



Government of the Republic of Kiribati

Kiribati Integrated Environment Policy

Vision Statement: -“The People of Kiribati continue to enjoy a safe and healthy environment that is resilient to the impacts of global climate change and supports livelihoods, human health, and sustainable development”

Coordinated by Environment and Conservation Division (ECD) of Ministry of Environment, Lands and Agriculture Development (MELAD)

December 2012

FOREWORD

The Kiribati Integrated Environment Policy (KIEP) is a key strategic policy document that marks an important milestone for the Government of Kiribati. It sets a solid policy platform for long term planning and action to respond to priority environmental issues, in particular the impacts of global climate change on our islands. It is a statement of intent and a document providing guidance and direction for government, local communities, development partners and all other stakeholders. This document is particularly relevant for 2012 the year of Rio+20 as we take stock of what we have done since the Earth Summit in 1992 and look to the future.

The KIEP is formulated through a 3 year broad based consultation process with government, private sector, Non-Government Organizations (NGOs), Community Support Organizations (CSO), outer islands and regional organizations like the Secretariat of the Pacific Environment Programme (SPREP). The consultation process proved to be a challenge due to the broad coverage of the environment sector.

The Government of Kiribati recognizes the environment as one of the three important pillars of sustainable development. The environment, its goods and its services is the foundation of livelihoods, human health and economy in Kiribati. It formed our culture and heritage and shapes the unique custom, traditions and way of living of the Kiribati people. This harmonious interaction with our atoll environment has sustained our people since time immemorial and needs to continue to do so.

People will always rely heavily on the environment to service their needs. Protecting, managing and utilizing the environment sustainable basis are vital, especially in a low-lying nation like Kiribati. Like many other Small Island Developing States (SIDS) and Least Developed Countries (LDC), Kiribati has suffered heavily the impacts of globalization in particular global climate change. The transition from a traditional subsistence lifestyle to a contemporary market-based economy, has brought with it key environmental challenges that adversely affect the overall health of the environment. Some of these key environmental challenges like the loss of island biodiversity, waste and pollution and the unsustainable use of natural resources are further magnified by the impacts of global climate change.

These challenges are most apparent in the heavily populated urban centres of Betio, South Tarawa and increasingly on Kiritimati Island. Increased human population, urbanization at alarming levels, degradation of the natural environment due to increased generation of non-biodegradable wastes and pollution put both the environment and economy under tremendous strain.

The KIEP recognizes and is intended to support and complement all other government strategic policy documents. It integrates all the thematic plans and strategies within the Environment and Conservation Division's mandate into a single strategic framework document. It will facilitate 'on the ground' implementation of the environment key policy area of the Kiribati Development Plan 2012 – 2015. Thus,

the KIEP will enhance the Government's effort to mainstream the environment into the national development planning as well as assisting to provide a framework that would assist line Ministries, development partners, communities and other stakeholders to effectively contribute to our collective actions to address environmental problems. This initiative is the first of its kind in the Pacific Islands region that also assists to set the scene by SPREP to replicate in other Pacific Islands as relevant.

We have learnt a lot during the formulation of the KIEP. The main lesson is the need to work together and as the National Political Focal Point for the environment, I invite and challenge you to join me in using the KIEP to make this implementation practical, concrete and a reality to fulfil the KIEP's Vision:

“The People of Kiribati continue to enjoy a safe and healthy environment that is resilient to the impacts of global climate change and supports livelihoods, human health, and sustainable development”

Ami bwai Te Mauri, Te Raoi ao Te Tabomoa.

Kam bati n rabwa.

Honourable Minister – Tiarite Kwong
Minister for Environment, Lands and Agriculture Development

ACKNOWLEDGEMENT

The development of the Kiribati Integrated Environment Policy (KIEP) is a notable national initiative on mainstreaming environment in the national development planning and this could not be accomplished without the contributions of many people.

An acknowledgement of the contributions of national key stakeholders during the three broad based consultations undertaken in August and December (2011) and January (2012) and thematic working groups meetings, which led to the formulation of the KIEP draft and finalization. These national stakeholders made up the various environment project committees including the Climate Change Study Team (CCST), Sustainable Land Management (SLM), National Biodiversity Planning Committee (NBPC), National Chemical Coordinating Committee (NCCC) and Waste Management Committee. These stakeholders include;

1. Office of Te Beretitenti (OB)
2. Ministry of Communication, Transport and Tourism Development (MCTTD)
3. Ministry of Commerce Industry and Cooperatives (MCIC)
4. Ministry of Education (MoE)
5. Ministry of Environment, Lands and Agriculture Development (MELAD)
6. Ministry of Finance and Economic Development (MFED)
7. Ministry of Fisheries and Marine Resources Development (MFMRD)
8. Ministry of Foreign Affairs and Immigration (MFAI)
9. Ministry of Health and Medical Services (MHMS)
10. Ministry of Internal and Social Affairs (MISA)
11. Ministry of Public Works and Utilities (MPWU)
12. Ministry of Labour and Human Resources Development (MLHRD)
13. Ministry of Line & Phoenix Islands Development (MLPID)

Acknowledging the contributions of the State Own Enterprises (KOIL and PUB), Non-Government Organizations (NGOs) which include the University of the South Pacific (USP), United Nations Development Programme, Kiribati Association of Non-Government Organizations (KANGO), Councils and Churches. Also appreciating the inputs received from the Outer Islands consultations undertaken during 2009 to 2011 including but not limited to Butaritari, Marakei, Abaiang, North Tarawa, Maiana, Aranuka, Abemama, Tabiteuea North and Onotoa

The support by the Secretaries in releasing their respective Officers to attend the series of consultations during the initial stage of the development of the KIEP and the subsequent submission of critical comments on the draft is acknowledged.

The support and guidance provided by the MELAD present and former admin officers throughout the whole process is recognized.

The inspiration of the former Director of the Environment and Conservation Division, Mrs. Tererei Abete-Reema, her leadership in securing the approval for the development of the KIEP and for galvanizing a strong support from staff in undertaking this national important work. Also recognizing the perseverance and unwavering support and determination by the present and former Environment and Conservation Division staff in the whole process in undertaking the ground work including the contribution in the drafting.

A special acknowledgement of the invaluable technical assistance provided by the Environmental Monitoring and Governance Division of the Secretariat of the Pacific Regional Environmental Programme (SPREP): Mr. Sefanaia Nawadra (Director), Dr. Jill Key (Capacity Development Adviser), Mr. Tepa Suaesi (Environment Officer) and Ms. Easter Galuvao (Biodiversity Advisor) are all gratefully acknowledged.

We would like to acknowledge the kind financial support provided by the Multilateral Environment Agreements (MEAs) project for the Africa-Caribbean-Pacific (ACP) funded by the European Union (EU), implemented by the United Nations Environment Programme (UNEP) and executed in the Pacific by SPREP; the Programme of Work on Protected Areas (POWPA) implemented through UNOPs, the Climate Change Second National Communications (SNC), and the Sustainable Land Management (SLM) both Global Environment Facility (GEF) funded projects implemented by the United Nations Development Programme (UNDP).

LIST OF ACRONYMS

ALD	Agriculture and Livestock Division
AusAID	Australian Assistance for International Development
BTC	Betio Town Council
CBPA	Community-based Protected Area
CDRC	Curriculum Development and Resources Centre
CI	Conservation International
CMNPHS	College of Medicine, Nursing and Public Health Sciences
CSO	Civil Society Organizations
EC	European Commission
ECD	Environment and Conservation Division
EHU	Environment Health Unit
EPU	Economic Planning Unit
ESAT	Environmentally Safe Aggregates Tarawa
EU	European Union
EHU	Environmental Health Unit
FFA	Forum Fisheries Agency
FNU	Fiji National University
IUCN	International Union of Conservation Nations
ITPGFRA	Treaty on Plant Genetic Resource for Food and Agriculture
JICA	Japan International Cooperation Agency
KANGO	Kiribati Association of Non-governmental Organisations
KCCI	Kiribati Chamber of Commerce and Industry

KDP	Kiribati Development Plan
KiriCAN	Kiribati Climate Action Network
KPA	Kiribati Ports Authority
KHC	Kiribati Housing Corporation
KPS	Kiribati Police Services
KMS	Kiribati Meteorological Station
KNTD	Kiribati National Tourism Office
KUC	Kiritimati Urban Council
LMD	Lands Management Division
MEA	Multi Environment Agreement
MCTTD	Ministry of Communication, Tourism and Transport Development
MCIC	Ministry of Commerce, Industry and Cooperatives
MELAD	Ministry of Environment, Lands and Agriculture Development
MFAI	Ministry of Foreign Affairs and Immigration
MFED	Ministry of Finance and Economic Development
MFMRD	Ministry of Fisheries, Mineral and Resources Development
MHMS	Ministry of Health and Medical Services
MISA	Ministry of Internal and Social Affairs
MLHRD	Ministry of Labour and Human Resource Development
MOE	Ministry of Education
MOP	Ministry Operational Plan
MPWU	Ministry of Public Works and Utilities
NEPO	National Economic Planning Office
NGO	Non-Government Organization

NSO	National Statistics Office
NZAID	New Zealand Assistance for International Development
OAG	Office of the Attorney General
OB	Office of Te-Beretitenti
PET	Polyethylene terephthalate
PNA	Party to the Nauru Agreement
PSO	Public Service Office
PUB	Public Utilities Board
SLM	Sustainable Land Management
SOPAC	Pacific Islands Applied Geosciences Commission
SPC	Secretary of the Pacific Community
SPREP	Secretariat of the Pacific Environment Programme
TUC	Teinainano Urban Council
WEU	Water Engineering Unit
UDP	Urban Development Project
UNCBD	United Nations Convention on the Conservation of Biological Diversity
UNCCD	United Nations Convention to Combat Desertification, Land Degradation and Droughts
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USP	University of the South Pacific

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1 POLICY FRAMEWORK

1.1 Environment and Development Context

The Republic of Kiribati is a small island nation consisting of 32 atolls and one raised coral island with a total land area of 800 square kilometres spread over an oceanic exclusive economic zone (EEZ) of 3.5 million square kilometres. Kiribati lies close to the equator, located between latitude 4 degrees north and 11 degrees south; and longitude 170 degrees east and 150 degrees west. There are three island chains with the Gilbert Islands in the west, the Phoenix Islands in the centre and the Line Islands in the east. Kiribati was part of the former British colony of the Gilbert and Ellice Islands and gained its independence in 1979. In the 2010 census Kiribati had a population of 103,000.

The island atolls of Kiribati support a rich culture that relies heavily on a diverse and healthy marine environment for its survival. As self-contained systems, islands are living laboratories for evolution—each one holds an irreplaceable piece of Kiribati's natural inheritance. Because of their isolation these islands support more rare and endangered species per capita than most other places in the world. Kiribati's ocean waters are amongst the most productive and least polluted on earth, it has one of the largest stocks of tuna and related pelagic species that underpins its national economy.

Since it was first settled, the people of Kiribati have relied on their natural resources for survival. They still do with an estimated 80% of the population primarily living a subsistence life style. The marine environment sustains them and they depend on it for food, transport, traditional practices and economic opportunity. On atolls the terrestrial environment is more limited but it is essential for water, food and shelter.

The transition from a traditional subsistence lifestyle to a contemporary market-based economy has brought with it key environmental challenges. These challenges are most apparent in the heavily populated urban centres of Betio, South Tarawa and to a certain extent Kiritimati Island. South Tarawa is also, where over 50% of the population live. Kiribati is one of the countries' most vulnerable to global climate change and addressing the impacts of global climate change dominates the national environment and development agenda. However Kiribati needs to address climate change in an integrated and holistic manner considering the other key areas of biodiversity conservation, waste and pollution management and sustainable use of natural resources in particular marine and water resources. Eco-system based approaches need to be adopted to ensure that development aspirations are sustained by natural systems. The need for behavioural change to address environmental problems, in particular waste management and the critical need for pollution control on South Tarawa as the capital island to some extent, Kiritimati Island, is most readily apparent on heavily populated urban centres but also on other Islands.

Since independence Kiribati has managed its development through a 4 year development planning cycle. The current Kiribati Development Plan (KDP) 2008 -2011 had for the first time Environment as one of its Key Policy Areas (KPA 4) amongst its 6 Key Policy Areas. The Kiribati government is currently in the process of reviewing this development plan and formulating the KDP 2012-2015. This Kiribati Integrated Environment Policy (KIEP) is intended to contribute to the review and revised targets and activities of the KDP 2012-2015. It also sets the direction towards long term preparations and planning towards building and enhancing the resilience of Kiribati, its local communities and people to respond to the impacts of global climate change.

1.2 Rationale for a Kiribati Integrated Environment Policy

The environment has emerged as a Key Policy Area (KPA) of the KDP since 2008. This is a huge ‘break through success’ for the environment sector considering for the first time, the appearance of the environment on the development agenda for Kiribati at national level. Building on this, MELAD seizes the opportunity to enhance the mainstreaming of the environment into the national development agenda, through the development of this ‘Kiribati Integrated Environment Policy’ (KIEP). This KIEP bridges the gap in fulfilling and advancing the objectives of the Kiribati National Environment Management Strategy (NEMS) that was developed in 1993. One of the objectives of the NEMS is to coordinate the various environmental activities. In the absence of a review to bring the NEMS in line with Kiribati’s current and emerging environmental issues has led to the evolution of various key environment thematic area plans and action strategies. The complexity of issues surrounding the implementation of these plans and action strategies and the supporting roles of the various stakeholders from other line Ministries and civil society prompted the need for effective mechanisms. Such mechanisms would strengthen the coordination and collaboration between ECD MELAD and the various Government Ministries and civil society in order to enhance their collective impact and effectiveness in addressing current and emergent environmental problems and issues in a holistic manner.

Hence, the KIEP is aimed at strengthening the coordination, collaboration and coherent implementation of the existing thematic environmental area plans and activities. It helps clarify the roles and responsibilities of the different networks of relevant and key sectors and stakeholders in a rapidly expanding national environmental planning regime and to develop mechanisms that will increase effective stakeholder consultation, interaction and cooperation.

The KIEP will serve as the framework document through which, activities carried out under the Environment KPA will be guided. It does not replace the existing thematic area plans and action strategies but rather provides an integrated framework for their effective implementation. The KIEP will be tied into the term of the Kiribati Development Plan and seeks to strengthen the environment pillar and in that way effectively contributes towards the sustainable development of the Republic of Kiribati. It will follow the KDP’s monitoring and review cycle.

The KIEP is also structured in a way that reflect the important roles of other Line Ministries outside MELAD that have direct or indirect roles to supporting environment protection and management from their respective portfolios. The KIEP is a blueprint document that will provide direct technical support towards achieving expected outputs under the relevant strategies of this key priority area, especially in areas concerning environment protection and management. The KIEP also provides a comprehensive roadmap towards addressing national priority problems that affect the overall health of the environment as well as affecting the environment protection and management at the national level. As a roadmap, the KIEP also serves as a guide to the Environment & Conservation Division (ECD) of MELAD as the Environment Authority in Kiribati, towards long term preparations and planning to respond to the impacts of global climate change and subsequently enhance the resilience of the environment.

1.3 Process of KIEP Formulation

The outcome of a series of outer islands and national consultations undertaken throughout Kiribati from 2009 – 2011 have been instrumental in identifying national priority areas that affect environmental protection and management in Kiribati. These have also contributed to the KIEP formulation. The KIEP has been formulated through participatory consultative processes where the initial stakeholder consultations were undertaken with various outer islands. This was followed by in depth discussions by thematic working groups on the outcomes of the consultations to come up with the first draft. The first draft was circulated to members of the thematic area working groups for comments. A second round of consultations was then undertaken to 9 outer islands - Butaritari, Marakei, Abaiang; North Tarawa; Beru; Tabiteuea South; Beru; and Onotoa were visited to do participatory consultations with stakeholders at the island, village and local community levels. This is to solicit views on the first draft and raise new issues. The findings of the inter-island consultation together with stakeholder comments on the first draft and further discussions by the thematic groups were used to consolidate into a draft that was presented and discussed with stakeholders in a half day workshop on 2nd December 2011. The outcome of this second round of consultations makes up the 2nd draft which was circulated to stakeholders for their comment on the 6th December 2011. Stakeholders were requested to submit comments by Friday 16th December, 2011.

In early January 2012, a final round of consultation was undertaken again in the form of a workshop. Stakeholders, especially those who have provided comments and feedbacks on the second draft of the KIEP were invited. This provided an opportunity for the stakeholders to be updated on the latest development of the KIEP and the next stage to consider within a specified and agreed timeframe, in working towards finalizing this KIEP. From these consultative processes, it was agreed that ECD would work with its various KIEP working group in finalizing inputs and feedbacks for the final round. The outcome of which, will form the basis of the final KIEP to be considered for the secretaries and Cabinet levels through clearance and the submission of MELAD administration.

1.4 Vision Statement

“The people of Kiribati continue to enjoy a safe and healthy environment that is resilient to the impacts of global climate change and supports livelihoods, human health and sustainable development”

1.5 Mandate and Scope of the Policy

The Environment Unit was first established in 1992 within the then Ministry of Environment and Natural Resources Development. In 1999 it was upgraded into the Environment and Conservation Division (ECD) of the Ministry of Environment and Social Development. In 2003, as a result of a ministerial reshuffle, the main powers, roles and responsibilities of the ECD are under the Environment Act 1999 and its amendment of 2007. It also has supporting responsibilities to a number of Acts and Ordinances such as:

- Wildlife Ordinance 1977
- Quarantine Ordinance 1977
- Native Land Ordinance 1977
- Foreshore and Land Reclamation Ordinance 1977
- Land Planning Ordinance 1977
- National Disaster Act 1993
- Recreation Reserves Act 1996
- Minerals Development Licensing 1998 CAP 58
- Public Utilities Act 1999
- State lands Act 2001
- Squatters Act 2005
- Phoenix Island Protected Areas (PIPA) Regulations 2008
- Fisheries Act 2010

Kiribati is also a Party to a number of regional and global multilateral environment and related agreements (MEAs) including the:

- United Nations Framework Convention on Climate Change (UNFCCC)
- Kyoto Protocol
- United Nations Convention to Combat Desertification, Land Degradation and Drought (UNCCD)

- United Nations Convention on Biological Diversity (UNCBD)
- Cartagena Protocol on Bio-safety to the Convention on Biological Diversity
- International Whaling Convention (IWC)
- Convention on the Conservation and Management of the High Seas Fishery Resources in the South Pacific Ocean
- Pacific Tuna Fisheries
- World Heritage Convention (WHC)
- Vienna Convention for the Protection of the Ozone Layer
- Montreal Protocol to the Vienna Convention (Montreal Protocol on Substances that Deplete the Ozone Layer) and its Amendments
- Stockholm Convention on Persistent Organic Pollutants (POPs)
- Basel Convention on the Control of Trans-boundary Movements of Hazardous Waste and their Disposal
- Waigani Convention
- London Convention
- International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996; Marine Pollution: UNCLOS (Chapters 1 & 12) – A
- MARPOL (International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto) Annexes I, II, III, IV, V and VI
- CLC Protocol 92
- Fund Protocol 92
- Bunkers Convention 2001
- Anti Fouling Convention 2001
- Ballast Water Management Convention 2004
- SPREP Pollution Emergency (Protocol concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region)
- SPREP Dumping Protocol

In the early 1990s, Kiribati with the assistance of the Secretariat of the Pacific Regional Environment Programme (SPREP) formulated its National Environment Management Strategy (NEMS). The scope of work carried out by ECD has expanded in the last two decades to address key environmental thematic areas:

- climate change;
- biodiversity conservation and management;

- waste management and pollution control;
- resource management;
- environmental governance.

A number of key policy and strategic actions documents exist for each thematic area:

Climate Change:

- First National Communication 1999;
- National Implementation Strategy (NIS) 2001;
- National Adaptation Program of Action (NAPA);
- Climate Change Adaptation Strategy 2005;
- Draft Climate Change Framework;
- National Energy Policy;

Biodiversity Conservation and Management:

- Kiribati Country Report;
- Second National Report;
- Fourth National Report 2010;
- 2nd National Report to the Cartagena Protocol on Bio-safety 2011;
- National Biodiversity Strategy and Action Plan 2007-2011;
- Key Biodiversity Area Report;
- Invasive Alien Species Strategic Action Plans;
- PIPA Management Plan 2010-2014;
- National Bio-safety Framework 2010;

Waste Management and Pollution Control:

- Draft National Waste Management Strategy;
- National Marine Pollution Contingency Plan;
- National Chemical Profile;
- Persistent Organic Pollutants (POPs) National Implementation Plan (NIP);

- Capacity Assessment for the Sound Management of Chemicals and National Strategic Approach to International Chemical Management (SAICM) Implementation;
- Electrical and Electronic Waste Baseline Study;
- Draft Landfill Operational Guidelines;
- National Programme of Action (NPA) to protect the marine environment from land based pollution activities;
- National HCFC Phase-out Management Plan

Resource Management:

- Building Code;
- Tarawa Water Master Plan;
- National Water Resources Policy 2008;
- National Sanitation Policy;
- National Action Plan (NAP) to address Land Degradation and Droughts 2007;
- Tarawa Lagoon Management Plan;

Environmental Governance:

- Environment Impact Assessment (EIA) Process;
- National Environment Management Strategy (NEMS) 1994;
- State of Environment Report (SoE) 1993;
- State of Environment Report (SoE) 2004;
- National Capacity Self-Assessment (NCSA) 2011;
- Kiribati Development Plan 2008-2011;
- MELAD Ministry Operational Plan (MOP);
- Environment Legislative Review 1993;
- Draft National Environment Communication Strategy;
- Memorandum of Understanding for PIPA;

As stated earlier, the Kiribati Integrated Environment Policy (KIEP) does not replace these policy and strategic actions documents and the work of their supporting stakeholder networks. Rather, it provides an integrated framework for their implementation.

1.6 Policy Goal and Objectives

The goals of this policy are key stages to be achieved within the next ten years in the planning and management of Kiribati's environment. These goals are set for the abovementioned five thematic areas: climate change; island biodiversity conservation and management; waste management and pollution control; resource management; and environmental governance.

The table below sets out the thematic policy goals and strategic objectives. These directions form the basis of the priority strategies and targets for the policy implementation in the next four years and beyond that are presented in Section 3.

ENVIRONMENT THEME	POLICY GOAL	STRATEGIC POLICY OBJECTIVES
Climate Change	To strengthen national capacity for effective response and adaptation to climate change, with a particular focus on environmental protection and management	<ul style="list-style-type: none"> • To improve knowledge, information and national adaptive capacity for responding and adapting to climate change • To build on existing adaptation measures and continue with implementation of concrete and practical adaptation measures aimed at protecting and sustaining environment services • To implement mitigation measures and strengthen synergies between climate change mitigation and environment sustainability • To facilitate long term planning and preparations to respond to the impacts of global climate change in order to build the resilience of the environment through coherent climate change programs undertaken at national level through MELAD
Island Biodiversity Conservation & Management	To strengthen national capacity and institutional frameworks for the effective conservation, management and sustainable use of Kiribati's terrestrial and marine biodiversity	<ul style="list-style-type: none"> • To enhance the storage, protection and dissemination of knowledge, and information to the general public on the conservation, sustainable use, and management of island biodiversity • To improve and strengthen national coordination, collaboration and cooperation between national stakeholders • To build on and strengthen national capacity and

		<p>mechanisms to effectively manage, conserve and sustainably utilize the island biodiversity at all levels of society</p> <ul style="list-style-type: none"> • To strengthen national capacity to effectively respond to the impacts of climate change on the island biodiversity • To facilitate long term planning and preparations to respond to the impacts of global climate change in order to build the resilience of the environment through coherent biodiversity conservation and management programs undertaken at national level through MELAD
Waste Management and Pollution Control		<ul style="list-style-type: none"> • To foster behavioural changes through education, awareness raising campaigns, enforcement of regulations, and capacity building that minimise waste generation and promote best waste management and pollution prevention practices • To ensure that the management of waste and control of pollution are financially self-sustaining. • To mainstream chemical and waste management into national development programmes • To facilitate long term planning and preparations to respond to the impacts of global climate change in order to build the resilience of the environment through integrated waste management and pollution control programs undertaken at a national level through MELAD
Resource Management	To promote the sustainable use and development of Kiribati's non- living land, water, coastal and mineral resources	<ul style="list-style-type: none"> • To support the implementation of effective sustainable landuse management plans • To support the protection and conservation of limited and vulnerable water resources • To combat the degradation and erosion of all islands' foreshores and coastal areas • To promote sustainable agriculture and soil

		<ul style="list-style-type: none"> conservation practices To support the sustainable use and development of mineral resources To improve education and awareness through communication and dissemination of information To facilitate long term planning and preparations to respond to the impacts of global climate change in order to build the resilience of the environment through ECD overall programs undertaken at national level through MELAD
Environmental Governance	To advance the development of capacities and systems for implementing effective environmental governance	<ul style="list-style-type: none"> To enhance capacities and engagement of stakeholders for effective environmental management and sustainable development at the individual, institutional and systemic levels To strengthen awareness and enforcement of environmental policies and legislations To improve monitoring and management of data for MEAs and state of the environment reporting and make this available for national development policy and planning processes To facilitate long term planning and preparations to respond to the impacts of global climate change in order to build the resilience of the environment through ECD overall programs undertaken at national level through MELAD

1.7 Roles and Responsibilities

The Ministry of Environment, Lands and Agriculture Development (MELAD), through its Environment and Conservation Division (ECD), is the national environment authority in Kiribati. ECD is mandated under the Environment Act 1999 (amended in

2007) as the responsible authority for the implementation of the KIEP. ECD will be responsible for undertaking and coordinating its implementation with MELAD administration providing the high level support and oversight role.

MELAD Administration has a critical role in the approval for the implementation of the KIEP at national, outer islands and village levels. The Secretary for MELAD is the Senior Responsible Officer for the environment portfolio of MELAD. The incumbent is also the National Focal Point for the environment, including all MEAs to which Kiribati is a Party to. The MELAD Honourable Minister is the political focal point for the environment at national government level in Kiribati.

Due to the cross-sectoral nature of the KIEP, a number of different Government agencies will play instrumental role in providing appropriate sectoral supports to ECD in sectoral areas that are directly relevant to fulfilling the overall environment portfolio of MELAD. Especially in specific sector areas that have overall supports towards achieving environment protection and management and subsequently contribute towards achieving a sustainable environment that is resilient, to the impacts of global climate change. Hence, this KIEP also outlines key activities of all relevant subsectors (in alignment with key sectors relevant plans under each thematic area) that these sectors are spearheading under their specific Ministries' portfolios. This is with a view of promoting and enhancing collaboration and partnership between ECD and the key sectors concerned. Particularly in areas that need parallel and synergised implementation under this KIEP through the relevant portfolio of the Kiribati National Government, in order to address environmental problems and issues in a holistic manner.

These lead agencies are:

Thematic Area	Lead Agencies
Climate Change:	
- Science of climate change	ECD
- Global climate change impacts on the overall health of the environment	ECD
- Climate Change Policy Response and Coordination	OB
Biodiversity:	
- Marine Biodiversity	ECD
- Terrestrial Biodiversity	ECD
- Phoenix Islands Protected Area	PIPA
- Recreational Areas	ECD/WCU
- Invasive alien species	ECD/WCU
Wastes and Chemicals:	

- Waste & Pollution	ECD, TUC, BTC
- Marine pollution	ECD, Marine Division, MTC
- Awareness raising, regulation and enforcement	ECD
- Waste collection and management	BTC, TUC, KUC
- Landfill operation and management	TUC & BTC
- Sewerage management	MPWU & PUB
- Hazardous waste	ECD
- Recycling	ECD & Te Kaoki Mange
- Ozone depleting substances	ECD, Customs
Resource Management:	
- SLM, awareness, gravel extraction and coordination	ECD, LMD, Mineral Unit – MFMRD & ESAT
- Land issues	LMD
- Water conservation and management	Water Engineering Unit
- Deep sea minerals	Mineral Unit
- Sustainable Agriculture	ALD
- Coastal	ECD, Mineral Unit & OB – (KAP III)
Environment Governance	
- Prosecution	WCU, Police, & OAG
- Mainstreaming	MFED

The role of the lead agency is supported by other ministries through their relevant mandates and functions and through multi-stakeholder national steering or coordinating committees. These committees coordinate the planning and implementation of key strategic environmental thematic action plans.

Similarly, civil society has also instrumental role and responsibilities to assist in implementing the KIEP through exploring appropriate private sector partnership that enhances local communities' involvement and participation at national, island and village levels.

- Role of Island Councils

- Role of NGOs
- Role of Women
- Role of Youths
- Role of Private Sector
- Role of Churches
- Role of Island, Village and Church Leaders/communities

1.8 Consultation and Coordination

The effective implementation of the policy will need consultation and coordination between the ECD and its stakeholders. The ECD will establish an Environment Advisory Committee to provide advice, consultation and coordination for the implementation, monitoring and review of the policy and its strategic plan at national level. The membership of the Environment Advisory Committee will be drawn from senior representatives of government agencies with representatives of other key stakeholders such as NGOs, churches and the private sector.

The key thematic areas of the policy will be supported by existing technical committees spearheaded and coordinated under each thematic areas and programs implemented by MELAD through ECD:

• Thematic area	• Name of Committee
• Climate Change	• Climate Change Study Team / National Adaptation Steering Committee
• Biodiversity	• National Biodiversity Planning Committee
• Waste and pollution	• National Chemical Coordination Committee • Proposed National Waste Management Committee • National Marine Pollution Advisory Committee • National Ozone Committee • Kiribati Refrigeration & Air Conditioning Technician Association • National Organic Waste Committee • Health-Care Waste Management Committee

	<ul style="list-style-type: none"> National E-waste Committee
<ul style="list-style-type: none"> Resource Management 	<ul style="list-style-type: none"> Central Land Planning Board/ Sustainable Land Management Planning Team National Water and Sanitation Steering Committee Foreshore Management Committee National Food Security Committee National Water Quality Monitoring Committee
<ul style="list-style-type: none"> Environmental Governance 	<ul style="list-style-type: none"> Environment Advisory Committee KDP Environment policy drafting committee Environment Enforcement Advisory Group KDP Environment Sector Group

1.9 Regional and Global Environmental Frameworks

Kiribati is party to a number of regional and global conventions or multilateral environment agreements (MEAs) listed in section 1.4. This policy will provide the framework through which Kiribati will undertake activities towards meeting its national and international (as relevant only) obligations under these MEAs.

There are also a number of global and regional action frameworks towards which this policy will contribute. These include:

At the global level:

- Agenda 21
- The Johannesburg Plan of Implementation
- Millennium Development Goals (MDGs)
Specifically for Small Island Developing States (SIDS)
- The Barbados Plan of Action
- The Mauritius Strategy for Implementation

And the following are key regional planning frameworks that support Kiribati's environmental management work

- The Pacific Plan
- SPREP Strategic Plan 2011-2015
- Solid Waste Management Strategy for the Pacific Region 2010 – 2015
- Regional Asbestos Strategy 2011
- Regional E-waste Strategy 2012
- Regional Health Care Waste Management Strategy 2013
- Pacific Ocean Pollution Prevention Programme Strategy (PACPOL) Strategy
- Pacific Islands Regional Marine Spill Contingency Plan (PACPLAN)
- Waigani and Stockholm Conventions
- The Pacific Islands Framework of Action to Combat Climate Change 2006 -2015
- The Pacific Action Strategy for the Conservation of Nature 2008 – 2012
- The Pacific Islands Regional HCFC Phase-Out Management Plan

2.0 GUIDING PRINCIPLES

The formulation and implementation of this policy is guided by the following four (4) key principles: leadership and good governance; collective responsibility for the environment; indigenous knowledge, practices and innovations; and integration of the environment and development.

2.1 Leadership and Good Governance

This principle generally means that the government of Kiribati will lead efforts to protect, manage and promote the sustainable use of the country's environment and its natural resources. It implies upholding good governing practices of transparency, accountability, shared responsibility and equity in the consideration of environmental requirements in development practices. It respects everyone's right to a clean and healthy environment. And it recognizes key principles for respecting the needs and capacities of the natural environment such as the precautionary, polluter pays and carrying capacity principles.

The *Precautionary Principle* is defined in the UN Agenda 21 Rio Declaration as “*Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation*”.

The *Polluter Pays Principle* means that populations are justly responsible for the waste and pollution they generate either directly or through payments for the available mitigation and management services. The principle also extends to society's responsibility to directly pay for the programs that help replenish, restore and rehabilitate natural resources and the environment that were exploited or degraded through extensive development activities.

The *Carrying Capacity Principle* may be defined as the ability of the environment to sustain the needs of human development and its own natural requirements. As such development should respect and be maintained within the limits of the carrying capacities of its hosting environment if it is to achieve a more environmentally and socially sound and sustainable pathway.

2.2 Collective Responsibility for the Environment

Protecting, managing and sustainably using the environment and its goods and services are generally accepted as everyone's responsibility. This responsibility is carried out both at the individual and collective levels. This principle recognises each individual as holding the key responsibility. It also recognises the relevant roles and influences that all sectors and institutions of the society have, in contributing to the protection and management of Kiribati's environment and its goods and services.

2.3 Indigenous Knowledge, Practices and Innovations

I- Kiribati people have developed valuable indigenous knowledge and practices that can contribute positively to the sustainable use and effective management of their natural resources and the environment. These traditions and practices are important elements of their culture and heritage that forms their national identity. These will be integrated into the implementation of this policy. ECD has a significant role in providing a conduit through protecting, managing and sustainably utilizing island biodiversity, to which indigenous knowledge, practices and innovations are dependent on.

2.4 Integration of the Environment and Development

This principle recognises the organic nature of environment and development in the sense that the environment underpins development. It recognises the challenges in reconciling and balancing the needs of the environment and the development needs of human society in Kiribati. It is vital that economic and/or physical development must be linked with environmental protection and not degrading it to facilitate long term sustainability. It emphasizes the critical importance of credible, relevant and legitimate

scientific investigations and information to the integration and mainstreaming of the environment into development planning and implementation. And it recognises appropriate value systems of the people and society in Kiribati that promotes and support the integrity of the environment as a system and its goods and services.

3.0 STRATEGIC ENVIRONMENT PLAN 2012 - 2016

The Strategic Environment Plan 2012-2015 outlines in details the strategic environment priorities of the five environmental policy thematic areas: climate change; biodiversity conservation and management; waste management and pollution control; resource management; and environmental governance. It sets in place a national strategy towards long term preparations and planning to respond to the impacts of global climate change and subsequently enhance the resilience of the environment in Kiribati. This Strategic Environment Plan will also guide the formulation of MELAD's annual MOP and contribute towards the KDP, where the environment portfolio is concerned. It will guide the development of annual implementation work-plans and budgets for MELAD's ECD and those of its stakeholders as appropriate. It also provides performance indicators defined to track progress. This will be also the framework for monitoring and reviewing the progress of environment priorities indicated under the environment key policy area of the KDP. As such, this Plan will have instrumental role in providing information that would be useful in determining and updating on the state of the environment in Kiribati as and when needed.

The development of the strategic plan was guided by the experiences and lessons gained from the implementation of national environmental programs in the last KDP 2008 – 2011, under the existing environment thematic action plans coordinated by ECD, and by other government and non-government organisations. Among the key environmental thematic action plans are the NAPA, NBSAP and NAP. There are a number of sectoral policies, programmes and plans whose implementation are crucial to achieving the policy objectives of the KIEP. These include, among others, the National Energy Policy, the National Water Resources Policy and Implementation Plan 2008 that are coordinated by Ministry of Public Works and Utilities (MPWU); relevant environmental health programs that are coordinated by the Ministry of Health and Medical Services (MHMS); relevant environment education programs by the Ministry of Education (MoE); eco-tourism programs of the Ministry of Communication, Transport and Tourism Development (MCTTD) and the outer island development and cultural preservation programmes of the Ministry of Internal and Social Affairs (MISA).

3.1 Climate Change

Goal: Strengthen national capacity to effectively respond and adapt to climate change, with a particular focus on environmental protection and management

Background:

Kiribati is one of the most vulnerable countries to the adverse impacts of climate change. The atolls of Kiribati rise 3-4 meters above mean sea level and are on average, a few hundred meters wide. These atolls are the home of nearly 110,000 (2010 Census) I - Kiribati people with their distinct culture. Inundation and erosion destroy key areas of land within the already small land area of each atoll, and storm surges contaminate the fresh groundwater lens, which is vital for health and survival. Fresh groundwater lens is also the only main source of freshwater resources in Kiribati. An economic evaluation of the costs of climate change related risks has been estimated to be 35% of Kiribati GDP (NAPA 2007). The estimate takes into account only the potential impacts of climate change on coastal zone (US\$7-\$13 million a year) and water resources (US\$1-\$3 million a year). In 1998 the GDP was US\$47 million (WB 2000).

The United Nations Framework Convention on Climate Change (UNFCCC) entered into force as an international agreement on March 1994 and entered into force specifically for Kiribati in May 1995, with an Initial National Communication to the Convention in 1999. The Convention sets out blueprints for the common but differentiated responsibilities of parties to address the global concern of climate change. Least developed countries (LDCs) and Small Island Developing States (SIDS) are among the countries that are considered most vulnerable to climate change. They are so, because in the case of the former their special circumstances make them unable to meet the costs of adaptation needs, and the latter because of their physical susceptibility to the effects of climate change. Kiribati is in both of these groups.

The Government of Kiribati has embarked in the process of mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) in its national development processes through a series of initiatives: the launch of the Kiribati Adaptation Program (KAP) in 2003, the adoption of a Climate Change Adaptation Policy Note and a Climate Change Adaptation Strategy in 2005, the consultation process and consequent adoption of a National Adaptation Program of Action (NAPA) in 2007 and the ongoing implementation phase of KAP. In addition, the Kiribati Development Plan (KDP) which covers the period 2007-2011 recognizes the potentially high cost and effects of climate change on economic growth and social development. The KDP also recognizes the central importance of environment sustainability within the development processes by allocating environment as

one of its key Policy areas, within which climate change is reflected. The recently adopted National Water Resource Policy (2008) defines the priority issues in the water sector taking into account climate change adaptation. Priority issues in the energy sector, given in the Kiribati National Energy Policy, also takes into consideration climate change mitigation and environment safeguards.

Legislation and policies

- Disaster Act 1993
- Climate Change Adaptation Policy Statement and Strategy 2004
- National Water Resource Policy and National Water Resource Implementation Plan 2008
- (National Sanitation Policy and National Sanitation Implementation Plan 2008)
- Kiribati National Energy Policy 2009
- Government Policy Statement for 2007-2011
- Draft National Framework on Climate Change 2010

Contextual Notes:

- Disaster risk reduction is a separate but similar strategy
- Vulnerability of outer islands need to be completed and well documented to inform decisions for future adaptation options
- The context of this Policy should focus on priorities that are oriented to environmental management in support of the National Climate Change Framework and the overall Kiribati Development Plan

Sources used to framework:

- NAPA 2007
- Climate Change information page in the Environment and Conservation Division website <http://www.environment.gov.ki/>
- KAPII various outcome documents 2006 - 2010
- MELAD Ministry Operational Plan (MOP) 2009 – 2011
- Kiribati Development Plan 2008 – 2011
- Kiribati Energy Policy 2009
- Kiribati National Capacity Self- Assessment to the Rio Convention Report 2009
- Draft Kiribati Meteorological Service Strategic Plan 2012-2018
- Kiribati government climate change portal <http://www.climate.gov.ki/>
- Initial national communication 1999 (second to be presented in Durban 2011)

Based on the above information and national consultations, climate change was recognized as a prominent threat on the environment and therefore need to be integrated as one of the key policy areas of the Strategic Environment Policy and its Plan for the period 2012-2015. This climate change area has an overall goal and three main thematic operational goals which are set out in the matrix below. The table outlines strategies, targets, indicators and potential implementing partners' distinctive to each goal. These objectives include:

1. Improving knowledge, information and national adaptive capacity to respond and adapt to climate change.
2. To build on existing adaptation measures and continue with implementation of concrete adaptation measures aimed at protecting the environment as a whole system and its services.
3. To implement mitigation measures and strengthen synergies between climate change mitigation and environment sustainability.

Climate Change Policy Area	Strategies (2012-2016)	Targets	Performance Indicators	Key Implementing Agencies/Partners
<i>CC1: To improve knowledge, information and national adaptive capacity for responding and adapting to climate change</i>				
a) Research, Knowledge and Information	1. Conduct Vulnerability and Adaptation Assessments (V&A) on the other sectors and the rest of islands of Kiribati	Documentation of the vulnerability of more sectors on South Tarawa and rest of islands in Kiribati	<ul style="list-style-type: none"> • Number of specific sector V&A and Number of V&A in other islands of Kiribati • Number of reviewed V&A studies in each sector/islands 	ECD, SOPAC_SPC, SPREP, USP, Line Ministries, NGOs
	2. Setting up the Environmental Data and Information Centre incorporating climate change information	Completion and operationalisation of Environment Information Centre and its various outputs	<ul style="list-style-type: none"> • Number of data sharing events among agencies inputting to the Environment Information Centre Number of climate data and analysis on 	ECD, KMS, WEU, OB, LMD, Mineral Unit, NSO, SOPAC_SPC, SPREP, USP, Line Ministries, NGOs

			climate trends/projections archived and accessible to public	
	3. Encouraging mechanisms to promote research on emerging climate change areas and exchange of information on status of environment	Documentation and enhanced public understanding on new climate change information and its linkages with the environment Outputs of research on climate change and environment used to guide national adaptation or informs decision making on adaptation	<ul style="list-style-type: none"> • Number of research undertaken on climate change • Number of reviewed research papers on climate change • Number of exchange public forums on climate change 	ECD, PSO, MoE, Line Ministries NSO, SPREP, USP, SPC, USP, College of Medicine, Nursing and Public Health Sciences (CMNPHS), Fiji National University (FNU)
b) Education, Awareness and Training	1. Encouraging mechanisms to incorporate climate change in school curriculum at all levels	Enhanced awareness and knowledge on climate change at Primary, Secondary Schools	<ul style="list-style-type: none"> • Number of supports/initiatives provided to encourage incorporation of climate change into school curricula • Number of school curricula incorporating climate change 	MoE, ECD, USP, SPREP, SOPAC - SPC, other relevant institutions

	2. Update and implement National communication strategies to include climate change and its relation to environment sustainability	Enhanced awareness and knowledge on climate change at Policy-makers level, civil servants and general public	<ul style="list-style-type: none"> Number of events recorded as implementing Communication Strategy provisions related to climate change 	ECD, EPU, WEU, LMD, OB, KNTO, EHU, SPREP, SPC_SOPAC
	3. Build the diversity of communities' capacity to adapt to climate change and environment challenges	Up-skilled population on other environment-based areas e.g. training on traditional agricultural practices and methodologies conducive to climate change, mangrove replanting, implementing conservation methods	<ul style="list-style-type: none"> Number of initiatives on technical and vocational, community level trainings Number of trainings on agricultural methods conducive to climate change, conservation, mangrove planting to communities – aimed at building adaptive capacity of communities 	ECD, MoE, OB, SPREP, MLHRD, PSO, Agriculture, Fisheries
c) Implementing MEAs (Multi-Environment Agreements) related to Climate Change	1. Advocacy of national issues at international forums	Recognition and integration of Kiribati issues on climate change at international and regional fora and their outcomes	<ul style="list-style-type: none"> Number of decisions from UNFCCC favourable to Kiribati Number of reports and websites 	ECD, Foreign Affairs, OB, SPREP, SPC - SOPAC, Line Ministries

			quoting Kiribati issues with climate change	
	2. Encouraging mechanisms to implement commitments/decisions of agreements and build synergies with national goals and priorities	Enhanced knowledge and effective national response to implementing commitments from Climate Change commitments	<ul style="list-style-type: none"> • Increase number of local support/participation in programs related to implementing Climate Change regimes 	ECD, Foreign Affairs, OB, Environmental Health Unit (EHU) – MHMS, Line Ministries, SPREP, SPC-SOPAC
	3. Contributions of national initiatives to global sustainability (e.g. PIPA, Oceanscape)	Demonstrate leadership and commitment to global community on effort to respond to the effect of climate change	<ul style="list-style-type: none"> • Number of initiatives that add value to global environmental benefits and sustainability 	MELAD, OB, SPREP, CI, SOPAC -SPC, USP, Line Ministries
<i>CC2. To build on existing adaptation measures and continue with implementation of concrete interventions aimed at protecting the environment and its goods and services</i>				
a) Adaptation	1. Revalidation and continue to implement National Adaptation Program Priorities to reflect the National Climate Change Framework and Disaster risk reduction	Implementation of tangible resilience building adaptation measures at national level	<ul style="list-style-type: none"> • Completion of NAPA revalidation • Number of implemented NAPA Priorities 	Line Ministries, OB, SOPAC -SPC, SPREP, USP
	2. Support community-based adaptation initiatives	Implementation of tangible community-based adaptation measures at	<ul style="list-style-type: none"> • Number of community based adaptation 	GEF SGP-KI, KiriCAN, ECD, OB,

		community level	initiatives	KANGO,SPREP, SOPAC_SPC, USP
b) Climate Change Financing	1. Support mechanisms to strengthen fiduciary/financial arrangements to improve access to climate and MEAs funds	Establishment of a robust financial system and relevant capacities on managing and coordinating international climate/MEA funds	<ul style="list-style-type: none"> • Increase flow of funds accessed from climate change funds or MEA funds 	NEPO, OB, ECD, Foreign Affairs, SPREP, SOPAC_SPC, PIF
	2. Explore financing initiatives resulting from positive spins of climate change	Number of opportunities to harness additional resources to meet challenges impacted negatively by climate change are established and maximised in a sustainable manner	<ul style="list-style-type: none"> • Number of different types of initiatives that harness financing benefits from positive impacts of climate change 	ECD, MFMRD,KNTOMCTTD, MCIC, NEPO, FFA, SPREP, SOPAC_SPC, USP
	3. Increase external assistance and national budgetary contributions to the national climate change institutions	Appreciation by Policy Makers of the need for budgetary contribution to the national climate change institutions	<ul style="list-style-type: none"> • Increase in national budgetary allocations to climate change institutions 	ECD, NEPO, OB
<i>CC3. To implement mitigation measures and strengthen synergies between climate change mitigation and environment sustainability</i>				
a) Mitigation	1. Support the implementation of the Kiribati Energy Policy and its Implementation Plan 2009	Contribute to achieving the overall vision of the Kiribati Energy Policy with its contributions to climate change mitigation and environmental compatibility	<ul style="list-style-type: none"> • Inventory of implemented mitigation related projects emanated from the Kiribati Energy Policy 	EPU, ECD, OB, Line Ministries, SOPAC_SPC, SPREP, USP

	2. Support the investigation of opportunities for energy conservation and explore additional energy efficient, clean technologies linking to Green Growth	Documentation of feasible and applicable efficient and clean technologies Contribution to environment sustainability and energy security	<ul style="list-style-type: none"> • Number of new efficient and clean technologies investigated and implemented • Emission reduction rates resulting from renewable/clean energy programs 	EPU, ECD, OB, Line Ministries, SOPAC_SPC, SPREP
	3. Explore and increase participation and involvement in climate change mitigation actions through enhanced ecosystem functioning (e.g. Mangrove Replanting, Conservation Areas – PIPA, Blue Carbon concept, Green Growth, etc)	Implementing different types of carbon sink-based mitigation initiatives and enhancement of ecosystem services	<ul style="list-style-type: none"> • Inventory of registered carbon-sink-based mitigation measures 	ECD, OB, MFMRD, LMD, Line Ministries, SOPAC - SPC, SPREP
	4. Promote small scale private sector and local communities' mitigation actions	Implementation of applicable mitigation measures at the private sector and local community level	<ul style="list-style-type: none"> • Number of community-based and small scale private sector mitigation projects at the national level 	EPU, ECD, OB, Line Ministries, SOPAC_SPC, SPREP

3.2 Island Biodiversity Conservation and Management

Goal: Strengthen national capacity and institutional frameworks for effective conservation, management and sustainable use of Kiribati's terrestrial and marine biodiversity.

Background:

Island biodiversity in this context, means all terrestrial and marine ecosystems, all plants and animal species and varieties found in these ecosystems including the knowledge, uses, beliefs and language that the people of Kiribati have in relation to their ecosystems and species. Biodiversity conservation and management promotes the concept of sustainable use and supports sustainable development. Based on various national, outer islands and household surveys undertaken as part of the formulation of the Kiribati National Biodiversity Strategies and Actions Plan from 1996 – 2004, it was confirmed that the current state of biodiversity in Kiribati is being degraded physically, socially, economically, politically and even judicially.

As a low-lying nation, Kiribati cannot afford to sit back and let this degradation continue. If the biodiversity is not conserved or used sustainably, and if appropriate traditional sustainable natural resources management practices are not revived, and if the traditional knowledge and language are not maintained or strengthened, then future development would not be able to sustain and support the people and the liveability of the atoll islands, in the long term. The main key in the whole process is the resource owners and users at the island and village levels, who hold the long-lasting key to effective biodiversity conservation and management.

The government of Kiribati recognizes the importance of conserving biological diversity and has become a State Party by ratifying the Convention on Biological Diversity (CBD) on 16th August 1994 and the Treaty on Plant Genetic Resource for Food and Agriculture (ITPGFRA) on 13th December 2005. The ITPGFRA focuses specifically on conservation and utilization of food crop species to sustain food security and improve health. As a Party, Kiribati has obligations to meet the objectives of the CBD and ITPGFRA at the national and international levels.

For the CBD this is being provided for through the formulation and implementation of the National Biodiversity Strategies and Action Plan (NBSAP) and the National Reports submitted to the CBD Secretariat. Further, the Government of Kiribati is also a State Party to the World Heritage Convention and is in the process of accession to the Ramsar Convention on Wetlands. These are all biodiversity related Multi-Environment Agreements (MEAs) that recognize the importance of biodiversity conservation, management and its sustainable use for the benefits of Kiribati and the people of Kiribati.

A number of reports were instrumental in the formulation of this strategic action framework which includes, among others, the Kiribati NBSAP; 4th National Report to CBD; MELAD Operational Plan and the KDP 2008 – 2011. The issues reflected in the matrix below could further be expanded to address the emerging and new issues associated with recent and future researches and explorations.

Island Biodiversity Conservation Policy Area	Strategies (2012 – 2016)	Targets	Performance Indicators	Key Implementing Agencies/Partners
<i>BC 1: To improve and enhance the storage, protection, management and dissemination of the knowledge and information on the sustainable use, conservation and management of biodiversity to the general public</i>				
1) Communication, education and public awareness	1. Improve the formal and informal education system to support biodiversity conservation and management concept	Integration of biodiversity conservation into the national education curriculum at primary and Junior Secondary School levels	Biodiversity is adopted as a new curriculum for primary, junior and secondary schools	ECD, MoE (CDRC), SPREP
	2. Enhance public awareness at all levels of society to improve decision making and participatory approach in biodiversity conservation and management	Implement(in collaboration with other Government agencies/NGOs and relevant projects) national awareness campaigns with emphasis on 2 conservation issues: 1) Replanting scheme campaign (on plant and tree species that are decreasing in availability for cultural	<ul style="list-style-type: none">• Number of campaigns undertaken• Number of replanting programmes implemented• Open spaces on South Tarawa managed and maintained	ECD, EYC, Lands, OAG, ALD, EHU – MHMS, Aid Donors and relevant Projects

		uses in South Tarawa) ii) Management and protection of public open spaces in South Tarawa) with Environmental Youths Club		
	3. Implement practical and cost-effective national campaigns on biodiversity related celebrations	National celebrations are implemented in collaboration with national and regional partners i.e. MELAD week, World Food Day, Agriculture Day, International Day for Biodiversity, Environment Day etc	The number of events celebrated nationally The number of communities engaged in the celebrations	ECD, SPREP, ALD, Fisheries Division, TTM, Lands,
2) Information and knowledge management	1. Expand and make available accurate and reliable data and information on national biodiversity to inform policy and decision making at all levels	Develop and update the national Clearing House Mechanism to host information and data that reflect the status of biological diversity and natural environment in Kiribati	CHM developed , updated and fully operational	ECD, SPREP
	2. Assessing the Ecological Gap for Kiribati	Complete Ecological Gap Analysis for Kiribati	A complete report of Ecological gap analysis	ECD, SPREP, CI, Fisheries, Lands, ALD

	3. Identify, establish and strengthen biodiversity conservation networks, initiatives and partnerships between national and local government, communities and groups, and the private sector	MOU to facilitate biodiversity information sharing agreed to and signed by key partners	The number of signed agreements and key partners.	ECD, Fisheries, Lands, NGOs, Sector	SPREP, ALD, MISA, Private
4. Traditional knowledge and practices	1. Identify, revive and integrate appropriate customary rights into biodiversity conservation and management	Customary rights identified and integrated into biodiversity conservation and management plans	Number of customary rights identified and integrated	Culture, ECD, Fisheries	MISA, ALD,
	2. Identify, revive and integrate traditional knowledge systems and practices that support biodiversity conservation, management and sustainable utilization at all levels of society	Traditional knowledge systems identified, revived and integrated into biodiversity conservation and management plans	Number of identified, revived and integrated traditional knowledge systems into local and national strategies.	Culture, ECD, Fisheries	MISA, ALD,
	3. Identify and support initiatives that promote traditional preparation skills requiring the continuous planting and planting of Kiribati	Traditional food preparation and storage for future use are supported through provision of financial support to women and	Number of women and other relevant local groups/NGOs engaged in training of youth; Increased in number of local food crops and trees	MISA, Councils, and other relevant groups/NGOs	ECD, Women

	food crops and trees that are declining	other relevant local groups/NGOs.	in at least 3 outer islands	
<i>BC2: To improve and strengthen national coordination, collaboration and cooperation between stakeholders at all levels of society</i>				
a) Institutional capacity	1. Improve coordination and collaboration with key stakeholders (national and local)	Mainstreaming of biodiversity conservation into the sector's strategic plans and KDP	Biodiversity conservation mainstreamed and integrated in at least 2 sectoral plans	ECD, NEPO, SPREP, National Biodiversity Planning Committee
		Improve and define the mandate and role of the National Biodiversity Planning Committee members	Agreement defining roles and mandate developed for National Biodiversity Planning committee members	ECD, National Biodiversity Planning Committee
b) Community empowerment	Empower local government and communities to lead and sustainably manage their biodiversity resources	Biodiversity conservation priorities are integrated into local government strategic action plan	Number of local government strategic action plan that integrates biodiversity conservation	MISA, ECD, FSP-K, OAG
<i>BC3: To build on and strengthen national capacity and mechanisms to effectively conserve and manage island biodiversity</i>				
a) Sustainable use of island biodiversity resources	1. Improve and enhance the sustainable use of island biodiversity resources that are in line with customary land and marine tenure systems	Identify the destructive fishing methods and gears and impose legislations to regulate these destructive fishing methods and gears Increased awareness of	<ul style="list-style-type: none"> Number of studies undertaken to address destructive fishing methods Number of Community by-laws and regulations in place Number of fire awareness	Fisheries Division, OAG, MISA, ECD, SPREP

		the impact of fire on biodiversity	activities carried out	
	2. Integrate the concept/principles of biodiversity conservation in organic farming	Organic farmers are aware on the concept of biodiversity conservation through trainings offered that integrate the concept of biodiversity conservation into organic farming	<ul style="list-style-type: none"> • Number of organic farming trainings offered • Number of farmers exercising organic methodologies 	ALD, ECD, KOFA, FSP-K, SPC
	3. Develop integrated coastal management plan for the Gilberts Islands Group	Coastal management plan developed and implemented	<ul style="list-style-type: none"> • Number of plans and activities implemented 	Mineral Unit, ECD, Lands, Fisheries Division - MFMRD, ALD, MPWU
b) Biodiversity conservation	1. Enhance and improve biological resources to maintain biological diversity in the short and long term run	Advocate the concept of community-based protected areas (CBPAs) and community based protected species	Number of community agreements developed and signed for the establishment of conservation areas	ECD, Fisheries, ALD, Tourism, SPREP, CI, MISA, ThEcoCare Small Grant Program
		Increase the number of terrestrial and marine Protected areas under effective management and planning	Number of new protected areas established	ECD, Fisheries, ALD, Tourism, SPREP, CI, AOG
		Formalize the designation of the proposed Ramsar site in North Tarawa at national level	Policy approved to declare Ramsar sites	ECD, AOG, SPREP, MISA

	1. Protect species, viable populations and associated habitats of ecological, natural heritage and cultural significance	Develop and initiate actions to protect and restore at least 2 threatened species in each of the Gilberts, Line and Phoenix Groups	<ul style="list-style-type: none"> List of national threatened species and ecosystems and identified and validated At least threatened species restored 	ECD, SPREP, Linnix, Fisheries, ALD, SPREP, CI – Pacific Programme
		Develop and initiate actions to protect and restore at least 2 threaten ecosystems in each of the Gilberts, Line and Phoenix Groups	Action plans for threatened species developed, endorsed and implemented	ECD, SPREP, Linnix, Fisheries, ALD, SPREP, CI – Pacific Programme
c) Invasive Species	1. Eradicate, control and manage invasive species that may adversely impact on Kiribati's biodiversity and livelihoods	Endorse at the Cabinet level, the Draft National Strategy and Action plan on IAS for Kiribati and the Line and Phoenix Groups	<ul style="list-style-type: none"> Approval of the National IAS Strategic Action Plan Number of invasive species initiatives implemented 	ECD, Linnix, ALD, SPREP, National Biodiversity Planning Committee
d) Bio-safety	<p>Establish enabling environment to support implementation of the National Bio-safety Framework (NBF)</p> <p>Enforce the bio-safety regulation upon its endorsement</p>	<ul style="list-style-type: none"> Establish and formalize the National Competent Authority Implementation of the NBF and Bio-safety Regulation Enforcement of the 	<ul style="list-style-type: none"> Number of National Competent meetings NBF implementation The endorsement and implementation of the Bio-safety regulation 	ECD, OAG, NCA, National Biodiversity Planning Committee, ALD, Fisheries

		bio-safety regulation		
e) Financial resources	1. Create incentives and mechanisms for the establishment of effective community based biodiversity protection and management	Identify and develop incentives that would generate income to local communities, while carrying out terrestrial and marine community based biodiversity protection and management (e.g. community-based eco-tourism)	<ul style="list-style-type: none"> • Feasibility study report on financial incentives completed • Number of income generating activities implemented • 	SPREP, CI, ECD, Fisheries, ALD, Tourism, Commerce
		Develop means of engaging government and private businesses in undertaking environment friendly practices that support the protection, management and sustainable utilization of island biodiversity	<ul style="list-style-type: none"> • Number of government and CSOs that have adopted environmentally friendly codes of practice or have environment management plans in place 	KANGO, FSP-K, ECD, Private Sector
	2. Create sustainable financial mechanism for the protection and management of biodiversity	Increase budgetary allocation by 5% (yearly) to fund the protection and management of biodiversity	<ul style="list-style-type: none"> • Number of government ministries that have budgetary allocations for biodiversity related initiatives • At least 1 biodiversity permanent post 	Finance, PSO, MELAD, ECD,

			established within MELAD	
		<ul style="list-style-type: none"> Undertake feasibility studies on the viability of establishing Environment Trust Fund in Kiribati 	<ul style="list-style-type: none"> Draft feasibility study report produced and considered by stakeholders 	Finance, ECD, National Biodiversity Planning Committee
		<ul style="list-style-type: none"> Secure new and additional funds to support implementation of the revised NBSAP 	<ul style="list-style-type: none"> Number of GEF5 project proposals developed and approved 	ECD, Finance, National Biodiversity Planning Committee
<i>BC4. To strengthen national capacity to effectively respond to the impacts of global climate change on island biodiversity</i>				
a) Ecosystem based adaptation	1. Promote and implement the ecosystem based adaptation to response to climate change impacts that threatens island biodiversity	Develop and implement ecosystem based adaptation initiatives to enhance the resilience of the environment against global climate change impacts	Number of ecosystem based adaptation initiatives developed and implemented	Fisheries, ECD, OB,
b) Food security	1. Diversify and broaden genetic food base (species/varieties that are tolerant to atoll environment and projected impacts of climate change (high salinity, prolonged drought, brackish	Mass produce and distribute local food crop species	<ul style="list-style-type: none"> The number of local species produced and distributed 	ALD, SPC, FAO, TTM

	water))			
		Introduced food crop species are screened and distributed	• Number of species screened and distributed	ALD, SPC, FAO

3.3 Waste Management and Pollution Control

Goal: To strengthen national capacity to ensure a safe and healthy environment for the people of Kiribati through effective and sound management of chemical and waste

Background:

The main types of wastes and pollutants threatening biodiversity and human health within Kiribati are those typically associated with urbanised communities (e.g. solid wastes and sewage discharges) and from agricultural activities and port areas (including nutrients, sediments, pesticides and anti-foulants). Lack of integrated management of these pollutants is a key threat to Kiribati's environment. The problem is exacerbated in an atoll nation like Kiribati due to its small size, high water table and rising sea levels and the lack of cover soil to bury wastes. Innovative approaches to waste management are necessary that not only minimise the waste generated, but also seek ways in which the waste can be usefully and, if possible, economically re-used.

Kiribati has adopted the **Waste Hierarchy** approach in its management of waste starting with avoidance and minimisation first then looking at the opportunities for reuse, recycling and recovery before finally considering safe disposal. The focus must be firmly on avoidance and minimisation, reuse, recycling and recovery because safe disposal options are very limited or non-existent on atolls.

The Kaoki Maange system of deposits and refunds on used aluminium cans, PET (Polyethylene terephthalate) bottles and lead-acid batteries has proved spectacularly successful and provides an example to follow. It has created a new business, employed people, provided some unemployed with a small cash income, costs the government nothing and has removed used aluminium cans, PET plastic bottles, and car batteries from the atoll. Kiribati's deposit refund system has received recognition across the Pacific and is widely seen as a "best practice" recycling system.

Organic matter comprises about 80% of the waste composition in Kiribati national waste stream. Unmanaged disposal of organic waste is an alarming issue. It rapidly fills the dumpsite, and breaks down to generate noxious leachate and methane gas. However, if managed well it can enhance the aesthetic value of the environment, and provide organic fertilizer for agricultural usage and monetary incentives for the local community who should know that waste is a resource not a burden to them. Addressing organic matter should be a high priority due to its high generation rate and volume.

The management of chemicals and hazardous wastes poses a special challenge. Safe handling, storage, transportation and disposal through the proper facilities, equipment and competent personnel are essential. This should include the control of pollution from industrial and commercial sites. Where safe disposal cannot be carried out in Kiribati, arrangements should be put in place for proper disposal outside Kiribati.

Kiribati is faced with the risk of a pollution incident through its use of chemicals, hazardous and noxious substances, and refined fossil fuels. Measures need to be put in place that addresses a pollution incident in the planning, preparedness and response capabilities. The National Marine Pollution Advisory Committee has drafted a national marine spill contingency plan (NATPLAN) that addresses the discharge of oils, chemical and HNS. The need to have proper equipment and competent personnel are essential.

Improvement on clean water supply for the increasing population on South Tarawa and Betio require additional sources beside Bonriki and Buota water reserves. Water desalination plants are currently being considered; however these plants would require a mechanism to safely dispose concentrated brine during low tide meaning they have to store this waste water for approximately two hours on average, meaning holding tanks are needed. However, there is no land available on which to place storage tanks and the waste water must be disposed of as it is produced. Its impact on the marine environment is not yet known. A similar case is waste water from a tuna loining factory that is currently under construction at the Betio wharf on South Tarawa. For this, some of the important questions, among others, to address are to what extent the coastal marine environment will be protected; and what are the mechanisms, measures and processes in place to address these issues in order to achieve the aim of managing and controlling waste and pollution.

The key to a cleaner Kiribati is public pride and a social attitude against waste and pollution. Government enforcement is expensive and can never be everywhere. The best option is to change public behaviour through increased community awareness backed with the enforcement of relevant legislations including the Environment Act 2007 where necessary. The public education work done by MELAD through the “Kiribati TeBoboto” and national clean-up campaigns, the very successful car wreck clean-up and the Green Bag Pre-paid System initiative have all begun the slow process of building an attitude of pride and care especially

in the urban environment of South Tarawa. However, this work must be on-going and expanded if we want to achieve our goal of a cleaner and safer environment for all Kiribati people.

Relevant Principles and Approaches:

There are numerous, internationally recognized principles and approaches that guide chemicals and waste-related activities on-the-ground, in a country setting such as that of Kiribati. In significant part, many of those have arisen or evolved as governments have collaborated in framing chemicals and waste-related management in the context of common, international approaches, declarations and agreements. Those addressed here, among others, are relevant and underlie the Integrated Environmental Policy that Kiribati has adopted:

Agenda 21 as adopted in Rio de Janeiro in June 1992 recognized the need for integration by recommending coordinated and integrated approaches for the sound management of chemicals and waste. Chapters 19 and 20 collectively recommended initiatives covering a variety of elements relevant to achieving such integration, including: international assessment of risks, harmonization of chemical classification and labelling, information exchange on chemicals and chemical risks, risk reduction, strengthening national capacities for chemicals and hazardous waste management, prevention and minimization of hazardous waste, and strengthening cooperation in the management of transboundary movements of hazardous waste.

The Strategic Approach to International Chemicals Management (SAICM), as adopted in Dubai in February 2006, also provides guidance consistent with the Waste Hierarchy. More specifically, SAICM's objective is "to achieve sound management of chemicals throughout their life-cycle so that, by 2020, chemicals are used in ways that lead to the minimization of significant adverse effects on human health and the environment," in combination with issue-specific objectives involving risk reduction, knowledge and information, governance, and capacity building and technical cooperation, among other helpful strategies.

In the context of both Agenda 21 and SAICM, and existing MEAs, a number of principles and approaches that are relevant to achieving sustainable development include, among others:

Polluter Pays: Ensuring that persons and corporations responsible for pollution bear the full environmental and social costs of their activities, and that those costs are reflected in the market price for goods and services, this important principle will be implemented in applying it to waste management and pollution control measures so that those responsible pay for the prevention, mitigation and other management-related measures;

Precaution: As worded in Principle 15 of the Rio Declaration: "In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are serious threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental

degradation”;

Life Cycle: This approach addresses the entire life cycle of a product, process, or activity. Life cycle of a chemical means all stages of the life of a chemical with production of the chemical, mixtures, and articles containing the chemical, storage, transport, distribution, export, import, professional use, consumer use, recycling, and waste management of the chemical, mixtures, and articles containing the chemical. It can also serve as a tool for conducting systematic, cradle to grave (or cradle to cradle) analyses to estimate the environmental consequences of alternative materials, designs, manufacturing processes, product use and end-of-life alternatives.

Prevention: This principle addresses the issue of how harm to human health and the environment can be avoided, based on the recognition that the economic and social costs of avoiding harm and damages are almost always less than those needed to repair, treat, or compensate afterwards. Prevention can be achieved through measures such as bans, restrictions, and technology standards to reduce or eliminate releases from intentional and unintentional production and use;

Substitution: When a chemical product may cause risks to human health or the environment, it should be avoided if there are less dangerous products or processes that can reasonably be used instead, making use of the more dangerous substance unnecessary. As such, it serves as an explicit component of integrated chemicals management that helps focus attention on informing, increasing awareness, and educating the public about alternatives and alternative processes; and

Transparency, Participation and Governance: As enunciated in Rio Principle 10, and elaborated comprehensively in the Aarhus Convention, these approaches define public participation as being based on three pillars – access to information (including “right to know”), access to decision making, and access to justice. Key elements of the first two pillars are embedded in most MEAs, while access to justice is mostly addressed in national law, although all three pillars are prominently embedded in the European crafted, international Aarhus Convention.

Waste Management and Pollution Control Policy Area	Strategies 2012-2016	Targets	Performance Indicators	Key Implementing Agencies/Partners
WMPC1. To foster behaviour (behavioural change) through education, awareness raising and research that promote best waste management and pollution prevention practices including the 3Rs.				
a) Education and awareness raising	1. Increase public awareness on waste and pollutions issues .	Public better understands waste and pollution issues. Public aware of proper waste disposal, sanitation and necessity/ways to minimize pollution. Enhanced public awareness on the ozone issues	No. of public awareness campaigns. No. of public complaints involving illegal dumping and poor sanitation.	ECD, Ministry of Education (MoE), Ministry of Health and Medical Services (MHMS), MWPU, NGOs, Churches, Environment Youth Club (EYC), MISA (Island Councils), PUB, UNICEF, MTC, Marine Division.
	2. Encourage incorporation of chemical and waste management into curriculums at all teaching institutions.	Teaching Institutions incorporate chemical and waste management and pollution control issues into its curriculums due to the recognition of its importance. Enhanced knowledge and awareness of trainees on chemical and waste management and pollution issues.	Number of teaching institutions having curriculums on chemical and waste management. Number of students enrolled (and completing course)	ECD, MOE (CDRC), MHMS, Ministry of Labour, MTD, Marine Division.

		Enhanced delivery on best practices on ozone products and their alternatives at Vocational institutions		
	3. Conduct community consultations and awareness raising on waste minimization and pollution prevention practices.	Enhanced knowledge at the community level on environmental and health impact of poor chemical and waste management.	<p>Number of community consultations in Tarawa and number of participants</p> <p>Number of community consultation on outer islands</p> <p>Number of communities that put in place improved waste management practices</p>	ECD, MHMS, MPWU, NGOs, Churches, EYC, Island Councils, KANGO.
b) Research and information	<p>1. Establish the systematic collection and analysis of chemical and waste management data</p> <p>2. Conduct research and field studies to provide data and information needed for improving chemical and waste management.</p> <p>3. Encourage new</p>	<p>Systematic collection and analysis of chemical and waste management data developed and used</p> <p>Data and information on chemical and waste management available and accessible to the public, researchers and policy makers.</p> <p>Data and information on GHG emissions from</p>	<p>Number of research projects funded.</p> <p>Number of databases established.</p> <p>Availability of data on recyclable waste items exported.</p> <p>Availability of data on waste disposed at</p>	Customs, Statistic, ECD, MISA, MHMS, KIT, USP, SPREP

	<p>research on GHG emissions including landfills and biomass.</p> <p>4. Establish a database on the quantity and type of waste disposed in landfills and exported for recycling.</p> <p>5. Establishing database on quantity of imported and distributed ODS</p>	<p>landfills established.</p> <p>Database on waste disposed in landfills and exported for recycling established.</p> <p>Database on products and gases imported for national consumption</p>	<p>landfills established.</p> <p>Chemical and waste management data reported annually.</p> <p>Number of imported ODS consumed at national level annually</p>	
<i>WCM2: To strengthen national capacity on sound chemical and waste management including the enforcement of waste and pollution regulations.</i>				
1. Enforcement of pollution provisions at the national level	<p>1. Strengthen and expand the operation of the JET (Joint Enforcement Team) to cover marine pollution.</p>	<p>Improved coordination and collaboration with enforcement partners.</p>	<p>Number of pollution regulation issues enforced.</p> <p>Number of inspections/patrols.</p> <p>Number of meetings.</p> <p>Number of environment cases issued with compliance notices, infringement notices and prosecuted.</p> <p>Number of</p>	<p>ECD, OAG, Kiribati Police Services, MISA (Councils), MHMS, MCTTD (Marine Division and MTC).</p>

			enforcement training (to strengthen JET)	
	2. Regulate Environmentally Significant Activities (ESA) focusing on polluting premises under the Environment Act (as amended 2007).	Polluting premises issued with environment licences and regularly audited.	<p>Number of environment licences issued.</p> <p>Number of compliance auditing undertaken on environment licence issued.</p> <p>Number of auditing reports</p> <p>Number of auditing trainings.</p>	ECD, OAG, Kiribati Police Services,
	<p>3. Strengthen relevant legislation and enactment of draft regulations.</p> <p>4. Strengthen the enforcement of licensing system for imports, handling and storage of products containing ODS and refrigerants</p>	<p>Relevant legislations reviewed.</p> <p>Draft regulations enacted.</p> <p>Ozone Layer Protection Regulation enacted</p>	<p>Number of legislations reviewed.</p> <p>Number of regulations enacted.</p> <p>Number of pollution related prosecutions</p> <p>Number of permit applications</p>	ECD, MFAI, OAG, SPREP, MHMS, MISA (Councils), MCTTD, MCIC, MFED (Customs), private sector

<p>2. Training and capacity building.</p>	<p>Seek and participate in training opportunities locally and internationally on chemical and waste management and pollution control.</p> <p>Conduct trainings and refresher courses to technicians, trainers and Customs on proper handling, detection of contaminated and illegal trade of ODS</p> <p>Support and promote private sector-led initiatives and community based activities that are environmentally responsible and friendly.</p>	<p>Staff trained in all key sectors on best practice in waste and chemicals management.</p> <p>Customs officers trained for ODS detections, technicians and trainers on best practice and management of ODS</p> <p>Project advocating environmentally responsible and friendly concept implemented.</p>	<p>Number of trainings on waste management and pollution control held/attended.</p> <p>Number of trained staff in chemical and waste management.</p> <p>Number of Customs trained, technicians and trainers</p> <p>Number of briefing reports submitted by trainees to respective directors</p> <p>Number of projects related to waste and chemical management implemented.</p> <p>Number of communities interested in similar projects.</p> <p>Number of public-private partnerships established.</p>	<p>ECD, MISA, MHMS, MCTTD, MoE, PSO, SPREP, SPC, JICA.</p> <p>OCO, APTC, MLHRD</p> <p>ECD, NGO's, Churches, EYC (Environmental Youth Club), MISA, KCCI, MFED, Chamber of Commerce.</p>
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Facilities for Waste Management and Pollution Control.	Establish and improve waste management and pollution control facilities. Establish temporary ODS bank facilities for the unused and reclaimed products	Improved landfills and establish adequate hazardous waste/chemical storage facilities. Temporary facility established for storing the reclaimed and unused refrigerants prior shipment for proper disposal overseas	Number of landfill sites improved. Number of adequate storage facilities established. Proportion of waste managed in an environmentally sound manner Number of recycling cylinders used.	ECD, MISA (Councils), MCTTD, MPWU, KOIL, PUB, MHMS, ALD (Quarantine), KPA, JICA. ECD, Private Sectors, Quarantine, UNEP
<i>WMPC3: To strengthen the mainstreaming of waste management into national development programmes</i>				
a) Mainstreaming Chemical and Waste Management into National/Sectoral Strategies, Plans and Policies.	1. Integrate chemical and waste management priorities into National and Sectoral Plans. 2. Implement relevant MEAs and Global Voluntary mechanisms on waste minimization and sound chemical management and in an integrated manner.	Sound chemical and waste management integrated into National and Sectoral Plans. Legislations, Policies and Procedures to meet obligations under MEAs and Voluntary mechanisms implemented.	Number of entries addressing chemical and waste management in National and Sectoral management plans or policies. No. of projects implemented. No. of relevant MEAs Kiribati is party to. No. of Conference of	ECD, MFED, OB, MISA (councils), MCTTD, MFMRD, UNDP, SPREP, UNEP, UNITAR, WHO, ILO, ECD, OB, MFAI, OAG, MCTTD, Kaoki Maange, KOIL, SPREP.

			<p>the Parties of the MEAs that Kiribati is Party to attended</p> <p>No. of national reports submitted</p> <p>No. of domestic legislations drafted and passed.</p> <p>No. of national coordinating committee meetings on MEAs</p>	
b) Sustainable Financial Mechanisms and Incentives.	<p>1. Explore funding from development partners to establish chemical and waste management systems that are self-financing and environmentally friendly.</p>	<p>Self-financing and environmentally friendly projects promoted and implemented.</p>	<p>No. of self-financing projects implemented.</p> <p>No. of development partners providing financial support.</p> <p>No. of project proposals.</p>	<p>ECD, MFED, MISA, KCCI, Kaoki Mange, OAG</p>

	<p>2. Develop economic instruments and other innovative financial mechanisms that are based on the polluter pays principle including the banning of certain imported products.</p> <p>3. Promote and support environmentally friendly initiatives including green businesses.</p>	<p>National policies developed to regulate and extends importers current accountability from selling and disposing of their products.</p> <p>Green businesses/initiatives on waste and chemical management established.</p>	<p>No of new financial mechanisms such as taxes, levies imposed etc.</p> <p>No of certain products regulated.</p> <p>No of policies on polluter pays principle.</p> <p>No of green businesses registered.</p> <p>No of green business awards.</p>	<p>ECD, MFED (Customs), KCCI, OAG, MISA, MCIC, SPREP, UNDP.</p> <p>ECD, MFED, MCIC, KCCI, NGO's, SPREP, UNEP.</p>
WMPC 4: To effectively coordinate and oversee ongoing national chemical and waste management programmes.				
Cross sector coordination and governance.	<p>1. Establish the national waste management committee.</p> <p>2. Strengthen national coordination mechanisms including institutional set up.</p>	<p>National waste management committee established and members identified.</p> <p>National coordination of key stakeholders involved established and strengthened.</p>	<p>Number of meetings.</p> <p>Number of e-forums created.</p> <p>Level of participation in e-forums.</p>	<p>ECD, MHMS, MPWU, MoE, MFED (Customs), MISA (Councils), OB.</p> <p>ECD, MHMS, MFED (Customs), MoE, MISA , OB</p>

	3. Implement national chemical management projects promoting Inter-Ministerial coordination.	Cross sectoral projects implemented.	Number of projects implemented promoting cross sectoral meetings.	ECD, MHMS, MFED (Customs), MFED, MoE, MISA and OB.
	4. Develop a national framework identifying roles and responsibilities of waste and chemical stakeholders.	Stakeholder roles and responsibilities well defined.	Mission, vision, work plan, and organizational charts of waste and chemical stakeholders	ECD, MISA (Councils), MHMS, MCIC, MFED, Kaoki Maange, OB.
	5. Support voluntary waste and chemical programs involving civil society (communities, NGO's, youth).	Voluntary campaigns adequately supported	Number of voluntary initiatives.	MELAD, MISA, KANGO.

3.4 Resources Management

Goal: To promote the sustainable use and development of Kiribati's non-living resources (land, water, coastal and minerals)

Background

Key environmental issues for the management of lands, water and coastal resources of Kiribati are extensively documented in the various existing government policies and planning documents. These include, among others, the National Action Plan to Address Land Degradation and Droughts 2007, MELAD's Ministry Operational Plan 2008-2011, the State of the Environment reports of 1994 and 2002, the National Water Resources Policy 2008 and the National Water Resources Implementation Plan 2008.

The environmental issues for resource management are acute in the nation's capital, South Tarawa and Kiritimati Island where the narrow, vulnerable and highly populated low-lying atolls have experienced declining environmental quality through severe shoreline erosion, ground water contamination and coastal and lagoon pollution under the pressures of growing population and expanding urbanisation. Populations including illegal squatter settlements continue to increase in already over-crowded areas and close to designated water reserves such as in Bonriki, South Tarawa. Increasing solid wastes, sewage and liquid waste discharges overwhelm the capacities of disposal and management systems and continue to threaten lagoon ecosystems and the groundwater lens. Increasing domestic sand mining and land reclamation compounds the erosion and vulnerability of the shorelines and coastal areas to frequent storm surges and sea level rise. Options are also under investigation for mineral mining including lagoon dredging of aggregate to replace domestic sand mining and the development of deep seabed mineral deposits.

In the last two decades, legislation, policies and plans of government have been developed in an effort to address these key resources management issues. These support efforts to control population, strengthen the resilience of the environment, in particular the foreshore, curb illegal sand mining and limit lagoon resources extraction, promote proper waste collection and disposal, improve soil quality and reverse land degradation and protect freshwater resources. Legislations that are directly relevant or with relevant provisions to resource management include, among others, the Environment Act 1999 (as amended 2007) and the approved EIA Regulations; the Lands Ordinance 1977; the State Lands Acquisition Ordinance 1977; the Native Land Ordinance 1977; the Foreshore and Land Reclamation Ordinance 1977; the Land Planning Ordinance 1977; the State Lands Act 2001 and the Squatters Act 2005. And among the key planning frameworks that were recently developed to address resource management issues include, among others, the NAP 2007, the National Water Resources Management Plan 2008, and the ESAT 2009.

The strategic environment priorities for resource management in the next four years will largely focus on strengthening the implementation of key environmental principles, regulations and relevant environment and development plans that support the sustainable development, protection and management of the non-living land, water, coastal and mineral resources of Kiribati.

Resource Management Policy Areas	Strategies (2012-2016)	Targets	Performance Indicators	Key Implementing Agencies/Partners
<i>RM1: To support the implementation of effective sustainable landuse management plans</i>				
a) Sustainable Landuse Planning	1. Strengthen capacities for the development and implementation of sustainable land use plans and practices	Support the review and revision of the existing national policies and plans with a view to identifying and addressing capacity needs for their effective implementation under relevant project funding – e.g. the NAP and GEF-funded Sustainable Landuse Management Projects	Number of plans and policies reviewed and under implementation	LMD, ECD, ALD, PWD, MISA (Local Government)
		Support and develop effective local landuse consultation and planning processes to strengthen the implementation of national sustainable landuse policies and plans at the local level	Number of landuse processes improved Number of island councils that have implemented sustainable landuse policies	LMD, ECD, ALD, MISA (Local Government)
	2. Improve the enforcement of relevant resource management policies and regulations	Increase the enforcement of relevant environmental legislations including EIA in the planning and management of land	Number of EIAs implemented Number of non-compliance cases	ECD, LMD, MISA (Councils), KPS, OAG

		resources in highly populated areas	resolved	
		Hold community awareness and education events on key principles and best practices that promotes sustainable landuse	Number of local community awareness and education events on sustainable landuse principles and practices implemented	ECD, LMD, ALD, Churches, KANGO, Media MoE
<i>RM2: To support the protection and management of limited and vulnerable water resources</i>				
a) National Water Reserves	1. Strengthen the implementation of relevant environmental policies and legislations complimenting and supporting the protection of designated national water reserves	Implement national water reserve protection awareness campaigns in communities	Number of awareness activities undertaken in communities around the national water reserves Number of communities consulted	ECD, LMD,MISA (Councils), ALD, KPS, PUB, Water Engineering Unit-MPWU, MHMS
		Implement relevant environmental policies that support a joint multi-stakeholder implementation of plans to relocate squatter populations away from the Bonriki water reserves on South Tarawa	Percentage of squatter populations around the Bonriki water reserve on South Tarawa that has been relocated	ECD, LMD,MISA (Councils), ALD, KPS, PUB, Water Engineering Unit - MPWU, MHMS
		Hold joint multi-stakeholder enforcement of relevant sector regulations for preventing activities that threatened water quality and the environments of the	Number of existing environmental policies for relocation that has been successfully enforced	ECD, LMD,ALD,PUB, MWPU KPS, MISA (Island Councils), OAG

		national water reserves	<p>Number of reports of joint enforcement monitoring of illegal activities in the Bonriki water reserve on South Tarawa</p> <p>Number of cases of illegal activities affecting the Bonriki water reserve on South Tarawa. reported and prosecuted</p>	
b. Community Water Cistern Catchments	1. Improve the implementation of plans for the effective rehabilitation and management of existing community water cistern catchments and the establishment of new ones	Complete the implementation of existing plans under the relevant projects (SLM project) for rehabilitating community water cistern catchments	<p>Number of existing community water cistern catchments rehabilitation plans completed</p> <p>Number of community water cistern catchments rehabilitated</p>	ECD, MPWU, Councils, PUB, , EU (EC), Kiribati Housing Corporation (KHC)
		Extend the development of community cistern catchments to new communities and improve the management of existing ones	<p>Number of rehabilitated community cisterns</p> <p>Number of new communities with cisterns</p> <p>Number of management plans for</p>	

			existing community cistern catchments formulated	
RM3: To combat the degradation and erosion of the foreshores and coastal areas				
a) Building the resilience of foreshores and coastal areas	1. Implement effective plans for rehabilitating and improving the resilience of the foreshore and coastal areas	Enforce relevant policies and legislations for the protection of the foreshores and coastal areas under the mangrove and coastal vegetation programs	Number of relevant policies and legislation successfully enforced Number of cases of illegal and coastal degrading activities reported and prosecuted	ECD,LMD, MFMRD, KPS, OAG, ESAT Project
		Extend where appropriate and possible the replanting mangroves and coastal vegetation to vulnerable foreshore and coastal sites	Number of new sites covered with the mangrove and coastal vegetation replanting programs Number of mangroves and appropriate coastal vegetation seedlings planted Total length of the foreshore re-vegetated and restored	ECD, EYC, ALD, KAP, MISA, MoE, ISME, Churches
RM4: To promote sustainable agriculture and soil conservation practices				
a) Agriculture & Soil Conservation	1. Support the implementation of existing agricultural and soil	Implement plans that support sustainable agriculture and soil conservation practices	Number of sustainable agriculture and soil conservation plans	ALD, ECD, LMD

	conservation policies and plans		formulated and implemented Areas with improved agriculture and soil fertility	ECD, ALD, OAG, KPS, LMD, MISA
		Enforce policies and legislations to prevent slash and burn and other activities that increases the vulnerability of lands and decline in soil fertility	Number of policies and legislations for the protection and conservation of soil fertility that has been successfully enforced Number of slash and burn cases resolved by local island councils Number of Island Councils with effective bylaws implementation	
RM5: To support the sustainable use and development of mineral resources				
a) Aggregate mining	1. Strengthen enforcement of licensing requirements for aggregate mining	Improve the regulatory processes and policies for addressing the impact of aggregate mining	Number of Environment License applications submitted and approved	LMD, ECD, Mineral Unit, KPS, OAG, , ESAT Project (MFMRD)
		Increase effective communities compliance and awareness programmes	Number of complaints received from communities	LMD, ECD, Mineral Unit, KPS, OAG

	<p>2. Involve illegal miners in ESAT Aggregate lagoon mining through the reselling of aggregate from the company;</p> <p>3. Involve cement importers as conduits to public in accessing aggregate and their hardware products.</p>	Illegal miners and suppliers buy and resell aggregate from company	Beach and land mining will slowly cease thus saving the foreshores of South Tarawa.	Mineral Unit (MFMRD), ECD, private sector
b) Seabed Mining	1. Strengthen the communication and mainstreaming of environmental information, principles and legislations into the development of mineral resources	Implement consultation, awareness and research that investigate the impacts of mineral use and development projects including lagoon and deep sea bed aggregate and mineral mining projects	Number of reports of impact assessment studies of lagoon and sea bed mining activities completed	ECD, Mineral Unit, OAG, LMD
		Hold awareness and information events for communicating findings on the impacts of mineral mining on natural ecosystems	Number of awareness and information events on the impacts of mineral mining completed	ECD, Mineral Unit, Media
	2. Consult marine environment experts on the information on likely impact of seabed mining and its likely impact on other marine resources, eg. tuna resources and other	More consultation with regional and international bodies and local communities	More information available	ECD, Mineral Unit (MFMRD), FFA, PNA, SPREP, SOPAC-SPC

	marine species			
<i>RM6: To improve education and awareness through communication and dissemination of information.</i>				
a) Resources Monitoring and Reporting	1. Strengthen systems for the effective monitoring and reporting of state and trends of lands, water, coastal and mineral resources	Establish a minimum set of indicators and dataset requirements for resource monitoring as part of an integrated national environment monitoring system	A minimum set of resource monitoring indicators approved	ECD, LMD, ALD, MFMRD, PUB, Water Engineering Unit - MPWU, Environmental Health Unit
		Conduct a trial monitoring and reporting of lands, water, coastal and mineral resources as part of an integrated national environment monitoring and reporting system	Trial monitoring and reporting of land, water, coastal and mineral resources as part of the integrated monitoring and reporting system	ECD, LMD, ALD, MFMRD, PUB, Water Engineering Unit - MPWU, Environmental Health Unit - MHMS

3.5 Environmental Governance

Goal: To advance the development of capacities and systems for implementing effective environmental governance

Background

The modern governance and administration of Kiribati's environment was formally commissioned with the establishment of an Environment Unit by the Government of Kiribati in 1994. In the last twenty years this Unit has grown into the Environment and Conservation Division that coordinate various environmental thematic programs that is supported by various multi-stakeholders committees and collaborating organisations.

Environmental governance involves not only this formal role of the government but also encompasses the ways non-governmental groups, community organisations and the private sector are involved in the development and management of the environment including the ecosystem goods and services. Effective environmental governance is necessary for communities to balance their development and environmental needs and respond effectively and creatively to the challenges and opportunities of environmental protection and management in Kiribati.

Key aspects of environmental governance that are considered under this section include the effective participation and involvement of stakeholders in the generation of knowledge and information and their application in decision making processes; awareness raising and implementation of environmental policies and legislations and the monitoring and communication and mainstreaming of environmental knowledge and information into national development planning processes.

Other related strategic priorities for environmental governance are also defined and supported under the thematic areas above. Therefore, the priorities in this section serve as core generic environmental governance measures to compliment and strengthen the integration of governance policy actions in the four thematic areas above.

Environmental Governance Areas	Policy	Strategies (2012-2016)	Targets	Performance Indicators	Key Implementing Agencies/Partners
<i>EMI: To enhance capacity and engagement of stakeholders for effective participation and involvement in environmental management and sustainable development activities</i>					
a) Environment Education and Training		1. Strengthen environmental education and training in all formal and informal systems of education in the country	Implement a general revision of environmental education curriculum and training in formal school systems to identify related capacity building needs and requirements	Report of a general revision of environmental education and training curriculum in formal school system completed Number of environmental school curriculum lessons revised and disseminated	CDRC, ECD
			Increase learning resources and approaches to improve the teaching of environmental management principles and practices in formal school systems	Number of environmental learning resources produced and disseminated to schools to support the teaching of environment management principles and practices	ECD, Mineral Unit, Fisheries Division – MFMRD, MHMS, MoE, USP, SPREP
			Increase the dissemination and mainstreaming of environmental knowledge and	Number of environmental information resources produced and disseminated to	ECD, MISA, KANGO, Churches

		information in informal community development training activities	community development training activities including workshops and information events	
b) Consultation and Coordination	1. Increase and enhance systems of consultation and coordination for stakeholder participation and involvement in environmental action including the convening of the Environment Advisory Committee	Implement effective mechanisms to strengthen the coordination of stakeholders participation in multi-disciplinary committees and decision-making bodies for environmental management	Number of effective coordinating mechanisms designed and implemented Level of improvement in the coordination of multi-stakeholder committees and decision-making bodies	ECD, KCCI, KANGO
		Implement public events such as seminars and forums to increase the participation of stakeholders in environmental management and sustainable development discourse	Number of relevant public environmental events that promotes discourse and sharing of knowledge and information on environmental management and sustainable development	MoE, ECD, Mineral Unit, MISA, KIT, Media, Churches, KANGO, USP
	2. Identify relevant programs and projects that supports environmental protection and management and	Minimises duplicating and wasting funds that can be better used on other aspects of each projects concerned; Pooling of limited	Enhanced and increased benefits to local communities	ECD, MISA, Island Councils, NGOs, relevant Projects implemented in Kiribati, Donors

	are currently implemented, for coordination, cooperation and collaboration purposes	resources to achieve common but differentiated purposes that support environment protection and management at all levels of society in Kiribati		
<i>EM2: To strengthen and improve the awareness and implementation of environmental policies and legislations</i>				
a) Legislation Awareness raising and Enforcement	1. Increase public awareness, ownership and support of environmental policies and legislations at all levels of society	Implement national awareness campaigns especially in the outer islands on policies and laws of environmental management and sustainable development	Number of national awareness campaigns on principles and laws of environmental management and sustainable development implemented Number of outer islands awareness campaign	MoE, ECD, Mineral Unit, MISA, OAG, Kiribati Police Services (KPS), MHMS, KIT, Media, Churches, KANGO, USP
	2. Increase capacities within ECD for the enforcement of environment legislation and policies	Regulations, guidelines and codes of practice in place for environmental legislation and inspectors trained in their use	Number of guidelines in place Number of trained inspectors	ECD, Police, OAG
	3. Increase capacities of government agencies and island councils for participation and involvement in the enforcement of	Implement measures to strengthen the roles of government ministries and island councils in the enforcement of environmental laws with emphasis on impact	Number of measures developed and implemented to strengthen ministries' support of environmental law enforcement	MISA, ECD, Police, OAG

	environmental and related laws	assessment policies and regulations	Level of ministries active participation in the national EIA process	
<i>EM3: To improve and strengthen the generation, monitoring and management of data for MEA and state of the environment reporting for national development policy and planning processes</i>				
a) Environmental Monitoring and Reporting	1. Develop effective and functioning national system for monitoring and reporting on the state of the environment that integrates and streamline the monitoring and reporting requirements of the government including those for MEAs and MDGs	Establish an appropriate set of indicators and integrated assessment framework for regular monitoring and reviewing of the state of environment that incorporate the performance indicators of the KIEP and the MEA monitoring and reporting obligations of the country	A set of indicators for monitoring the state of the environment of the country A framework for integrated assessment of the national state of the environment Number of MEA monitoring and reporting requirements incorporated and mainstreamed into the national state of the environment monitoring system	ECD, Fisheries Division, Mineral Unit, ALD, MHMS, MFED
		Conduct a first trial of the integrated state of the environment monitoring and reporting system	A report of the national state of the environment integrated monitoring and review produced and launched	ECD
b) Environmental Communication and	1. Strengthen capacities for effective	Increase the use of appropriate technologies and associated social	Number of technologies and social networks	MFED, MELAD, MFMRD, MCTTD

Mainstreaming	communication and mainstreaming of the environment into development planning processes	network such as websites, GIS, multi-media and media in the communication and mainstreaming of environmental knowledge and information into development planning policies and decision-making	developed and used to communicate environmental knowledge and information to policy and decision-making institutions and leaders	
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4. HUMAN RESOURCES AND FINANCIAL IMPLICATIONS

The effective implementation of the KIEP will require strengthening of the Environment and Conservation Division and the wider network of partner agencies and stakeholders, whose portfolios overlap with enhancing and supporting the environment protection and management portfolio, as well as in the position to achieve the objectives of this KIEP from their respective sectors. This will include considerations for additional staff; a possible expansion of existing institutional arrangements especially to cater for the outer islands and an increase in financial resources to facilitate and implement policy actions on the ground.

The expansion of human resources and financial requirements for environmental administration to meet the implementation needs of this policy will also be guided on the direction and priority of the government's public sector reform processes, including the streamlining of national agencies functions and operations and a potential decentralisation and strengthening of the administration at the island groups and local levels.

The KIEP will assist in identifying key areas where funding proposals can be made to donor partners. It will also serve as a useful guide through which donors, regional and United Nations organisations and other partners can design their contributions and assistance to protect and manage Kiribati's environment to support livelihoods, human health and the economy through sustainable development.

5. IMPLEMENTATION, MONITORING AND REVIEWING SCHEDULE

The implementation of the KIEP will take effect from the time that it is approved by Cabinet. Its strategic priorities guide the ECD component of MELAD's MOP and contribute to the KDP. It will be implemented through annual work-plans and budgets of the MELAD-ECD and is evaluated both at the operational performance levels and at the strategic impact levels during the duration of the KDP. Operational performance indicators are defined in the policy's strategic priorities and are to be monitored and reviewed annually. Strategic impacts indicators will be defined as part of Kiribati's State of the Environment monitoring and reviewing system. The SOE reviews will be carried out at the end of the KDP as the environment component of the KDP review and will furnish the comprehensive information for the formulation of the environmental policy priorities and targets for the new KDP. Strategic priorities have been defined in the policy for organising and building the capacities of MELAD-ECD to effectively monitor and evaluate KIEP at both the operational performance and strategic impact levels.

REFERENCES

The following are key sources of information and guidance that were used in the development of the policy and the strategic plan.

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- Kiribati's Energy Policy 2009
- Kiribati National Capacity Self- Assessment to the Rio Convention Report 2009
- Draft Kiribati Meteorological Service Strategic Plan 2012-2018
- Kiribati government climate change portal <http://www.climate.gov.ki/>
- Initial national communication 1999 (second to be presented in Durban 2011)
- Comments from the Review Template of the KDP 4 2008-2011 related to the Environmental Management component