (ESSP) 2012-2015 has completed. The ESSP is linked to the Government of *Kiribati Development Plan 2012-2015 Key Focus Area 1: Human Resources Development*. This ESSP includes those activities identified in the previous ESSP (2008-2011) that are not yet implemented. The current ESSP has seven specific goals which include:

- Delivery of a high quality, coherent and relevant school curriculum for all Kiribati children.
- Provision of a conducive learning environment in Kiribati schools.
- Development of a committed, competent and effective school education work force.
- Strengthening policy and planning systems for achievement of quality education outcomes.
- Strengthen the legislative and regulatory framework for managing the school sector.
- Consolidate partnerships with stakeholders in the education system.
- Provision of strong and efficient support services by the Ministry for the delivery of quality and balanced education for all I-Kiribati children.

*In line with the requirement to infuse sustainable development ideas into education curricula at all levels and promote participation by all groups, emphasizing the link between environment and social and economic issues, and continue to improve access to scientific, mathematics and technical training, Kiribati has made significant progress, as follows:*

- i) Moving to the right direction for achieving universal primary education or education for all is evident. Although the NER for primary level has fallen from 93% to 85% between 2008 to 2010, the 91% survival rate to year 5 indicates that Kiribati is now on the right track to achieve universal access to primary education. This was well supported in the increase in the transition rate from class 6 to form 1 from 85% to 97% in 2009 to 2010 respectively (AusAID, 2011). UNESCO suggesting in the Education For All (EFA) Global Monitoring Report Kiribati was considered at risk of not achieving gender parity in education by 2015 or 2025.
- ii) Gender parity for primary school access has been achieved; however, disparities exist in higher levels of schooling, with UNESCO suggesting in the Education. For All (EFA) Global Monitoring Report Kiribati was considered at risk of not achieving gender parity in education by 2015 or 2025.
- iii) With respect to rate for pupils completing primary school, a statistic in Kiribati which has been steadily rising in the last years, has fallen from 93% to 85% between 2008 to 2010. It is notable that as the overall rate continues to rise, the completion rate for girls is almost fully on track for this indicator.
- iv) For the literacy rate of 15 to 24 year-olds, Kiribati has met the literacy targets, which was 90.6% for 2009. The literacy rate has shown a consistently upward trend, from 70.3% in 1991, to 94.7% in the 2000. The situation in terms of secondary and tertiary education, however, is not as positive. As reported in the Education Sector Strategy 2011-2016 published in March 2012, the much needed increase in enrolment in secondary education has not taken place, being 49% in 2010 compared to 44% in 2004. Participation in tertiary education remains low compared to regional averages, and despite significant investment in technical and vocational education, participation rates there remain very low. The church-state system of management and delivery of education fails to reach its full potential and makes a common approach to establishing standards and raising quality is difficult to achieve. Despite a healthy level of investment in the sector that compares favourably with countries in the region, the overall outcomes are disappointing.
- v) In 2009, Cabinet approved the CDRC Curriculum Development Handbook documenting procedural guidelines and quality assurance processes to improve curriculum for all government and church schools. Along with this, Cabinet also approved the establishment of the Educational Advisory Committee & Curriculum Assessment Committee, as well as development of a National Curriculum and Assessment Framework.
- vi) Endorsement of the National Curriculum and Assessment Framework (NCAF) in September 2011 which set out national benchmarks and providing curriculum resources, writing of new syllabuses and in-service training for teachers to support implementation of the new

curriculum. The NCAF is currently under review to incorporate new thematic areas relevance to the implementation of the Global Development Agendas, such as climate change, overpopulation, and gender equity, and food and water security. The new National Curriculum is strongly aligned with the regional and internal educational standards (MFED Workshop, Wednesday, 12 June 2013).

- vii) Development of syllabuses for Year 1 & 2 and for Year 3 to 11 in the Language and Mathematics Learning Areas, as well as a policy for the use of ICT and Media Enhanced Learning in schools (MoE Strategic Plan, 2012).
- viii) Further progresses in 2011 include the development of Early Childhood Care Education Policy; revision of the 2007 Education Ordinance to reflect changes in the Kiribati Education programmes and strategies; development of a surge program intended to upgrade the English language proficiency of all Kiribati teachers along with Teachers' Professional Development Framework as well as institutional strengthening arrangements for Kiribati Teachers College; and a program of community consultations to encourage active participation of churches and other Government Ministries in education activities.
- iv) More children with disabilities are now able to access the School and Centre for Children with Special Needs. It was estimated that 105 in 2012 are now able to access the School and Centre for Children with Special Needs compared to 80 in 2010 (AusAID, 2012).
  - x) On 17 April 2013, at Kiribati House of Parliament in Ambo, 6000 copies of the children's story book "*The Children Take Action – a Climate Change Story*" were handed over to the Permanent Secretary for Education for delivery to all primary schools in Kiribati. The Curriculum Development and Resource Centre (CDRC) will use the book to improve literacy skills in te-Kiribati and English. In addition, the story book will help children learn, in a very simplified way, the basics of climate change and its impacts on our environment.
  - xi) Six primary schools have been rehabilitated – including with improved access to clean water and sanitation facilities – to provide safe and conducive learning environments for almost 900 children.
  - xii) Development of a policy for the use of ICT and Media Enhanced Learning in schools.
  - xiii) Kiribati-Australia Partnership focuses on improving the standard of basic education across 115 primary and junior secondary schools in Kiribati, which should lead to higher enrolment rates and improved learning outcomes, with the view to support GoK's vision of enhancing economic opportunities for its people.
- xix) Under the partnership, both Australia and Kiribati agreed to review KANI and improve its long-term viability. Further support of AusAID and WHO to upgrade the Kiribati School of Nursing.

*In line with the requirement to incorporate population issues into the mainstream of decision-making and planning mechanisms of government, including developing comprehensive population policies consistent with sustainable development objectives while respecting and promoting the dignity and the fundamental rights of the human person and of the family, Kiribati actions include:*

- i) Ratification of CEDAW in 2004 after efficient lobbying by *Aia Maea Ainen Kiribati* (AMAK), a federation of women's groups,
- ii) Ratification of the International Covenant on Civil and Political Rights (ICCPR) (AMAK, 2007),
- iii) At Parliament session in December 2012, Parliamentarians gave strong support to the First Reading of a Government Bill on child protection. This Child, Young People and Family Welfare Bill has its Second Reading at the April session 2013. The Bill aims to cater for the protection of children under 13 years old,

- iv) The Family Bill has been drafted and consultations with communities have commenced. The draft bill aims at addressing all forms of violence against women,
- v) Government has decided to reintroduce a Constitutional Reform Bill in the Parliament session in April 2013 to facilitate further support to gender, children and human rights issues through the establishment of a new ministry. On the policy side, Government has approved the Eliminating Sexual and Gender Based Violence (ESGBV) Policy, as well as National Action Plan 2011-2021 (MISA, 2012).

*In line with the requirement to improve urban/rural settlements, in consultation with local communities, by giving priority to the improvement of basic services, such as access to potable water, environmentally sound sewage treatment and disposal, shelter, education, family planning and health care, as well as to the elimination of poverty; ensuring that development projects are people-centred and have explicit environment and health objectives; ensuring adequate resources for public health and preventive medicine activities; and considering urban development options, including decentralization, actions undertaken by Kiribati include:*

Under the programme cycle 2003 to 2007, UNDP's support to Kiribati focused on the following interrelated areas:

- i) Accessed to Basic Services and Livelihood Opportunities, such as:
  - Reform of Planning and Budgeting process at sub-national levels for more effective incorporation of community level perspectives, participation and needs in support of the Outer Islands Development Fund (ADB/GoK) initiative; and Involvement of local authorities and communities in outer islands and urban areas in planning and management of development activities, including the provision of public services as part of the ADB funded Outer Island Development Fund initiative.
- ii) Dealing with vulnerability: this focused on improved capacity of national/sectoral authorizes to plan and implement integrated approaches to environmental management and energy development that responds to the needs of the poor.
- iii) Establishment of broad partnership between Government Ministries and Community Based Organisations as evidenced by the set up of the Outer Island Project Coordination Committee (OIPCC).
- iv) AusAID has provided funding for infrastructure projects to improve roads; information and communication technology development; energy; water and sanitation, which aimed at improving productivity for the private sector and may provide opportunities for private sector involvement in delivering and maintaining these infrastructure services.

*In line with the requirement to direct efforts to improve urban/rural settlements through the promotion of projects aimed at the elimination of poverty that give priority to the improvement of basic services such as shelter and comprehensive public health, including potable water, sewage disposal, maternal and child health care, the responsible planning of family size and other specific measures aimed at health promotion and disease prevention, Kiribati has done the following:*

- i) Securing funding from New Zealand, Australia and other donors for supporting sustainable urban development, such as improving water supply, educating and aware communities of health and environment problems.
- ii) From 2010 to 2013 New Zealand has supported the following actions:
  - improved household water and sanitation for 6,000 people living in slum conditions in South Tarawa,

- a new climate proofed subdivision in South Tarawa for up to 1,000 people to relieve overcrowding, and assist the Government to plan for natural growth,
- improved Solid Waste Management collection including through introducing recycling and waste minimization strategies, and rehabilitation landfills,
- encourage small business development agencies to foster economic growth
- rainwater harvesting on 14 public buildings in South Tarawa and Kiritimati Island to provide a supply of clean water for poor communities,
- rehabilitation of Kiritimati Island's Cassidy Airport runway to allow access to remote Line Islands where 10% of Kiribati's population live, and to enable tourists to visit the world class fishing, bird watching and surfing spots, and
- the programme aims to directly benefit approximately 7,000 people in South Tarawa, and indirectly support the rest of South Tarawa and communities on Kiritimati Island. The first phase commenced in 2008 and included preparatory work with Government, Urban Councils and communities.

*In order to encourage the use of distance training to meet the expanding educational demand and the large demand for knowledge and training in the area of the environment, Kiribati has undertaken the following actions:*

- i) Establishment of the New Zealand and GoK reimbursement scheme which support the in-country training of public employees as well as private employees (through Chamber of Commerce). Trainings can only be done either at the Kiribati Institute of Technology (KIT) and Extension of the University of the South Pacific (USP Teoraereke). The scheme continues until to date and has benefited approximately 113 civil servants during the periods 2009 to 2012),
- ii) Introducing the Commonwealth of Learning (COL) to assist staff at the Kiribati Institute of Technology to establish video production and DVD duplication facilities at Kiribati Video, an NGO that functions as the Institute's video resource unit. In recent years, Kiribati Video has released more than 100 DVD titles on topics such as health, disability, the environment, civil society, good government, Kiribati history and culture, family and social issues. These titles are distributed to islands across Kiribati and provide an essential resource for community education. The project aims at providing a tool to all students for education and dissemination of information to rural and remote communities, and
- iii) Joined the OLPC (one laptop per child) Oceania project in 2010. In 2011, 2,000 XO laptops were distributed to pupils in Kiribati primary schools. The Kiribati Government has undertaken to measure the impact of these laptops on basic literacy and numeracy.

*In line with the requirement to seek to improve the quality of education, training and human resource development by upgrading basic education and technical/vocational skills training and by making improvements, where necessary, to national management and planning capacities and labour market linkages, actions undertaken by Kiribati include:*

- i) From 2005 to 2009, six junior secondary schools were constructed, and extensive teachers' training and teachers' resources were provided under the KESP. In addition, the support of a long term technical assistance for developing curriculums and managing educational assessments contributed to the completion of a timetable for implementing the Curriculum and Assessment Strategy,
- ii) Since 2010, the MoE in partnership with the Australian Government through AusAID, UNICEF and UNESCO initiated the Kiribati Education Improvement Programme which established a 10 year commitment to improve education in Kiribati. This program aims to give all children in Kiribati access to quality education by 2020. The Program will improve basic literacy and numeracy and ensure children have the necessary skills to continue to the

next stage of education. To date the program has supported implementation and completion of major activities, including but not limited to the following:

- upgrading of the six newly established primary schools which benefited 873 children;
  - improving learning environments which benefited 900 students and teachers;
  - improving access to more reliable water and sanitation facilities for 2,500 students and assisted 310 teachers meet English language proficiency standards;
  - a National Curriculum Framework for Grades 1 & 2 and a Professional Development Framework to guide teachers in delivering quality education; and
  - the Kiribati Education Improvement Program to help more than 20,000 I-Kiribati children attend school regularly and gain the necessary skills and knowledge to learn to read and write.
- iii) In 2012, the Kiribati Education Sector Strategic Plan (ESSP) 2012-2015 was completed. This ESSP includes those activities identified in the previous ESSP (2008-2011) that are not yet implemented. The current ESSP is strongly aligned with the Educational Global and Regional agendas and KDP 2008-2011 & 2012-2015,
- iv) Provision of strong and efficient support services by the Ministry for the delivery of quality and balanced education for all I-Kiribati children (AusAID, Last Review: 8 November, 2012),
- v) A National Curriculum and Assessment Framework (NCAF) is now in place. The NCAF is currently being progressively rolled out to other learning areas and to more senior years. Similar program for Year 3 to 11 is in progress,
- vi) Development and adoption of the **Teacher Professional Development** in 2012 has made the following progresses: delivery of the **Kiribati English Language Program** to 390 teacher training placement in KELP courses; 100% teachers base line tested.
- vii) School Improvement Program: 50% of schools implementing SIP and 10% audited by end 2012;
- viii) Infrastructure Development Program: completion of clear guidelines for selection of schools for rehabilitation, completion of rehabilitating 6 schools; appraising of another 12 schools for rehabilitation; and evaluation of six pilot schools. School grants programs have been introduced to all schools, and
- viv) Workshop on introducing the Teaching Service Standards.

The Public Service Office undertook the following:

- vi) Securing funds for overseas scholarships for public employees and private sector employees (through Chamber of Commerce) where 84 scholarships was awarded and only 68 were successful (2009 to 2012). External donors for overseas scholarships and short term training include Japan, JICA, KOICA (Korea) NZAID, AUSAID, Commonwealth, India, PICPA, Singapore, Malaysia, Indonesia, Malta, AUSAID, SPC, Taiwan, Thailand, Austria, and China. Taiwan offers Open Scholarship for Technical and Professional Trainings, NZ government offers support for short term overseas training on technical and specialized trainings, and JICA – Japan government offers funding for short term overseas on "Technical and Vocational Trainings",
- vi) By beginning 2012, the assessment of employees was carried out to find out qualification levels and number of qualified employees with different qualification levels within Government ministries and State-owned Enterprises, results are as follows:

<b>Qualification Level</b>	<b>Within Government Ministries</b>	<b>Within State-Owned Enterprises</b>
Masters' degree	78	10
Post graduate	46	5
Degree	283	35
Diploma	614	26
Form 7	1746	80
Secondary High School	1763	322

*Source: PSO HRD Plan, 2012-2015*

- viii) In 2012, development partners have reviewed the overall Academic Awards allocation and administration and NZ and AusAID and decided to outsource the administration of their awards in 2013, which means that GOK scholarship and administration will be the only award to be decided and administered by HRPC,
- viv) Youth participation (students aged 16-24 years) at KIT has improved since 2011, with youth comprising 70% of the intake for full-time courses in 2011, rising to 81% in 2012.
- x) Adoption of the Australian competency-based curricula in sub-trade courses and assessment and alignment of these courses with the Australian standards and the AQTF requirements,

The Ministry of Labour with the support of New Zealand and Australia has undertaken the following actions:

- xi) Adoption of the TVET Sector Strengthening Program, which supports actions undertaken for the development of KIT and KNS, such as:

a) Kiribati Institute of Technology (KIT)

- Upgrading courses to international standards and improving teacher standards. Student enrolments have increased from 185 in 2010 to 265 in 2011 as a result,
- Increased enrollment to 120 annually as the maximum, however the plan was disrupted by the loss of some KIT classrooms during a fire in 2010,
- In 2011, there was an increased enrolment, with 315 full-time students enrolled (compared to the estimated 2010 baseline of 205 students), only 239 full-time students enrolled in 2012 because the business fast track course option was not offered. Out of these total, 65 percent were male, with an even higher proportion of 89 percent in the trade courses. However, there was little improvement in social equity of access to KIT, as the program's vocational preparation and scholarship schemes for outer island youth have not yet implemented. Overall, the program is performing satisfactory in the quality areas of effectiveness, efficiency, sustainability and analysis and learning, but this is being less than anticipated in areas of gender, monitoring and evaluation,
- Approved by government, the reform of KIT to adopt the Australian competency standards and to be established as an English language institution and KIT Management of Information System for improvement of data and information records,
- Completion of the design for KIT new buildings which is anticipated to start in early 2014, and
- Kiribati recognises that proficiency in English is crucial for graduates from all disciplines to be competitive in international labour markets. KIT will move towards an English-only teaching environment with support from TVETSSP. Other technical institutions in Kiribati are also making changes, including the Marine Training

Centre, which has extended its seafarers' training course to 18 months to incorporate six months of intensive English.

Other general support of TVET include:

- Under KANI, students (upon graduating) take a 10-week intensive International English Language Testing System (IELTS) preparation course to assist them to achieve IELTS level 7, a requirement for employment in Australia and New Zealand. Improving English language is also a priority under KEIP, with activities being undertaken to improve the quality of English language teachers and curriculum, and
  - Completion of 2012 – 2016 MLHRD and TVET policy and strategy and other key policies, including revenue retention, apprenticeships and trade testing, and labour mobility.
- ii) The New Zealand Aid Programme has supported the Kiribati Marine Training Centre since 1983. The centre delivers vocational training to I-Kiribati seafarers. Actions undertaken to the development of MTC, including but not limited to the following:
- iii) From 2006 to 2012, NZ has invested \$7 million to support the construction of MTC new classrooms, dormitories and a galley. The fund also supported the development of the MTC curriculum so that it is accredited to train deck officers and engineers. Other support include establishment of a catering facility and offer English language training. This investment has enabled the Centre to increase its annual student intake from 150 to 200,
- iv) New Zealand has also agreed to progress the design of the Kiribati Fisheries Training Programme and to re-develop the Fisheries Training Centre in Tarawa. The aim of this project is to seek to increase international and domestic employment opportunities and fisheries revenue for Kiribati, and
- v) The New Zealand Police have been helping the Kiribati Police Force to address the alarming levels of domestic violence in the country. A senior advisor is to work with the Acting Police Commissioner in a mentoring role. Specialist assistance is being provided with youth offending, child sexual abuse, road policing, and criminal prosecutions (<http://www.aid.govt.nz/where-we-work/pacific/kiribati>).

#### Progress Rating

Progress to date is good based on the number of outputs being implemented with some that are in the pipeline. This rating is anticipated to be higher in the next reporting period given that recently there have been heavy commitments to putting in place achievable plans and programs together with the upgrading of the existing Education frameworks, guidelines and policies and development of new strategies etc. The biggest development have been the upgrading of local tertiary institutions and upgrading of teachers and the curriculum at all levels and alignment with the international and regional standards.

#### Implementation Gaps/Issues

- a) Lack of institution to offer the ICT since 2008 when KIT is on fire at that time,
- b) Lack of technical and professional lecturers since KIT is in the process of adopting South Australia TAFE standard,
- c) Lack of Project Officer on ICT from organizations,
- d) Need of further training by Project Officers on how to do their project documents,
- e) Lack of monitoring from PSO on sectors that require ICT project documents,
- f) Lack of funding or donor for identified ICT priorities, and
- g) Majority of ICTs were specific to organization needs and it is hard to come up with general syllabus on requested trainings.



The expansion of access to and quality of education at all levels, however, is seriously restricted by a lack of resources. Secondary education is not available on all islands, and there is a shortage of qualified teachers. A centralized database for all education and training activities would help government in making accurate decision and in considering the way forward.

**Health:** A Key Priority Area 3 of the KDP 2012-2015, which aligns with the MSI+5 and MDGs. The overarching goal of the MHMS is, “*continuous improvement in the provision and delivery of preventable and curative health services and equitable distribution of the benefits attained nationwide through effective and efficient allocation of scarce resources and good governance (accountability and transparency)*”. To achieve this goal and related MDGs 4 and 5 and disease-specific aspects of MDG 6, the MHMS Strategic Plan 2012-2015 focuses on six national strategic objectives, which include:

- (a) High quality, comprehensive family planning services
- (b) Improved maternal, newborn and child health
- (c) Prevention of spread of communicable diseases
- (d) Reduced prevalence of non-communicable diseases
- (e) Strengthened health delivery system
- (f) High quality, appropriate health care services for victims of gender based violence and youth.

Therefore, assessment of health focused on MDGs 4, 5 and 6.

#### **MDG 4 – Reducing Child Mortality Rates**

The causes of mortality and morbidity remained fairly consistent between 2002 to 2009. Acute respiratory infections and diarrhoeal diseases are the two major causes of morbidity and are among the five leading causes of mortality. There was an increase in reported cases of respiratory disease between 2002 and 2009. There have been increases in mortality from diseases of the circulatory and respiratory systems and from cancers. Perinatal conditions are still a leading cause of mortality among infants.

In line with MDG 4 - the MHMS with the support of its development partners, WHO, UNICEF, Global Fund through CCM, UNFPA, Cuba and AusAID, has undertaken several actions and made good progress, as follows:

- i) National Population Policy (2005) sets a clear target to stabilize the population by 2025 (Kiribati Census, 2010)
- ii) National HIV and STI Strategic Plan (2005-2008& 2012-2015). These plans highlight three priority areas, including treatment, care and support; prevention; and coordination of the national multi-sectoral response.
- iii) In partnership with the Secretariat of the Pacific Community (SPC), the United Nations Population Fund and the United Nations Children’s Fund (UNICEF), delivered health programs that have resulted in improved detection and treatment of tuberculosis (TB), provided necessary equipment and supplies to improve obstetric care, and established a new strategy to improve immunization and treatment of childhood illnesses.
- iv) Infant mortality has also improved (KCCM, 2012; AusAID Concept Paper, 2011).  
A drop in the infant mortality rate to 51 per 1,000 in 2010; if this is maintained Kiribati will have achieved its Millennium Development Goal to reduce under 5 mortality below 60 per 1,000 live births in 2015. However data is incomplete so the trend is not yet certain. According to KCCM (2012) report, mortality is higher in rural 5 areas than urban areas for both neo-natal and infant mortality, whilst identical for the age range 1 to 4 (under five mortality rate).
- v) Just under 10,000 home visits were conducted by public health nurses in 2011, the majority for treating sick patients, followed by care for infants under-one.

## **MDG 5 – Improving Maternal Health**

Maternal health has improved (KCCM, 2012; AusAID Concept Paper, 2011)

- i) Approximately 90% of all births are now attended by skilled health personnel and the total fertility rate has declined, falling from 4.5 in 1995 to 3.4 in 2008. The maternal mortality ratio, based on hospital records, is now 158 per 100 000 live births (2010 Census Report), a significant reduction from the previously reported ratio and consistent with (1) the reduction in the total fertility rate, and (2) the continued high percentage of women attended by trained staff.
- ii) Over 700 pregnant women are seen by antenatal clinics each month.
  - High rates of breastfeeding, partly due to active promotion including at Tungaru Central Hospital which was accredited as a Baby Friendly Hospital;
  - High levels of immunization (above 90%);
  - High levels of parental visits and deliveries attended by skilled health personnel; and only one maternal death in 2010.
- iii) Establishment of 34 Health Centres, eight in South Tarawa, four in Betio and twenty two on Outer Islands, and
- iv) Progress made from 2012 to 2013: completion of the new maternity ward at Betio on 3 August 2012. It was anticipated that the ward should provide safe delivery services to over 1,200 women annually in South Tarawa, however the data to verify how many women received the service was not available. Other progresses include the rehabilitation of the Kiribati School of Nursing to improve the quality of nursing education in Kiribati; rehabilitation of sewerage networks and help foster better hygiene and sanitation practices at the household level to reduce infant deaths from diarrhea; and continue the tuberculosis (TB) program to further reduce the prevalence of TB in Kiribati.
- v) Approximately 29000 people visit an outpatient clinic each month.

## **MDG 6 - Combating HIV/AIDS, TB and other diseases**

Kiribati has the highest incidence of tuberculosis in the Pacific, high rates of sexually transmissible infections (resulting in significant vulnerability to HIV) and an increasing prevalence of non-communicable diseases (NCDs) (AusAID, 2011). Despite recent progress, in 2010, Kiribati still reported the second highest number of annual TB case notifications in the Pacific after the Solomon Islands (286 cases), and the second highest TB notification rate (292 cases per 100,000 population) after the Marshall Islands (356 per 100,000) (MHMS & SPC, 2012). Kiribati actions to combat HIV/AIDS, TB and other diseases include:

- i) Secure the Global Fund and Response Fund (including the Continuity of Care Fund) to support national activities in addressing HIV/AIDS and STIS. The MHMS via CCM, work in partnership with the Kiribati Health Family Planning Association and Kiribati Red Cross and other NGO's to educate and train people in the prevention of HIV and STIS.
- ii) Establishment of the Kiribati Country Coordinating Mechanism for HIV, STIs and TB (CCM) in 2010 as the national authority coordinating the response to HIV/AIDS and STIS. The CCM replaced the Kiribati Taskforce on HIV/AIDS & TB. There are 25 members of the CCM, with representatives from government, non-government and civil society, including PLHIV. The key indicators to be monitored and assessed included: HIV prevalence; Condom use; and Comprehensive correct knowledge of HIV/AIDS among 15-24 year olds.
- iii) From 2008 to 2011, polio immunisation coverage rose from 74 per cent to 95 per cent. Coverage for the combined diphtheria, pertussis and tetanus vaccine (DPT3) rose from 82 per cent to 99 per cent.
- iv) Providing support to NGOs' including KHFA, KRCS and others to disseminate information to communities, advocating the role of social factor in TB transmission. A reduction in cases of tuberculosis is evident, particularly in the crowded areas of South Tarawa.

- v) There are evidences that there is improvement in the management and training systems, better access to health services and better quality of health services in the Outer Islands.

#### Progress Rating

Progress was very good given that heavy commitment have been made, however update data and information are not available which would give us a more reliable progress to date. It shows that the Ministry of Health has been over reliance on donors' support in both funding and technical support, which is one of the challenges in achieving sustainable medical services. Interesting, the Ministry is currently focusing on addressing the main cause of health issues, which is the overpopulation, mainly on South Tarawa. Despite this problem, family planning is a priority of the current strategic plan (2012-2015).

#### Implementing Gaps/Issues

The Ministry lacks the resource to sustain some of its important obligations, such as reporting progress on timely manner. Existing reports for the Ministry like other sectors are donor driven, so over reliance on donors can lead to the lack of ownership and in many cases, it is difficult to detect on the spot implementation issues to be able to address effectively. Limited number of skilled health workers, mainly doctors also led to the poor delivery of health services.

As some of the plans and strategies have been developed outside the Ministry through donor-assisted programs and, although the level of ownership is good, capacity to implement, enforce and monitor is variable.

### **B) National Coordination and Monitoring Mechanisms for Development Assistance/Programs**

Because of its weaknesses and aid coordination issues highlighted by studies undertaken by Wrighton<sup>2</sup> (2008) and Rouatu<sup>3</sup> (2010), Kiribati is now advocating a whole of government, sector-wide approach (rather than the traditional Project-based approach) in the monitoring and coordination of overseas development assistance and programs – right from the planning or design stage down to implementation. According to this new model/mechanism, lead ministries will collaborate with other sector stakeholders (ministries, NGOs, private sector and civil society representatives) as well as representatives of development partners in developing national sector (rather than individual ministry) projects, including implementation. The National Planning Office (MFED) is responsible for scrutinizing and appraising the project proposals, ensuring that they are in line with the development priorities stated in the National Development Plan in force, before tabling them to the Development Coordinating Committee (DCC) for further review and recommendations for Cabinet's approval. However, experience so far (including national preparations for this report) shows that coordination between and among the sector members is not easy given their different and, sometimes, competing priorities. Because of its vital role in ensuring success and realization of the benefits expected from development assistance/programs, more attention should, therefore, be given to the issue at all levels - national, regional and international.

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<sup>2</sup>Wrighton, N, 2008: Aid Management and Coordination

<sup>3</sup>Rouatu, I, March, 2010: Review and Evaluation of Aid Effectiveness in Kiribati

## 4 Emerging Challenges to Sustainable Development

While Kiribati is still grappling with the implementation challenges of Agenda 21, BPOA and MDGs, the number of development challenges facing the world continues to grow – in particular climate change and sea level rise, natural and environmental disasters, health issues, and others as outlined below:

**Climate Change:** While climate change falls under MDG 7, it is a cross-cutting issue that impacts all MDGs.

Globally, there is a strong and growing recognition that addressing the causes and effects of climate change and other environmental impacts are key development concerns. The issues of climate change can erode past development gains, and risk current and future livelihoods of the poorest communities in the world like Kiribati. It has the potential to increase hunger and poverty (MDG1), threaten the achievement of universal education (MDG 2) and undermine gender equality (MDG 3) and the achievement of health outcomes under MDGs 4, 5 and 6.

At the national level, Kiribati is one of those countries most vulnerable to the adverse impacts of climate change. Government believes that by 2050, if no adaptation measures are undertaken, Kiribati could face economic damages due to climate change and sea level rise of US\$16million a year which was equivalent to 17-34 percent of its 1998 GDP.

Natural disasters have not only disrupted lives and national economic processes in the Kiribati context, but have also been responsible for major alteration of the natural environment and significant resource degradation.

The potential impact of natural disasters on Kiribati's development is great as the country's economic growth is tied to the resource base at risk. For instance, it is estimated that income generated directly through resource-based activities in the coastal zone, like tourism and fisheries, the integrity of the coastal natural resource system is crucial in maintaining its productivity.

**Life-style health problems** are another emerging concern to Kiribati. Type 2 Diabetes, hypertension, coronary heart disease, stroke are common non-communicable disease examples of this emerging health concern. Data on the causes show:

- ▶ 59% smoked tobacco
- ▶ 71.8% drank more than standard alcohol drink
- ▶ 99.3% consumed less than 5 combined serving vegetables and fruits

- ▶ 50.1% low physical activity
- ▶ 81.5% overweight
- ▶ 28.1% diabetic

(WHO STEPS Survey, 2009)

Also the number of amputation cases has increased at the rate of 134% between 2005 and 2011. In addition, non-communicable diseases account for 58% of the main primary causes of death in Kiribati (Health Report 2011).

**Population:** The continuous annual **population growth rate** of about 2% for the whole country and 4% for urban areas are increasingly becoming a concern to Kiribati. Likewise, over crowdedness and very high **population density** (over 2000 persons/km in urban Tarawa) are also worrying and increasingly becoming a real issue to Kiribati. Population in the Kiribati context is an emerging, concerning issue simply because of the country's young population, limited land-space, limited employment opportunities, and narrow revenue and resource base. The impact of these population problems (growth rate and density) have already been seen in the increased destruction to the environment, people's health and livelihood in general. So, these population related problems are critical and thus deserve to be given more attention – i.e. in terms of prevention in particular, being a preventable disease or health problem.

**Water Security:** Because Kiribati is made up of narrow, coral strips of islands, coupled with its relatively dry climatic condition all year round, water is, therefore, very precious and thus must be protected and managed properly so that it can be sustained in the long term. Water is increasingly becoming a concern to the country because of the combined adverse impacts of its increasing population and climate change/variability. Already the capacity of existing safe water reservoirs is not enough to meet demand in South Tarawa. Increased salinity in ground water also continues to be experienced not only in Tarawa but also in the outer islands. Not only that but water in other locations in South Tarawa is contaminated from industrial and human/animal wastes. Prescriptive and preventive remedies to Kiribati's water problem have been and are still being trialed out under several projects (KAP, STSISP and KIRIWATSAN) but, unfortunately, not enough attention is given to infrastructure by these projects.

**Food Security:** Kiribati is an importing country in terms of food commodity. There are only two Shipping lines that bring in imported goods to the country are limited in number and are owned and controlled by overseas firms. Moreover, the combined effects of the country's poor alkaline soil, dry climatic condition and brackish water make agriculture a real challenge to food security. The vulnerability of Kiribati to external price shocks, together with its limited economic and financial capacity to cushion the effects of these external shocks, are such realities that add

to the complexity of the situation. The aid of science and modern technology, technical assistance, together with improved shipping link to and from major overseas export markets, are believed to be potential answers to the country's persisting food security problem but, as mentioned, Kiribati does not have the financial and technical capacity to cope with the situation.

**Energy Security:** Because of the disastrous and destructive effects of carbon emissions from the use of fossil oil, the finite nature of fossil oil and its increasing and unpredictable price, the importance of energy security is increasingly realized even in countries with the least carbon emission rate like Kiribati. Government departments, State Owned Enterprises (SOEs), NGOs and members of the private sector and civil society (in particular energy policy makers, major importers, retailers and users of electrical products and services) at large have a crucial and vital role in enhancing and sustaining energy security in Kiribati. Accordingly, they need to be made aware and educated on energy conservation and efficiency through local and overseas workshops and training programs. In addition, the country should also be assisted in identifying and implementing potential energy saving methods/strategies and renewable energy sources. Similar assistance is also needed for the country's energy policy, plans and legislative framework which must be constantly reviewed and improved to be able to enhance and sustain energy security in Kiribati.

**National Monitoring & Coordination of Development Assistance/Programs:** Monitoring and coordination of overseas development assistance and technical cooperation programs is a persisting issue which now deserves special and more urgent attention, given the increase in the number of aid funded projects that have to be implemented almost simultaneously in the next couple of years in Kiribati. Because of the project or ministry, rather than development sector, focus of most, if not all, overseas development assistance and programs, utilization and implementation of these aid programs is also fragmented in Kiribati. As a result, national monitoring and coordination of these aid programs/projects is made difficult; and the complexity of the problem increases with the increase in the number of aid funded programs/projects to be implemented at the same time. Development partners are also equally responsible for the problem as the focus of their development assistance or programs continues to encourage this project/ministry based fragmented approach. To address this emerging issue, Kiribati encourages a holistic, sector-wide approach instead - a model also applied in the development, implementation, monitoring and coordination of the 2012 – 2015 Kiribati Development Plan.

## 5 The post-2015 Sustainable Development priorities

In the light of the highlighted implementation gaps/issues and emerging challenges/issues, the following post 2015 sustainable development priorities for Kiribati have been identified:

**Health** – focusing more on Child & Maternal Health, Family Planning, NCDs (or lifestyle diseases), HIV & AIDs, Hepatitis B;

**Human Resource Development** - with emphasis on Education & Training that will support and facilitate implementation of the global sustainable development programs in Kiribati;

**Economic Growth** - in terms of assistance to help boost Employment, GDP/capita, sound SOE performance, etc. which, in effect, will significantly improve the livelihood of the people of Kiribati;

**Foreign Investment & Private Sector Development** – in terms of the required policy and legislative reforms to create a conducive environment to attract and facilitate growth of foreign direct investment and private sector development in the country;

**Climate change & Disaster risk management** – to enable the country to mitigate and adapt to the social, environmental and economic challenges posed by climate change/variability and sea-level rise;

**Marine & Fisheries Conservation & Governance** – with emphasis on avoiding use over and above the maximum sustainable yield level, more effective surveillance and optimal development and management of the country's marine and fisheries resources;

**Regionalism (to counter globalization)** – i.e. one that will benefit all rather than the few, normally the more advanced and developed;

**Water Security** – with emphasis on protection, conservation and management against destructive human activities and the impacts of climate change;

**Food Security** – as Kiribati is heavily dependent on imported food commodities, coupled with its poor agricultural potential and vulnerability to external price shocks;

**Energy Security** – to encourage energy efficiency and conservation, including carbon free renewable energy sources; and

**Tourism** - to speed up the identification, development and promotion of the country's tourism products, including the establishment of potential overseas niche markets, required infrastructure developments as well as the needed policy and legislative framework to protect the natural and cultural tourism attractions/products and, of course, enhance and foster the sustainable development of tourism in Kiribati.

## 6 Conclusion

Based on the implementation status on the reported sustainable development programs, overall Kiribati's progress may be rated as "good", according to the progress rating assessment criteria used by this report. However, taking into account those programs not reported here, due to lack of data/information<sup>4</sup> and the constraint of time involved in the preparation of this report, a more realistic progress rating may lie somewhere between "not enough progress" and "good progress". The traditional national monitoring & coordination mechanism for overseas development assistance/programs has been proven to be inefficient and ineffective hence its replacement (since 2012) by the new mechanism, currently being trialled out, which focuses on a whole of government, sector-wide approach. Lack of financial and technical resources, rigid and prescriptive nature of the programs just like the donor-driven nature of projects undertaken in pursuit these programs (thus resulting in limited coverage of the country at large and little attention to infrastructure development but more to expensive overseas technical assistants), have been identified as the main implementation gaps or key issues experienced in the course of implementing the global sustainable development programs in Kiribati. Emerging challenges/issues that have the potential to pose threat to the sustainable development of the country include climate change, lifestyle deceases, population growth rate & density, water security, food security, energy security and the National Monitoring & Coordination Mechanism for overseas development assistance/programs. Kiribati's post 2015 Sustainable Development Priorities comprise health, human resource development, economic growth, foreign direct investment & and private sector development, climate change & disaster risk management, marine fisheries conservation & governance, regionalism, water security, food security and tourism.

## 7 Recommendations

The BPOA/MSI Regional Preparatory Conference is humbly invited to note:

- a) the progress made by Kiribati in implementing the said global sustainable development agendas on a national level – i.e. since 2005 to-date;
- b) the identified implementation gaps/issues;
- c) Kiribati's National Monitoring & Coordination Mechanism for overseas development assistance/programs;
- d) emerging challenges/issues that have the potential to pose threat to the sustainable development of Kiribati; and
- e) Kiribati's Post 2015 Sustainable Development Priorities.

However, in order for the global sustainable development programs to be able to produce the desired outcomes and results at the national level, the following recommendations may be worth noting by national governments, overseas governments and development partners, including stakeholder regional and international organizations:

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<sup>4</sup>A problem which may be attributed to the weaknesses of the traditional National Monitoring & Coordination Mechanism for Overseas Development Assistance/Programs



- i) To avoid irrelevancy and, at the same time, facilitate achievability of the desired outcomes and results of the programs, their prescribed implementation requirements must be country-based, not generalized as is now the case;
- ii) Development assistance to support implementation of national development projects should not direct what and how the project may be implemented in a country; rather the projects should be professionally tailored to the genuine needs of the country; it should be comprehensive (not selective) and pay more attention to infrastructure development, including asset management plans required for the sustainability of these infrastructure;
- iii) To be able to draw out useful lessons from the global sustainable development programs for Small Island Developing States, full commitment (not partial commitment) to the implementation of all of the programs' prescribed or required actions (that are, of course, relevant to the country) is needed on the part of national governments, development partners as well as stakeholder regional and international organizations; and
- iv) To be able to monitor and coordinate implementation of the programs, countries that need the assistance should be helped (financially and technically) in searching and establishing the monitoring & coordination mechanism that best suits their unique situations and will work for the purposes of the programs.

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## ANNEXES

### ANNEX 1 Guiding Questions for the Stocking

## ANNEX 2 Progress Rating Assessment Criteria & Method

| <b>Assessment Criteria</b> | <b>Rating<br/>(0-100%)</b>             | <b>Explanation</b>                                                                               |
|----------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Very bad Progress</b>   | <b>0 – 20%</b>                         | <b>Total outputs or implementations requirements completed is less than 20%</b>                  |
| <b>Bad Progress</b>        | <b>At least 20% but less than 40%</b>  | <b>Completion of over 20% but less than 40% of total outputs or implementation requirements</b>  |
| <b>Not Enough Progress</b> | <b>At least 40% but less than 60%</b>  | <b>Completion of over 40% but less than 60% of total outputs or implementation requirements</b>  |
| <b>Good Progress</b>       | <b>At least 60% but less than 80%</b>  | <b>Completion of over 60% but less than 80% of total outputs or implementation requirements</b>  |
| <b>Very good Progress</b>  | <b>At least 80% but less than 100%</b> | <b>Completion of over 80% but less than 100% of total outputs or implementation requirements</b> |

|                           |             |                                                                                          |
|---------------------------|-------------|------------------------------------------------------------------------------------------|
|                           | <b>100%</b> |                                                                                          |
|                           |             |                                                                                          |
| <b>Excellent Progress</b> | <b>100%</b> | <b>Completion of all outputs or 100% of total outputs or implementation requirements</b> |

This is the description of the progress rating: Very bad Progress = 0 – 20% compliance with the program’s prescribed implementation requirements or conditions; Bad Progress = over 20% but less than 40%; Not Enough Progress = At least 40% but less than 60%; Good Progress = At least 60% but less than 80%; Very Good Progress = At least 80% but less than 100%; Excellent Progress = 100%. Computation of the rating: total number of completed implementation requirements over the total prescribed number of implementation requirements for the program multiplied by 100.

## **Annex 3 BPOA Sustainable Development Programs & Implementation Requirements**

### **CLIMATECHANGE & SEA LEVEL RISE**

- *Ratification of or accession to the United Nations Framework Convention on Climate Change, Montreal Protocol on Substances that deplete the ozone layer and other related legal instruments;*
- *Monitoring, survey and collection of data on climate change and sea level rise;*
- *Assessment of socio-economic impacts of climate change, climate variability and sea level rise*
- *Formulation of comprehensive adjustment and mitigation policies for sea level rise in the context of integrated coastal area management;*
- *Development of adequate response strategies, adaptation policies and measures to minimize the impact of climate change, climate variability and sea level rise by mapping climate change vulnerable areas and developing computer-based information systems covering results of such surveys, assessments and observations;*
- *Improve public and political understanding of the potential impacts of climate change;*
- *Formulation of comprehensive strategies and measures (including preparation, facilitation and collection of information) on adaptation to climate change that would contribute to a better understanding of the range of issues associated with the development of methodologies to facilitate adequate adaptation to climate change;*
- *Promotion of energy efficiency in the use of energy resources and use of appropriate methods to minimize the impacts of climate change on the sustainable development of those energy resources; and*
- *Increased participation in the bilateral, regional and global research, assessment, monitoring and mapping of climate impacts, including adoption oceanographic and atmospheric measures and policies and the development of response strategies.*

### **NATURAL AND ENVIRONMENTAL DISASTERS**



- *Establish and/or strengthen disaster preparedness and management institutions and policies, including building codes and regulatory and enforcement systems, in order to mitigate, prepare for and respond to the increasing range and frequency of natural and environmental disasters and promote early warning systems and facilities for the rapid dissemination of information and warnings.*
- *Strengthen the capacity of local broadcasting to assist remote rural and outer island communities within countries and among neighboring countries during disaster events.*
- *Establish a national disaster emergency fund with joint private and public sector support for areas where insurance is not available in the commercial market, taking into account the relevant experience to be gained from the operation of similar funds.*
- *Integrate natural and environmental disaster policies into national development planning processes and encourage the development and implementation of public and private sector pre- and post-disaster recovery plans, drawing on the capacity of the United Nations Department of Humanitarian Affairs and bearing in mind the International Decade for Natural Disaster Reduction.*
- *Strengthen cultural and traditional systems that improve the resilience of local communities to disaster events.*

#### **MANAGEMENT OF WASTES**

- *Development of incentives (fiscal and policy, etc.) to encourage imports with low waste or degradable waste content;*
- *Development of regulatory standards and measures to prevent, control and monitor pollution from all sources, including sewerage, disposal sites, hospital effluent and other toxic and hazardous wastes;*
- *Ratification and implementation of the Basel Convention on the control of trans-boundary movements of hazardous wastes and their disposal, 1972 convention on the prevention of marine pollution by dumping wastes and other matter and related regional conventions;*
- *Public awareness and education campaigns to gain public support for the control of wastes at the source, the value of reuse, recycling and packaging, converting wastes into resources;*
- *Introduction of clean technologies for treatment of wastes at source and solid wastes;*
- *Development of information systems and database for waste management and pollution control, monitoring the types and quantities of wastes, for both sea and land sources of pollution;*
- *Provision of port reception facilities for the collection of wastes to prevent pollution from ships; and*

- *Formulation and enforcement of national laws and/or regulations to ban importation of hazardous wastes (including wastes for recycling and recovery operations) from members of the Organization of Economic Cooperation and Development (OECD).*

### **COASTAL AND MARINE RESOURCES**

- *Establishing/strengthening institutional, administrative and legislative arrangements for developing and implementing integrated coastal zone management plans and strategies for coastal watersheds and Exclusive Economic Zones; and also integrating them into national development plans;*
- *Comprehensive monitoring programmes for coastal and marine resources, including wetlands, in order to determine shoreline and ecosystem stability, and also document and apply, as a basis for integrated coastal zone planning and decision making, traditional knowledge and management practices that are ecologically sound and include participation of local communities;*
- *Developing/strengthening national capabilities for the sustainable harvesting and processing of fishery resources, including provision of training and awareness programmes for coastal and marine resources managers (of government and local communities); and*
- *Ratification and implementation of regional and international conventions for the protection of coastal and marine resources.*

### **FRESHWATER RESOURCES**

- *Development, maintenance and protection of watershed areas, water distribution networks and appropriate water catchment systems;*
- *Promotion of water conservation and prevention of water contamination through integrated national water plans, use of incentives and regulatory measures, community involvement in the conservation management strategies, etc.,*
- *Adoption of appropriate standards for the management of freshwater resources, including forecasting models for effective water management, planning and utilization;*
- *Strengthening of procedures to monitor and respond to the impacts of climate change and variability, drought and sea level rise;*
- *Development and acquisition of appropriate technology and training for cost effective sewerage disposal, desalination and water collection to provide high quality portable freshwater; etc.; and*
- *Capacity building on the effective allocation of the limited water resources.*

### **LAND RESOURCES**

- *Development/improvement in national databases for land-use planning and management; and dissemination of information such as lands' carrying capacity, economic and environmental value, etc. to relevant community groups – e.g. youth, women, etc.;*

- *Review land-use plans and formulation of comprehensive land-use plans and zoning to protect land resources and ensure sustainable and productive land-use to guard against land degradation, pollution and exceeding carrying capacity;*
- *Improved land tenure and administration to facilitate sustainable land-use;*
- *Encouraging sustainable and integrated use, management and conservation of the land and its natural resources, using the force of law and regulations, economic pricing and incentives;*
- *Afforestation and reforestation programmes to ensure watershed and coastal protection and reduce land degradation;*
- *Improving the availability, affordability and environmental quality of shelter in human settlements; and*
- *Strengthening of physical planning in both urban and rural environments, putting emphasis on physical planning offices, including environment impact assessment and other decision making tools;*
- 

### **ENERGY RESOURCES**

- *Public Awareness & education programmes, including consumer incentives to promote energy conservation;*
- *Promotion of energy efficiency and environmentally sound energy sources through the use of renewable energy or energy-efficient technologies; and*
- *Strengthening of research capabilities in the development and promotion of new and renewable sources of energy – e.g. wind, biomass, solar, etc. – including technologies to encourage efficient utilization of non-renewable sources of energy.*

### **TOURISM RESOURCES**

### **BIODIVERSITY RESOURCES**

- *Formulation and implementation of integrated strategies for the conservation and sustainable use of terrestrial and marine biodiversity, in particular endemic species, including protection from the introduction of certain non-indigenous species and identification of sites of high biological significance for the conservation of biological diversity and/or for eco-tourism and sustainable development opportunities such as sustainable agriculture, training and research;*
- *Ratification and implementation of the convention on the Biological Diversity, the convention on International Trade in Endangered Species of Wild Fauna and Flora and other relevant international and regional conventions;*

- *Community support for the conservation of biological diversity and designation of protected areas by concentrating on educational strategies that increase awareness of the significance of biodiversity conservation, in particular the fundamental importance to resource-owning communities of a diverse biological resource base;*

### **NATIONAL INSTITUTIONS AND ADMINISTRATIVE CAPACITY**

- *Strengthen institutional arrangements and administrative capacity, including cross-sectoral/inter-ministerial committees and task forces, in order to integrate environment and economic policy into national planning and across sectors and ensure the capacity to implement Agenda 21 and the decisions of the Global Conference.*
- *Develop implementation strategies and schedules, including financing, for both regional and national activities.*
- *Establish or strengthen environmental agencies with adequate financial and staff resources.*
- *Increase the awareness and involvement of non-governmental organizations, local communities and other major groups in public education, national planning and the implementation of sustainable development programmes.*
- *Improve public education in order to familiarize local, provincial/State and national bodies with environmental laws already in existence, facilitate discussion of the value of environmental*

*legislation and standards to local communities and open wider discussion on more culturally appropriate penalties for the contravention of laws and regulations.*

- *Develop appropriate national, provincial/State and local environmental regulations that reflect the needs and incorporate the principles of sustainability, create appropriate environmental*

*standards and procedures, and ensure their integration into national planning instruments and development projects at an early stage in the design process, including specific legislation for appropriate environmental impact assessment for both public and private sector development.*

- *Give sustainable development task forces or their equivalent the official authority and validity to permit their continued meeting as interdisciplinary and communally representative advisory bodies.*
- *Provide adequate resources for the enforcement of environmental regulations.*
- *Enact the domestic legislation required for the implementation of the wide range of international environmental conventions and agreements directly relevant to small island developing States.*
- *Establish national information nodes on the sustainable development of small island developing States in order to encourage, at the international level, the development of a small islands' sustainable development information network to facilitate the exchange of experience among Small Island developing States.*

## **REGIONAL INSTITUTIONS AND TECHNICAL COOPERATION**

- *Support regional organizations through membership and budgetary contributions.*
- *Encourage improved coordination and collaboration among regional bodies and between the international community and regional programmes.*

## **TRANSPORT AND COMMUNICATIONS**

- *Continue efforts to strengthen transport services and facilities at both the national and local levels, paying particular attention to environmental protection, safety, and innovative energy-efficient and low-cost transport solutions.*
- *Upgrade domestic communication facilities, including radio and telephone coverage, to remote rural and outer island communities, and continue efforts to improve international telecommunications links.*
- *Address quarantine problems and requirements stemming from changing transport situations and longer-term climatic changes.*

## **SCIENCE AND TECHNOLOGY**

- *Ensure that science and technology policy is closely linked to national environmental strategies and sustainable development plans and is responsive to local and sectoral sustainable development needs, emphasizing self-sufficiency and the minimization of import dependency.*
- *Give greater emphasis to research and development, as well as to training for science and technology and economic development generally, and for environmental and technology assessment in particular; refine analytical tools for natural resource accounting; and*
- *encourage the development and use of information and communications technology to overcome size and isolation problems.*
- *Promote research and development in areas where endogenous technologies and traditional practices have great relevance, including agriculture, agricultural processing, waste-recycling,*

*ethnobiology and biotechnology, construction and renewable energy, ensuring that mechanisms are in place for the appropriate protection of intellectual property rights in accordance with relevant international conventions.*

- *Encourage the use of endogenous, environmentally friendly technologies by establishing regulations, standards and economic incentives.*

- *Develop or ensure access to databases on environmentally sound technologies of local relevance and collect consistent time-series data for monitoring the performance of sustainable development.*
- *Promote and strengthen the role of women in science and technology disciplines.*

## **HUMAN RESOURCE DEVELOPMENT**

- *Infuse sustainable development ideas into education curricula at all levels and promote participation by all groups, emphasizing the link between environment and social and economic issues, and continue to improve access to scientific, mathematics and technical training.*
- *Incorporate population issues into the mainstream of decision-making and planning mechanisms of government, including developing comprehensive population policies consistent with sustainable development objectives while respecting and promoting the dignity and the fundamental rights of the human person and of the family.*
- *Improve urban/rural settlements, in consultation with local communities, by giving priority to the improvement of basic services, such as access to potable water, environmentally sound sewage treatment and disposal, shelter, education, family planning and health care, as well as to the elimination of poverty; ensuring that development projects are people-centred and have explicit environment and health objectives; ensuring adequate resources for public health and preventive medicine activities; and considering urban development options, including decentralization*
- *Direct efforts to improve urban/rural settlements through the promotion of projects aimed at the elimination of poverty that give priority to the improvement of basic services such as shelter and comprehensive public health, including potable water, sewage disposal, maternal and child health care, the responsible planning of family size and other specific measures aimed at health promotion and disease prevention*
  - *Encourage the use of distance training to meet the expanding educational demand and the large demand for knowledge and training in the area of the environment.*
  - *Promote and strengthen the role of major groups, including non-governmental organizations and women, in the creation and implementation of sustainable development initiatives.*
  - *Seek to improve the quality of education, training and human resource development by upgrading basic education and technical/vocational skills training and by making improvements, where necessary, to national management and planning capacities and labour market linkages.*

- *Encourage the use of traditional knowledge and skills in environment, resource management and health, and the use of community groups to assist in promoting environmental awareness.*

## **IMPLEMENTATION, MONITORING AND REVIEWS**

*Some of the important actions necessary at the national level are described below.*

### **Finance**

- *The implementation of the Programme of Action will require adequate resources to reflect the increased significance attached to sustainable development considerations in national development planning. Environment and development strategies will also need to be integrated at the outset of decision-making processes so as to ensure that macroeconomic policies are supportive of national sustainable development goals and priorities. In that regard, while in general the financing for the implementation of the Programme of Action at the national level will come from the public and private sectors of small island developing States, various financing channels, including those referred to in chapter 33 of Agenda 21, need to be explored in line with the specific circumstances of small island developing States.*
- *In addition, resources at the national level should be further increased to meet the sustainable development goals and priorities articulated in the light of the Programme of Action, by optimizing the impact of available resources and by exploring possibilities for increasing the use of economic instruments, promoting private sector investment and using innovative financial mechanisms with a view to achieving an appropriate mix between traditional regulation and market-based mechanisms. A move towards increasing the use of economic instruments could be regarded as an important indirect complementary mechanism for the financing of sustainable development at the national level.*
- *Among possible innovative financial mechanisms, small-scale grants and micro-enterprise loans for sustainable development activities at the community level should be explored.*
- *For small island developing States, in particular the least developed amongst them, official development assistance (ODA) is a major source of external funding. To maximize the benefits and impact of that financial and technical assistance, operational mechanisms should be reviewed and/or developed to ensure the fullest possible coordination among donors, small island developing States and relevant international and non-governmental organizations, taking into account local and community concerns.*

### **Trade**

- *In order to achieve greater and more stable export earnings, small island developing States should seek to develop a more diversified production structure for goods and services that exploits existing or potential comparative advantages and is consistent with environment and development policies that are mutually supportive.*

### **Technology**

- *Measures should be encouraged to enhance the capacity for developing*

*indigenous technology, including the capacity to manage, assess, acquire, disseminate and develop technologies, and for utilizing appropriate and environmentally sound technologies, while adequately and effectively protecting intellectual property rights. Efforts should also be made to ensure, subject to national legislation and policies, that the technology, knowledge and customary and traditional practices of local and indigenous people, including resource owners and custodians, are adequately and effectively protected and that they thereby benefit directly, on an equitable basis and on mutually agreed terms, from any utilization of such technologies, knowledge and practices or from any technological development directly derived the reform.*

### **Legislation**

- *New legislation should be developed and existing legislation revised, where appropriate, to support sustainable development, incorporating customary and traditional legal principles where appropriate, backed up with training and adequate resources for enforcement.*

### **Institutional development**

- *Appropriate national measures for institutional development should be adopted to integrate environmental, population and development strategies in national and sectoral development planning in order to achieve sustainable development.*

### **Information and participation**

- *Efforts should be made to increase the awareness and involvement of non-governmental organizations, women, local communities and other major groups in national planning, the development of environmentally sound and sustainable technologies, and the implementation of sustainable development programmes. They should include establishing or strengthening networks for the dissemination of information to assist effective participation in the planning and implementation of sustainable development activities.*

### **Human resource development**

- *National capacity-building should be increased at all levels by promoting public awareness and human resource development, including education, training and skill development, particularly of technicians, scientists and decision makers, to enable them to better plan and implement sustainable development programmes.*