

# UNDP Project Document

Government of Kiribati

United Nations Development Programme

## ENABLING ACTIVITIES FOR THE PREPARATION OF KIRIBATI'S SECOND NATIONAL COMMUNICATION TO THE UNFCCC

### **Brief Description**

The proposed project will enable Kiribati to prepare its Second National Communication to the Conference of the Parties of the UN Framework Convention on Climate Change. The activities within the Second National Communication are a continuation and update of the work done by Kiribati to prepare its Initial National Communication (INC) that was carried out under the Pacific Islands Climate Change Assistance Project (PICCAP). The main components of the project are: a) Inventory of GHG Emissions b) Programmes containing measures to facilitate adequate adaptation to, and mitigation of climate change, c) and Programmes and national action plans that are considered relevant for the achievement of the objectives of the UNFCCC. The Project will further enhance the national capacities and will raise general knowledge and awareness on climate change and its effects. It will also contribute to putting climate change issues higher on the national agenda through strengthened cooperation and increased involvement of all relevant stakeholders in the process. In addition, it will strengthen and build national capacities for participation in different mechanisms related to GHG mitigation and to fulfilling other commitments to the UNFCCC.

## **Table of Contents**

<b>Subject</b>	<b>Page</b>
<b>1. Elaboration of the Narrative</b>	<b>4</b>
<b>1.1 Situation Analysis</b>	<b>4</b>
<b>1.2 Strategy</b>	<b>5</b>
<b>1.3 Management Arrangements</b>	<b>6</b>
<b>1.4. Monitoring and Evaluation</b>	<b>6</b>
<b>1.5 Legal Context</b>	<b>8</b>
<b>2. Total Budget</b>	<b>9</b>
<b>3. Appendices</b>	
<b>Appendix A: Summary report of the self-assessment exercise</b>	<b>11</b>
<b>Appendix B: Technical components of the project proposal</b>	<b>25</b>
<b>Appendix C: Terms of Reference</b>	<b>44</b>
<b>Appendix D: Endorsement letter</b>	<b>62</b>
<b>UNDP Signature Page</b>	<b>63</b>

## ACRONYMS

APRs	Annual Project Reports
BPoA	Barbados Programme of Action for Small Island Developing States
CBD	Convention on Biological Diversity
CCA	Common Country Assessment
CCU	Climate Change Unit
CCST	Climate Change Study Team
CoP	Conference of the Parties
CP	Country Programme
GHG	Greenhouse Gases
IM	International Meeting in Mauritius
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
JPoI	Johannesburg Plan of Implementation
MDGs	Millennium Development Goals
NAPA	National Adaptation Programme of Action
NBSAP	National Biodiversity Strategy and Action Plan
NCSA	National Capacity Self Assessment
NEX	National Execution
NGO	Non-Governmental Organization
PICCAP	Pacific Islands Climate Change Assistance Project
PICs	Pacific Island Countries
PIREP	Pacific Islands Renewable Energy Project
QPRs	Quarterly Projects Reports
SBAA	Standard Basic Assistance Agreement
SIDS	Small Island Developing States
SNC	Second National Communication
SPREP	Secretariat of Pacific Regional Environment Programme
UNCCD	United Nations Convention on Combating Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
WSSD	World Summit on Sustainable Development
V&A	Vulnerability and Adaptation Assessment

## 1. ELABORATION OF THE NARRATIVE

### 1.1. SITUATION ANALYSIS

Similar to the remaining Pacific Island Countries (PICs), Kiribati is very much aware and concerned about environmental degradation and global warming and their detrimental effects. Kiribati consists of atolls scattered in three groups within a vast area of the Central Pacific ocean. The total sea surface area that makes up the Exclusive Economic Zone (EEZ) is 3.5 million km<sup>2</sup>, compared to a total land area of only 800 km<sup>2</sup>. The land area is distributed unequally among 33 atolls existing within a region defined by 5° N and 7° S latitudes, and 168° E and 168° W longitudes. The Gilbert Group in the west has 17 atolls; the Line Group in the east has 8 atolls; and the Phoenix Group of 8 atolls lies in between. Five of the atolls in the Line Group and 7 in Phoenix Group are inhabitable. The three groups have disjointed EEZs with regimes of high seas separating them. The atolls are small, narrow, flat land pieces. They are about 600m wide on average, and are about 3 to 4 meters above mean sea level.

The estimated population for Kiribati in 2005 was about 95,000 people, of which 44% live in the urban part of Tarawa atoll. Population censuses over several 5 year intercensal periods indicate annual rates of growth between 1.7 and 2.2. There is no indication that population is to stabilize in the foreseeable future.

The driving force of the weather is temperature distribution. It is understood that global temperature has increased since the 19th century, as would be expected from human-induced climate change arising from emissions of greenhouse gases. Global temperature increase is expected to cause the sea level to rise, and this has also been observed. Sea level rise has been a major concern for Kiribati. This should be apparent from the above description of the geophysical characteristics of Kiribati. Sea level rise and temperature increase will set in train causal-effect relationships in components of the environment and sectors of the economy, leading to adverse impacts on the livelihood of the people. During high spring tides, or during winds with gale forces, the edges of the atolls are usually flooded from the surrounding seawater. The occurrence of flooding depends on wind and atmospheric pressure that characterizes the weather at the time. These elements of the weather have impacts on the natural state of the sea level and cause the sea to overtop and flood the edges of the islands.

Kiribati ratified the UN Framework Convention on Climate Change (UNFCCC) on 7<sup>th</sup> February 1995, and has submitted its Initial National Communication (INC) to the UNFCCC on 30<sup>th</sup> October 1999. Following the preparation of its INC (under the Pacific Islands Climate Change Assistance Project (PICCAP) and Phase-II enabling activities, the country has initiated efforts to create an institutional set-up that seeks to mainstream climate change issues into the national legal frameworks. Moreover, its INC provides compelling evidence that, by global standards, Kiribati is one of the nations most vulnerable to climate change and sea-level rise.

Ratification of the UNFCCC is one step forward in terms of commitment to addressing climate change and related issues. Kiribati is also a Party to many other UN conventions, such as those, among others: biological diversity, biosafety, protection of the ozone layer, persistent organic pollutants, and combating desertification. Kiribati has also ratified the Kyoto Protocol on 7 September 2000.

Since the completion and submission of the INC, Kiribati has embarked on the implementation of sustainable development programmes which have strong linkages to its reporting commitments under other multilateral environmental agreements. These reports include its contribution to WSSD and JPoI, BPoA and IM, NBSAP under the CBD. Kiribati is currently implementing a programme to identify its urgent and immediate needs for adaptation to climate change which will culminate in a National Adaptation Programme of Action (NAPA). With the support of the GEF, Kiribati has also embarked on the identification of its capacity building needs relating to the implementation of the UNFCCC, CBD and the UNCCD through the National Capacity Self Assessment (NCSA) project.

## 1.2. STRATEGY

In compliance with its obligation as a non-Annex I Party to the UNFCCC, Kiribati intends to prepare its Second National Communications (SNC). The proposed project will assist the Government of Kiribati in implementing activities needed to enable the country to prepare its SNC, following the guidelines adopted by the Conference of Parties (CoP).

The activities within the SNC are a continuation of, and an improvement of the work done under the PICCAP where Kiribati prepared its INC and Phase II enabling activities. During the implementation of the project, particular attention will be put on addressing identified gaps and constraints during the SNC stocktaking exercise, making good use of the information derived from such exercise, and utilizing the results of relevant, previous or ongoing national or international activities related to the climate change issues.

The proposed project is in accordance with Kiribati's national development objectives, its national strategy for the implementation of the UNFCCC and its pursuit of improving natural resource management and promoting environmental sustainability. The Government of Kiribati through its adopted climate change adaptation policy and national strategy recognizes seven key principles which are critical for the implementation of the UNFCCC: (i) mainstreaming of climate change issues and concerns into national development planning; (ii) development of a National Greenhouse Gas Inventory Network; (iii) Pursuing sustainable development through the UNFCCC and the Kyoto Protocol; (iv) Understanding and responding to the adverse impacts of climate change; (v) Training, public awareness and education; (vi) capacity building; and (vii) Linking science and policy. The amendment to the Environment Legislation has been successfully read for the first time in Parliament. The amendment has adequate provisions requiring that all developments projects are to undergo environmental impacts assessments and which also include consideration for climate change issues. There is also a section that enables the Minister for Environment to establish regulations necessary to implement any international agreement, treaty, protocols or conventions, including Climate Change.

The UNDP is assisting Kiribati in obtaining sustainable environmental management and energy development that will improve the livelihoods and security of the poor. This is achieved through strategic areas of focus covering: institutional framework for sustainable environmental management and energy development; monitoring and assessment of environmental sustainability; and national capacity for participation in global conventions, regulatory regimes and funding mechanisms for environmentally sustainable development. The SNC, which is the main output of the project, as well as activities for improvement of the country's capacities to implement the UNFCCC, will directly contribute to the achievement of the UNDP-Kiribati's UNDAF and CP outcomes (2003-2007).

The project will make use of the capacity built and institutional arrangements that were set up during PICCAP. However, capacity building activities will still form part of the project and will be provided through training workshops, and encouragement of the information exchange between the national and relevant regional and international institutions. This is to augment the existing capacity, as well as address capacity gaps that were identified during the SNC stocktaking exercise, from the ongoing NCSA project in the country, and in the ongoing regional climate change mitigation projects participated in by Kiribati.

The project will be executed by the Kiribati Ministry of Environment, Lands and Agriculture Development (MELAD) in close collaboration with other relevant ministries and institutions, particularly those that make up the country's Climate Change Study Team (CCST). The Climate Change Unit (CCU) and SNC Project Coordinator (NCCC) will work closely with the Global Environment Facility (GEF) and UNFCCC focal points, CCST and UNDP-Fiji.

### 1.3 MANAGEMENT ARRANGEMENTS

Please refer to the Section 5, Institutional Framework and Project Implementation, Appendix B: Technical Components of the project proposal.

### 1.4. MONITORING AND EVALUATION

UNDP guidelines and procedures on reporting, monitoring and evaluation will be followed throughout the project cycle. In addition, the SNC Project Coordinator will provide regular progress reports to UNDP and copy to all members of CCST and the Kiribati MELAD, who will be hosting and executing the project. These reports will enable the CCST and UNDP to evaluate the progress of the project on a regular basis and identify difficulties and shortcomings with a view to overcoming them during the period of project implementation. These reports will be reviewed by UNDP for their quality and standard, comprehensiveness, and conformity to the proposed terms of reference and dates of completion. In addition, a mid-term review between UNDP and the Kiribati MELAD may be conducted. An independent evaluation by a qualified consultant will be conducted at the end of the project.

The CCST will meet twice a month to review project implementation and provide scientific, technical, policy and strategic guidance. The minutes of these meetings will be shared with all participating institutions. An independent financial audit will be conducted according to the UNDP rules and procedures. During the implementation of the project, regular financial statements will be prepared and provided to UNDP for accessing funds for project activities.

#### Monitoring Responsibilities and Events

A detailed schedule of project review meetings will be developed by the project management, in consultation with project implementation partners and stakeholder representatives and incorporated in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

Day to Day Monitoring of Implementation Progress - This will be the responsibility of the CCST based on the project's Annual Work Plan and its indicators. The Project Management Team (PMT) will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely and remedial fashion.

*Periodic Monitoring of Implementation Progress* – This will be undertaken by the UNDP-CO through quarterly meetings with the project proponent, or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.

#### Project Monitoring Reporting

The SNC Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

#### *Inception Report (IR)*

A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year Work Plan divided in quarterly timeframes detailing the activities and progress indicators that will guide implementation during the first year of the project. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the targeted 12-month timeframe. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project-related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation. When finalized, the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Coordinating Unit will review the document.

#### *Quarterly Progress Reports (QPR)*

Short reports outlining main updates in project progress will be provided quarterly to the local UNDP Country Office and the UNDP-GEF regional office by the project management team.

#### *Annual Project Reports (APR)*

The project will be subject to an annual review, the timing of which will be determined by UNDP in consultation with the executing agency, MELAD. During these reviews, project performances will be measured against established work plan targets and expenditures assessed against approved budgets. The CCST will prepare and submit Annual Project Reports (APRs) to UNDP, which will be used as a basis for the annual reviews.

#### *Technical Reports*

Technical Reports are detailed documents covering specific areas of analysis or scientific specializations within the overall project. As part of the Inception Report, the project management team will prepare a draft Reports List, detailing the technical reports that are expected to be prepared on key areas of activity during the course of the Project, and tentative due dates. Where necessary this Reports List will be revised and updated, and included in subsequent Annual Project Reports (APR). Technical Reports may also be prepared by external consultants and should be comprehensive, specialized analyses of clearly defined areas of research within the framework of the project. These technical reports will represent, as appropriate, the project's substantive contribution to specific areas, and will

be used in efforts to disseminate relevant information and best practices at local, national and international levels.

#### Audit Clause

The Government of Kiribati will provide the UNDP Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

#### 1.5. LEGAL CONTEXT

This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement (SBAA) between the Government of Kiribati and the United Nations Development Programme, signed by the parties. The host country implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government co-operating agency described in that Agreement.

UNDP acts in this Project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to UNDP as per the terms of the SBAA shall be extended mutatis mutandis to GEF.

The UNDP Resident Representative is authorized to effect in writing the following types of revision to this Project Document, provided that he/she has verified the agreement thereto by the GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- Revision of, or addition to, any of the annexes to the Project Document;
- Revisions, which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the re-arrangement of the inputs already agreed to or by cost increases due to inflation;
- Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and
- Inclusion of additional annexes and attachments only as set out here in this Project Document.



## 2. Total Budget

Award ID:	PIMS# XXXX Kiribati: Enabling Activity for the preparation of the Second National Communication									
Award Title:	PIMS# XXXX Kiribati: Enabling Activity for the preparation of the Second National Communication									
Project ID:	PIMS# XXXX Kiribati: Enabling Activity for the preparation of the Second National Communication									
Project Title:	Kiribati Ministry of Environment, Lands and Agriculture Development									
Executing Agency:	PLANNED BUDGET									
GEF OUTCOMES ATLAS ACTIVITY	RESPONSIBLE PARTY	Source of Funds	Budget ATLAS Code	Budget Description	Year 1 (US\$)	Year 2 (US\$)	Year 3 (US\$)	Total Budget (US\$)		
Outcome 1: National Circumstances	MELAD	GEF	71300	Local Consultants and committee meetings	7,800	9,750	1,950	19,500		
Outcome 2: National GHG Inventories	MELAD	GEF	71300	Local Consultants	6,600	8,250	1,650	42,500		
			71600	Travel	1,500	1,500				
			72200	Equipments	20,000					
Outcome 3: Programmes containing measures to facilitate adequate adaptation to climate change	MELAD	GEF	74210	Printing and publication			3,000	48,200		
			71300	Local Consultants and committee meetings	6,900	8,600	1,700			
			72100	Contractual services	7,500	7,500				
			71600	Travel	3,000	3,000				
			72200	Equipments	5,000	5,000				
Outcome 4: Programmes containing measures to mitigate climate change	MELAD	GEF	71300	Local Consultant and committee meetings	6,080	7,600	1,520	35,200		
			72100	Contractual Services	7,000	5,000	3,000			
Outcome 5: Other relevant information (e.g. research and systematic observation, technology transfer, education and public awareness, capacity building)	MELAD	GEF	72200	Equipments	5,000			47,800		
			71300	Local Consultants and committee meetings	7,120	8,900	1,780			
			74500	Miscellaneous	10,000	15,000	5,000			

Outcome 6: Constrains & Gaps; Related Financial, technical & capacity needs	MELAD	GEF	71300	Local Consultants and consultants	12,000	12,000	6,000	30,000
Outcome 7: Technical Assistance	Consultants (external)	GEF	71200	Regional/International Consultants	40,320	50,400	10,080	100,800
Outcome 8: Compilation, Production of communication, including Executive Summary and its translation	MELAD	GEF	71300	Local Consultants		3,000	10,000	18,000
			74210	Printing and publication		2,500	2,500	
Outcome 9: Project Management	MELAD	GEF	72100	Contractual services - individuals	20,000	20,000	20,000	60,000
Outcome 10: Monitoring & Reporting	MELAD / UNDP	GEF	74105	Management and reporting	1,000	1,000	1,000	3,000
<b>GRAND TOTAL</b>					166,820	169,000	69,180	405,000

## Appendix A: Summary Report of the self assessment exercise

### I. DESCRIPTION OF THE PROCESS AND APPROACH ADOPTED FOR THE STOCKTAKING EXERCISE

The objective of the stocktaking exercise and stakeholder consultations is to build upon existing activities, institutions and knowledge relating to the preparation of national communication and to review and seek relevant information on national stakeholders' experiences from past and existing programmes, and their likely contributions towards the preparations of the SNC to meet the country's obligations under the UNFCCC.

The stocktaking and stakeholder consultations were carried out by a team of the Director of the Environment and Conservation Department and Climate Change Coordinator. Three methods were applied to solicit and collect information from various government ministries, agencies, institutions, the private sector and other non-government organizations and community groups:

- a) Desk review of information relating to the climate change activities of the initial national communication and other related activities including broad national policy papers that were readily available to the team members;
- b) Meetings and/or consultations with relevant Departmental members of the Environment and Conservation Department, key government ministries, agencies and non-government organizations; and
- c) A national workshop on climate change awareness.

The first two steps above assisted in defining the scope and focus of the stocktaking and stakeholder consultations as well in identifying relevant stakeholders to be consulted. The consultations concentrated on reviewing information from the preparation and completion of the first national communication as well as the perceived needs and priorities for the SNC following the UNFCCC guidelines adopted by the Conference of the Parties to the UNFCCC (UNFCCC COP decision 17/CP.8). The meetings also examined ways of improving working relationships and synergy between the Environment and Conservation Department/Ministry of Environment, Land and Agriculture Development and other relevant stakeholders as well as between various activities, programmes and projects relating to the preparation of second national communication. The consultations also discussed the setting up of an appropriate institutional structure to implement the various activities that would enable the preparation of the SNC.

The elements of information covered in the consultations included work carried out under previous climate change enabling activities (e.g. PICCAP, NAPA), gaps/uncertainties, new areas of work to be undertaken, priorities for SNC, opportunities for promoting synergy/linkages with related programmes and lessons learned and or best practices in INC process that would be useful for the preparation of SNC. The stocktaking and consultations were centred on the following components of the national communication:

- a) National circumstances (development priorities, geography and climate, information needs for adaptation, and mitigation, capacity needs and constraints, institutional arrangements);
- b) Greenhouse gas inventories (main sources of emissions and removals, data sources, adequacy and reliability, accessibility, availability and management of data, capacity needs and constraints);
- c) Programmes containing measures to facilitate adequate adaptation to climate change (vulnerable sectors, gaps and uncertainties, methods and tools for assessing adaptation

- options, capacity needs and constraints, priorities for adaptation in the 2NC);
- d) Programmes containing measures to mitigate climate change (main sectors, methods and tools, priorities to be addressed, and the linkages to the other development priorities);
- e) Other Information (technology needs and other technology transfer-related issues, PICCAP Phase II outcomes, research and systematic observation, education, training and public awareness needs, and the linkages other capacity building activities
- f) Constraints and gaps, and related financial, technical and capacity needs (areas for improvement and any new information to be included)

### **Institutions and individuals involved**

A total of eight government ministries, agencies and non-government organizations involving 14 experts and key stakeholders were consulted during the stocktaking and stakeholder consultations. Most of the experts and/or organizations consulted are also members of, or are represented on, the Climate Change Study Team (CCST).

The actual stocktaking and stakeholder consultations were carried out in two phases. The first phase involved two roundtable consultations with government departments and key NGOs who are part of the CCST. The consultations, undertaken on the 5<sup>th</sup> and 21<sup>st</sup> September 2006, involved discussions on the key issues for consideration in the Stocktaking Exercise and the institutional arrangement for the SNC Project. Participants were given an open forum format to present their views on the issues related to the Stocktaking Exercise and they identified key areas for action.

The second phase involved a national workshop on climate change awareness. The workshop was co-facilitated by ECD. Participants at the workshop included representatives from government ministries, NGOs and civil society. Breakout groups were formed during the workshop to identify key issues for consideration in the SNC. (These are identified Appendix B).

## **B. MAIN OUTCOMES OF THE STOCKTAKING, INCLUDING PRIORITIES IDENTIFIED**

The work carried out under the previous enabling activities such as the preparation of initial national communication indicated that a great deal of information is now available for the preparation of the SNC. However, there are many gaps and constraints which had been identified under initial national communication and which will be addressed in the SNC.

### **NATIONAL CIRCUMSTANCES**

While the physical geography of Kiribati and its islands remain the same as was previously reported in its INC, some of its physical and socio-economic characteristics are being influenced by the interactions of the ocean-atmosphere system and the development priorities it wants to pursue. The way in which Kiribati will implement the UNFCCC will depend partly on how well it can respond to the vagaries of climate change, climate variability and sea-level rise and the need for economic development.

Activities since INC completion include:

- contribution to the 2002 World Summit on Sustainable Development and the Johannesburg Plan of Implementation (JPOI),
- the 10-year review of the Barbados Programme of Action and the International Meeting in Mauritius as well as other regional meetings and conferences

- Multilateral environmental agreements (UNCCD, CBD, Montreal Protocol, Basel, Ramsar, etc).

Some of the pertinent information from these reports and documents will be useful for incorporation in the national circumstances section of the SNC. This will include analyses of national development priorities and policies that are relevant to addressing climate change in Kiribati as well as incorporating climate change concerns in sectors such as energy, transport, tourism, agriculture, fisheries, health and waste.

## NATIONAL GREENHOUSE GAS INVENTORY

Kiribati's first GHG inventory as presented in its INC highlighted some of the most pertinent problems and constraints in the preparation of its SNC. These problems and constraints are:

- a) Difficulties in accessing accurate data and the lack of GHG database management system.
- b) Difficulties in data collection and collation.
- c) Lack of knowledge or expertise and lack of studies in particular categories of GHG emissions.
- d) The lack of quality data and poor data management has been singled out as the most pressing.
- e) Lack of appropriate hardware and software for development and improvement of data management systems for the preparation of national communications, and,
- f) Lack of strong coordination of activities relating to the preparation of the GHG inventory

Given the problems and constraints outlined above, it may be necessary to focus emissions estimates on those categories of emissions for which data are available and accessible and whose emissions provide a significant share to the total GHG emissions in Kiribati. In this regard, a key source analysis will be undertaken to determine key source categories of emissions for the inventory work. Additionally, capacity building and training on the use and application of the methodologies and tools for conducting a national GHG inventory will have to be conducted in order to train sufficient numbers of people to undertake the inventory work.

## VULNERABILITY AND ADAPTATION ASSESSMENT

Previous work on vulnerability and adaptation assessment provides pertinent information for the preparation of SNC, including, *inter alia*:

- a) All of Kiribati's population and infrastructure are located in the coastal areas/zones, rendering them highly vulnerable to climate change and sea-level rise. Their vulnerability is exacerbated by their exposure to extreme events, such as strong storms associated with erosions, coastal flooding, inundation and land loss.
- b) Kiribati is also highly susceptible to extreme climate events, such as, prolonged droughts associated with the ENSO events, coral bleaching and intense tropical cyclones which can cause severe damage to socio-economic activities and infrastructure, agriculture and biodiversity
- c) Most vulnerable sectors included coastal zone, water resources, agriculture, forestry, fisheries and human health, which are considered vital to the welfare and livelihoods of communities.

Kiribati has already taken positive actions to implement the UNFCCC objectives but many gaps, constraints and problems still remain. The National Development Strategies will catalyze drafting of policies relating to population, water resources, land-use and waste management in addition to addressing health and climate change concerns.

Many of the issues and activities relating to the implementation of the UNFCCC and the preparation of national communication were carried out under the auspices of the national coordinating committee (NCC) which was mandated by the government to oversee the implementation of the UNFCCC.

The level of awareness on environmental issues is generally high among the various sections of the population and government but more needs to be done to integrate climate change issues and concerns in the development planning and implementation.

#### SYNERGY BETWEEN ENABLING ACTIVITIES AND OTHER PROJECTS

At the national level, the proposed project will have strong linkages to a number of on-going UNDP-GEF enabling activities such as Kiribati's National Capacity Self-Assessment (NCSA) activities, National Biodiversity and Action Plan (NBSAP), National Sustainable Land Management Project (SLM) as well as with other UNDP-funded activities in the area of sustainable energy including the UNDP-GEF funded Pacific Islands Renewable Energy Project (PIREP), and the proposed Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP).

Of particular note is the similarity in approaches that highlighted the immediate needs and concerns relating to identification and prioritization of adaptation options, strategies and measures in the preparation of the SNC. Adaptation to climate change has very close linkages with activities relating to the preparation of the National Biodiversity Strategy (NBSAP) under CBD and National Action Plans under the UNCCD. Activities relating to the preparation of vulnerability and adaptation assessments for national communication will therefore have closer links on adaptation and capacity building issues that will be identified under the NCSA project.

#### NEW AREAS OF WORK FOR SECOND NATIONAL COMMUNICATION

A number of new areas have been identified which will form part of the programme for the preparation of the SNC. The new areas of work include:

- a) Conduct a key source analysis in order to determine the sectors with significant emissions where resources can be targeted,
- b) Training in the use and application of various models in vulnerability and adaptation assessments, the IPCC Good Practice Guidance on National Greenhouse Gas Inventories and Uncertainty Management, IPCC Good Practice Guidance on Land Use, Land Use Change and Forestry and related applications of geographic information systems and remote sensing techniques.
- c) Strengthen existing and, where appropriate, establish data management systems to ensure preparation of good quality inventories and to enable vulnerability and adaptation assessments over the long term.
- d) Identify technology transfer issues relating to energy efficiency and energy conservation as well as opportunities for renewable energy sources and technologies.

Opportunities already exist for promoting and strengthening synergy with related programmes such as NCSA, NBSAP, and NAPAs in the process of the preparation of SNC. The SNC will build on other related projects (e.g., NCSA, NAPA) and other national activities carried out under other relevant international conventions (e.g., UNCBD and UNCCD). This is especially important for vulnerability and adaptation activities as adaptation issues transcend many of the activities of

the three Conventions thus increasing the potential for cooperation and collaboration among the various ministries, agencies, institutions and individuals who are already involved in their implementation.

## PRIORITIES FOR SNC IDENTIFIED UNDER VARIOUS COMPONENTS

### NATIONAL CIRCUMSTANCES

Information on national circumstances concerning the physical (geography, topography and climate) and socio-economic (economy, education, population, health, livelihoods) characteristics of the country and how these might affect the way in which Kiribati deals with climate change and sustainable development issues in the long term is currently being developed. The preparation of the second national communication will strengthen the linkages and facilitate better understanding of the nexus between climate change and development. This will involve analyses of policies and plans that are currently being pursued by Kiribati and their relevance in dealing with climate change issues and concerns.

Coordination, cooperation and synergy between the key stakeholders in developing actions and strategies to cope with the impacts of climate change are crucial for the sustainability of project implementation. It is envisaged that the preparation of the various components of the SNC will help strengthen and where appropriate, build synergies among and between activities relating to the reporting requirements of other MEAs. The CCST epitomizes a strong institutional arrangement under which many of the activities/tasks will be carried out in the preparation of second national communication.

### NATIONAL GREENHOUSE GAS INVENTORY

Many of the problems relating to the preparation of national greenhouse gas inventory are lack of quality data and its associated problems of access, availability, management and retrieval systems; lack of expertise and capabilities to undertake inventory work and the lack technical, financial, human and institutional capacities to carry out inventory work on a sustainable (continuous) basis. Therefore good capacity building and training of personnel and institutions is necessarily critical in order to ensure high quality inventories.

Training and capacity building is required in data collection, analysis, archiving and management, and the use and applications of geographic information systems and remote sensing techniques as they relate to estimations of emissions and removals from land use change and forestry sector. Identification of key source categories of emissions is considered important in determining resource allocations in GHG inventories and therefore training is needed in this area as well as on the use Revised IPCC guidelines on national greenhouse gas inventories, the IPCC good practice guidance on the National GHG inventories and Uncertainty Management and the IPCC Good Practice Guidance on Land use, land-use change and forestry.

## STEPS TAKEN OR ENVISAGED TO IMPLEMENT THE CONVENTION

### Measures to facilitate adequate adaptation

Much of early work has focused on vulnerability and adaptation assessments, which identified a number of critical actions, and measures that could contribute to enhancing adaptive capacity and towards achieving adequate adaptation to climate change. The preparation of the INC has

highlighted many of the needs and concerns relating to vulnerability and adaptation, including the need to:

- a) Integrate climate change adaptation into sectoral development planning and budgeting processes,
- b) Build capacity for climate change vulnerability and adaptation at the national levels to strengthen human and institutional capacities to assess, plan and respond to climate-related risks,
- c) Implement urgent adaptation measures to enable the communities to cope with future climate and sea-level changes,
- d) Strengthen networking and information sharing/exchange amongst all stakeholders to develop appropriate measures to address climate change, climate variability and sea-level rise.
- e) Conserve and protect breeding grounds and habitats and species that are considered vulnerable to impacts of natural disaster and human induced activities.
- f) Conduct studies on the impacts of ENSO on the fisheries and tourism sectors.
- g) Monitor the use of chemicals and fertilizers and its impact on fisheries, and their habitats.
- h) Improve water management efforts with better supply-side and demand-side management.
- i) Develop a climate change and climate variability database and collect data on sectors and relevant indicators to monitor and evaluate their impacts,
- j) Promote integrated coastal zone management and planning for the protection of coastal resources,
- k) Improve climate monitoring, research and systematic observation, develop and manage databases necessary for vulnerability and adaptation assessment and enhance the capabilities and capacities of experts and institutions in the use and applications of analytical, integrated and process-based methods and tools for assessment work.

Vulnerability and adaptation assessment work undertaken during the preparation of INC1 provides a good basis for developing a policy framework for adaptation that is country driven, economically viable and socio-culturally sensitive to the needs and concerns at the various levels of integration of society. The preparation of vulnerability and adaptation assessment will build on these frameworks and plans in enhancing adaptive capacity and improving the coping strategies.

Significant gaps still exist in the areas of data collection, monitoring, expertise, skills and know-how required to conduct vulnerability and adaptation assessments on a continuous basis.

Therefore, there is an urgent need for training and capacity building in:

- a) Development and use of appropriate methodologies and tools for conducting vulnerability and adaptation assessments at the community, national and sectoral levels.
- b) Strengthening of existing and where appropriate development of data management systems to ensure that a vulnerability and adaptation assessment is carried out on continuous basis.
- c) Evaluation (including cost-benefit analysis), prioritization and costing of adaptation options, strategies and measures.
- d) Incorporation of vulnerability and adaptation assessment work into development planning. This would include risk-based assessment methods.
- e) Research, systematic observation and data collection, analysis and dissemination.
- f) Enhancement of the capacity of communities to identify capacity building and training needs as they relate to vulnerability and adaptation assessments, building on the community vulnerability and adaptation assessments currently being carried out in several communities.

#### Measures to mitigate climate change



As part of its overall development strategy, Kiribati is in the process of developing an energy policy that will reflect its future development trajectory. In this regard efforts are being made to promote energy efficiency and conservation as well as the use of renewable energy sources and technologies.

Training and capacity building is required in the use of appropriate technologies, methodologies and tools for assessment of mitigations options and development of mitigation scenarios particularly in sectors with significant mitigation potential.

## OTHER INFORMATION CONSIDERED RELEVANT FOR THE ACHIEVEMENT OF THE OBJECTIVES OF THE CONVENTION

### Technology transfer

There is a need to carry out technology needs assessment to identify the barriers and ways to promote renewable energy technologies for renewable energy development. Other issue relating to technology transfer includes, capacity building needs, enabling environment, technology information and mechanisms for the transfer of technology.

### Research and systematic observation

Strengthening of the capabilities and expertise of Kiribati to contribute to and participate in research and systematic observation, data collection and processing, archiving, analysis and dissemination is crucial in dealing with climate change issues. Therefore, there is a need to enhance the capacity of the institutions and personnel responsible for Kiribati's contribution to and participation in the global climate observing system and other global observation systems.

### Capacity-building

Capacity-building is regarded as a key issue in all areas of work relating to the preparation of national communication. It is therefore important that sufficient resources are provided for this activity on an on-going basis so that activities/tasks required are implemented in an effective manner. Opportunities already exist for collaboration and synergy between the various Convention processes as they relate to capacity building and technology transfer and therefore it is important to ensure these are further strengthened.

### Education, training and public awareness

In respect of education, training and public awareness Kiribati is in the process of incorporating climate change issues within the education curriculum. Such efforts are highly commendable and will need resources (human and financial) to continue this work as the priorities and needs for climate change science evolve.

There is a need to continue and improve the efforts in training and awareness-raising on climate change issues at the community and national level. Existing networking and information exchange between the various levels of society should be strengthened and where relevant new networks and information exchange mechanisms should be explored.

### Needs and constraints, and related financial, technical and capacity gaps

Great efforts are being made to fulfill and overcome some of the needs and constraints relating to financial, technical and capacity gaps with the assistance of bilateral and multilateral organizations. However, there are many more needs and constraints that are being identified and for which no or very limited resources are available to help address these evolving issues and priorities. Therefore it is recommended that resources (human, technical and financial) made available should be commensurate with the evolving priority needs and concerns.

### **C. MAIN LESSONS LEARNED FROM THE SELF-ASSESSMENT EXERCISE**

#### **LINKAGE WITH FIRST ENABLING ACTIVITIES INCLUDING TOP-UP ACTIVITIES**

A number of lessons learned from the previous work relating to the preparation of the INC and on-going work currently being carried out under various projects include the following:

- a) Strong institutional arrangement is critical in the management of the projects and their implementation.
- b) Greater clarity over roles and responsibilities of various ministries, agencies and institutions and the need to strengthen institutional arrangements, and to develop in-country capacity and in-country training will be critical in the implementation of the SNC project,
- c) The level of collaboration and cooperation between and among the various agencies, institutions of government and non-government organizations and communities in the implementation of projects is quite high in Kiribati, a factor that will facilitate effective implementation of the various components of the SNC.
- d) Many activities relating to the implementation of the various components of national communication will require capacity building and training. This could include skills upgrading and outsourcing experts and institutions to carry out the tasks/activities in a timely manner.
- e) Kiribati has made good progress under its public service reform programme particularly in promoting the reforestation and agroforestry, the establishment of the land use commission and a new environmental act which makes it legally binding for all development projects to undertake environmental impact assessment. However, the challenge now is to seek to integrate climate change issues and concerns into the sectoral planning and development.
- f) A number of government ministries and non-government organizations will play a key role in the preparation of the SNC. These include:
  - Environment and Conservation Department,
  - Ministry of Environment, Lands and Agriculture Development,
  - Ministry of Health
  - MPWU
  - MFMRD
  - MISA
  - MFED
  - MCTTD
  - Kiribati Association of Non-Government Organizations

#### **SYNERGY WITH RELEVANT INITIATIVES**

The initial national communication formulation (INC) process represents a very good example on how various ministries, agencies, institutions of government and non-government organizations work together in a collaborative manner towards developing a national communication. The

approach used in the INC formulation is similar to what is being proposed for the SNC preparation.

The SNC preparation (particularly the adaptation component) will be based on multi-stakeholder consultations, which will identify a number of important sectors of the economy and livelihoods, which would be adversely affected, by climate change, climate variability and sea-level rise. Moreover, adaptation and capacity building are key cross-cutting issues that would promote synergy between and among the UNFCCC, CBD and the UNCCD. Activities relating to the preparation of vulnerability and adaptation assessments for the SNC will therefore have closer links on adaptation and capacity building issues with other reporting requirements.

## REGIONAL COMPONENT

It is envisaged that the SNC preparation in Kiribati can make use of existing regional technical support mechanisms to provide technical advice and support (expertise, skills and know-how) and nationally-adapted methods and tools, and, a roster of regional experts who could be used to assist the countries undertake some of the activities relating to the national communication; training and capacity building institutes on various elements of the national communication, and methodologies for prioritization and evaluation of adaptation actions/activities.

Regional training, while focusing on vulnerability and adaptation assessments, national GHG inventories, mitigation analysis, will also focus on data management systems for various elements of the national communication and include best practices such as those initiated by the CIDA-sponsored work on adaptation, NAPA and the evaluation (and costing) of adaptation options, strategies and measures.

### D. STAKEHOLDER CONSULTATIONS

The Government of Kiribati is fully committed to the implementation of the UNFCCC, and hence the goals and objectives of this project. The strengthening of scientific, technical and institutional capacities of Kiribati in various aspects of the proposed activities, as well as the leading role taken by the CCST and the Environment and Conservation Department, to execute the project would enable the country to fulfill its obligations and commitments under the UNFCCC on a sustainable basis. Indeed, the whole project management structure is designed to fully engage participation by local experts in all aspects of activities so that further activities in the future are sustainable.

Public participation in certain aspects of the project activities will be encouraged where appropriate and possible. The outreach activities to be undertaken in the SNC Project Component would also need the extensive support of not only the relevant ministries, but also local communities and NGOs such as Kiribati Trust and KANGO in order for the activities to be effective and successful. Local communities, NGOs and the media will be invited to participate in all national workshops as appropriate.

On the completion of the SNC preparation, it is expected that further institutional and technical capacity of the country would have been considerably strengthened to enable Kiribati to better respond to the challenges and opportunities presented by climate change as well as to better fulfill its commitments under the UNFCCC.

## Institutions and Stakeholders Consulted

<i>Institution</i>	<i>Stakeholders interests/responsibilities</i>	<i>Relevance to climate change/reasons for inclusion</i>	<i>Role in the self-assessment process</i>
<p><b>GOVERNMENTAL INSTITUTIONS</b></p> <p>Environment and Conservation Department, Ministry of Environment, Lands and Agriculture Development</p>	<p>Implementing agency and operational focal point of the GEF, including UNFCCC, UNCCD and CBD and other MEAs.</p> <p>Responsibilities:</p> <ul style="list-style-type: none"> <li>- management of the state of the environment;</li> <li>- national coordination of activities and programmes related to MEAs including implementation, monitoring and evaluations</li> <li>- issuance and vetting of projects including permits and environmental impact assessments</li> <li>- Liaising with relevant national agencies for assistance to ensure the effective representation of Kiribati at meetings of the Parties to the Convention and other relevant meetings;</li> <li>- Liaising with relevant regional and international bodies to ensure that the representation of Kiribati at any meeting concerning a Convention is informed and effective;</li> <li>- Managing or participating in any project, or part of a project, aimed at implementing any aspect of environmental concerns</li> <li>- Disseminating information to local stakeholders and creating public awareness on environmental concerns</li> <li>- Preparing reports, and information papers for the Minister and Cabinet in relation to the implementation of any Convention;</li> <li>- review and improvement of regulations, policies and strategies for implementing environmental concerns.</li> <li>- Provide technical support to any other relevant government department or agency) to</li> </ul>	<ul style="list-style-type: none"> <li>- Climate Change Unit, established under the Environment and Conservation Department.</li> <li>- Climate Change Study Team (CCST) is established under the auspices of the ECD/MELAD with administrative and management support from Climate Change Unit.</li> <li>- Responsible for preparation of the INC and its submission to the COP</li> <li>- Responsible for preparation of the draft National Implementation Strategy (NIS) in collaboration with other relevant agencies</li> <li>- Responsible for the NCSA.</li> <li>- Responsible for preparation of the National Biodiversity Strategy and Action Programme under the CBD</li> </ul>	<ul style="list-style-type: none"> <li>- Consultations on national priorities, Mainstreaming of climate change in national environmental strategies, programmes and other documents, and on current and planned projects.</li> <li>- Regular consultations with the UNFCCC partners for discussion of the proposal of the second national communication in terms of technical issues, opportunities for synergy among various projects and institutional arrangements.</li> <li>- Regular consultations on the needs and priorities for capacity-building</li> <li>- Regular consultations on the implementation of work at the ECD, NBSAP and the formal adoption of NIS.</li> <li>- Operational focal point of the UNFCCC and the GEF</li> </ul>

	implement any obligation under a Convention.		
Department of Agriculture	<p>Department responsible for development of agriculture products for export and local markets.</p> <ul style="list-style-type: none"> <li>- Consultations with relevant agencies on issues relating to crop production &amp; research, food security, land-use, border control, water, biosafety and biosecurity.</li> </ul>	<ul style="list-style-type: none"> <li>- Member of the CCST</li> <li>- Collaboration with ECD/MELAD on policy and strategies on agricultural developments as they relate to crop productions, food security, land-use, resources management, vulnerability and adaptation assessment, use of chemicals and inorganic fertilizers, mitigation and other relevant climate change information and data.</li> <li>- Promoting and encouraging development of climate change variability and extremes resilient crops and better practices</li> </ul>	<ul style="list-style-type: none"> <li>- Consultation with regard to the issues related to agriculture research and crop productions especially technology application and techniques.</li> <li>- Consultation on data needs for V&amp;A assessment regarding agricultural crops including issues related to invasive species, chemicals usage, and policies review and development.</li> <li>- Consultation on the provision of climate data and information as well as on the needs for capacity-building, training and research (collection, analysis and archiving) and dissemination of information.</li> <li>- Consultations on strategies for continued participation in preparation of the second national communication, for marine resources management and impact from climate change including variability and extremes, education and awareness and conducting vulnerability and adaptation assessments nationally at both national, sectoral and community levels.</li> </ul>
Ministry of Fisheries and Marine Resources Development	<ul style="list-style-type: none"> <li>-Responsible for managing the national fisheries and marine resources, including education and awareness programmes.</li> </ul>	<ul style="list-style-type: none"> <li>- Member of the NCCCI</li> <li>- Promotes the well-being of marine resources, fisheries and lagoon ecosystems.</li> <li>- Together with ED/MNRL promotes programmes that heighten the awareness communities effects of climate change and sea-level rise on marine resources and practices.</li> <li>- Provide technical support to community and private sector projects related to marine resources management, monitoring and evaluations including environmental impact assessment.</li> </ul>	<ul style="list-style-type: none"> <li>- Consultation with regard to continued participation in preparations for second national communications</li> <li>- Completion of the national development plan and issues relating to cyclone rehabilitation</li> <li>- Official focal point for the international cooperation</li> <li>- Consultations on continuing participation in preparing second national communications,</li> </ul>
Ministry of Finance and Economic Development		<ul style="list-style-type: none"> <li>- Member of the CCST</li> <li>- Effective integration of climate change issues into national strategies and policies including sustainable development programmes</li> </ul>	
Department of Foreign Affairs	<ul style="list-style-type: none"> <li>- Focal Point of the GEF and is responsible for other trade agreements</li> <li>- National coordination of international cooperation</li> </ul>	<ul style="list-style-type: none"> <li>- Facilitation and official information role related to Climate Change</li> <li>- Member of the CCST</li> <li>- Effective participation and supportive role to</li> </ul>	

		Environment Department in UNFCCC negotiations, dissemination of official information and facilitation for other related development internationally including impacts from climate change on trade.	effects of climate change on trade (export and imports) and also on information dissemination.
Ministry of Internal and Social Affairs	- Responsible for administration and technical support to Outer Islands administrations.	<ul style="list-style-type: none"> <li>- Proposed member of the National Climate change country Team</li> <li>- Provide expert advice on outer islands resource management issues especially water, forestry, soil erosion and infrastructure development with regards to climate change impacts, and mitigation potential.</li> <li>- Facilitates participation in environment programmes in outer islands and liaise with authorities.</li> </ul>	<ul style="list-style-type: none"> <li>- Consultations on effects of climate change on resources and infrastructure in the outer islands</li> </ul>
Department of Lands and Survey	Responsible of mapping and surveying islands		
Ministry of Health	- Responsible for public health activities in management, waste management, as well as surveillance and establishing early warning for vector-borne and water-borne diseases	<ul style="list-style-type: none"> <li>- Member of the CCST</li> <li>- Has collaborated with Environment Department with respect to concerns for land based pollutions affecting the lagoons and peoples health.</li> </ul>	<ul style="list-style-type: none"> <li>- Consultations on information and data on the health effects of changes in rainfall and temperature</li> <li>- Provision of public health statistics, information, and advice relating to climate change education and awareness programmes, trainings, water quality testing including vulnerability and adaptation assessments.</li> </ul>
Meteorological Office (MCTTD)	- Responsible for providing national meteorological services to the public	<ul style="list-style-type: none"> <li>- Member of the CCST</li> <li>- Has collaborated with Environment Department in providing support to Regional Meteorological Services in data rescue programme and participates in climate-related projects such as sea level monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- Will continue to participate in the second national communications.</li> <li>- Consultations on strategies to enhance capacity-building on climate-related activities including data management activities and technologies including research and systematic observations applications</li> </ul>
MPWU	- Responsible for design and development of infrastructure of public works and services in communities, roads, bridges, drainage, water works, energy inspection, and development, coastal zone protection and management,	<ul style="list-style-type: none"> <li>- Member of the CCST</li> <li>- Undertakes climate change vulnerability and adaptation assessments, environmental impact assessment work, resource investigations and studies including mapping and planning, development of</li> </ul>	<ul style="list-style-type: none"> <li>- Consultation on strategies for further participation in the second national communications.</li> <li>- Involvement in future climate change related activities including integrating of reducing</li> </ul>

	building standards and control, land survey information, and waste management.	resources management policies, plans and regulations	impacts of risks into development plans and policies, improvement in resource management and training as well as education and awareness
Police Department & National Disaster Management	- Responsible for the national disaster management office and national emergency operations centre	- Member of the CCST - Responsible for pre disaster and emergency , trainings and educational and awareness , including vulnerability and adaptation assessments, and hazards risks assessments. -responsible for post disaster response and relief operations	- Consultations on strategies for improving and strengthening NDMO and disaster management processes including comprehensive reviewing of procedures, policies and mitigating activities. Continue participation in second national communications
Office of the Prime Minister	- Government Ministry responsible for the environment, economic development, outer islands and finance	- Member of the CCST - Key policy decision maker on disaster management and cyclone damage rehabilitation activities including legislation and policies development	- Consultations on immediate and future government policies regarding climate change and impacts, from extremes, and adaptation and vulnerability assessments
Ministry of Transport and Communication	- Regulatory agency responsible for administration of transportation sector, especially shipping and airlines, and ports facilities in Kiribati. Responsible for media and public communications	- Responsible for administering regulations related to marine pollution, oil spills and transport (ships and planes safety)	- Consultations on strategies for disaster mitigation, and marine pollutions issues as well as effects of climate change considerations on transportation.
Ministry of Education Youth and Sport	- Responsible for education curriculum development which incorporates subjects relating to climate change, including climate variability and sea-level rise. Responsible for coordinating sporting activities	- Curriculum advisers responsible for development of primary school materials, senior high school courses and materials, as well as teachers' development on general environment issues. Individual schools encourage continuing to adopt their own independent environmental projects.	- Consultations on the process of incorporating climate change issues into the teachers professional development programme and improve the education curriculum for environmental concerns
<b>PUBLIC AND STATE INSTITUTIONS</b>			
Kiribati Public Utilities Authority	- Responsible for generating and supplying power (electricity) to commercial and residential sectors on Funafuti and the outer islands.	- Member of the CCST - Heavily dependent on the use of fossil-fuel (diesel) and biggest single consumer of imported fuel in Kiribatu	Consultations on strategies for reducing risks of damages including placing all new lines underground , reducing fossil fuel usage and promoting for energy efficiency and energy conversion studies. Active in public sector promotions and awareness in energy efficiency programmes.

NON-GOVERNMENT NGOS			
KANGO	- Responsible for central administration and support to all NGO including environmental NGOs in facilitating numerous community based programmes and including environment programmes	- Member of the CCST - Assist through their community based network to promote awareness, training and dissemination of information on climate change issues.	- Consultations on KANGO strategies for climate change community awareness and training programmes in the preparation of second national communication.
Kiribati National Council of Women	- Responsible for facilitating numerous community based and national social development programmes. It has expanded their interests into community-based environmental programmes including coastal vegetation planting	- A major contributor to the NAP A process - Assisted Kiribati in the preparation of Initial National Communication A member of KANGO and assisting Kiribati to prepare community vulnerability assessments	- Consultations on strategies for climate change community awareness and training programmes in the preparation of the second national communication.
Island Councils	- Responsible for traditional decision-making at all levels of Kiribati Society	- Strong advocates for sustainable development and the protection and preservation of traditional and cultural heritage. Enforcement of traditional conservation systems that improve the resilience of ecosystems to climate impacts	- Consultation on the promotion of linkages between sustainable development and climate change at various levels of society.



## **APPENDIX B: TECHNICAL COMPONENTS OF THE PROJECT PROPOSAL**

### **1. BACKGROUND/CONTEXT**

Following the new guidelines for the preparation of national communications, Kiribati is now (through this proposal) seeking to prepare and submit its Second National Communications (SNC) to the UNFCCC. The activities within the SNC are continuation of, and an improvement of the work done under the INC preparation. During the duration of the project, particular attention will be put on addressing identified gaps and constraints during the SNC stocktaking exercise, making good use of the information derived from such exercise, and utilization of the results of relevant previous or ongoing national or international activities related to the climate change issues.

### **2. PROJECT OBJECTIVES**

The proposed project aims to strengthen the technical and institutional capacity of Kiribati to prepare and submit its SNC to the UNFCCC thereby meeting its obligations.

### **3. PROJECT STRATEGY**

Please refer to Section 1.2, page 5.

### **4. PROJECT ACTIVITIES**

#### **4.1. NATIONAL CIRCUMSTANCES**

Information provided on national circumstances is critical for understanding Kiribati's vulnerability to the adverse effects of climate change, its capacity and its options for adaptation, as well as its options for addressing its GHG emissions within the broader context of sustainable development.

Information on national circumstances will include the analyses of national and or regional development priorities and objectives that Kiribati is pursuing and those that would serve as the basis for addressing climate change and sea-level rise issues. Information on national circumstances will be linked to information provided in other chapters of the national communication. The analyses of development priorities and objectives should be of interest to other national stakeholders investigating the benefits of specific activities and policies and the linkages between the activities and policies relating to climate change and those of other Conventions, such as the CBD and the UNCCD.

Information will include:

- Geographical characteristics, including climate, forests, land use and other environmental characteristics;
- Population: growth rates, distribution, density and other vital statistics;
- Economy, including energy, transport, industry, and tourism, agriculture, fisheries, waste, health and services sector;
- Education, including scientific and technical research institutions;

- Any information considered relevant by the Party, e.g., information relating to Article 4.8 and 4.9, of the Convention;
- A description of institutional arrangements relevant to the preparation of the national communications on a continuous basis including distribution of responsibilities within government departments, universities, research institutions, etc;
- CCST as a relevant coordinating body;
- Involvement and participation of other stakeholders; and
- Thematic Working Groups on GHG inventory, vulnerability and adaptation assessment, mitigation, etc.

#### 4.2. GREENHOUSE GAS INVENTORY

GHG inventory is one of the key components of a national communication, as it forms the basis for climate change mitigation measures. A reliable and accurate GHG inventory will also be very useful for the formulation of any projects under the Clean Development Mechanism (CDM) of the Kyoto Protocol, so that appropriate baseline for emission reduction can be derived.

Kiribati's first GHG inventory in its INC highlighted some of the most pertinent problems and constraints in the preparation of its Second National Communication. These problems and constraints were:

- Lack of data or reliable data, including difficulties in accessing accurate data and the lack of GHG database that is required for a better understanding of its estimation of its GHG emissions, which is considered vital in social and economic development planning;
- Lack of reliable data from land use change and forestry sector and application of default emission factors used that might not be suitable to national conditions;
- No estimation of uncertainties for sources and removals of emissions;
- Capacity-building is still needed in GHG inventory; and
- Lack of appropriate hardware and software to develop and, or improve data management systems for the preparation of national communication would help the country fulfill its obligations, not only under the UNFCCC but also, other reporting requirements of the various multilateral environmental agreements.

#### Proposed Activities

On the basis of the previous inventory, national GHG Inventory for direct greenhouse gases carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) and for indirect greenhouse gases carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>) and non-methane organic volatile compounds (NMVOC) will be undertaken for the year 2000 in five source categories: energy, industrial processes, agriculture, land-use change and forestry and waste, using the IPCC 1996 Revised Guidelines for National Greenhouse Gas Inventories.

A key-source analysis will be carried out to determine the sectors with significant emissions where resources can be targeted. This activity will also include training in and capacity building on the use and application of the IPCC 1996 Revised Guidelines for National Greenhouse Gas Inventories, the IPCC Good Practice Guidance on National Greenhouse Gas Inventories and Uncertainty Management, and the IPCC Good Practice Guidance on Land Use, Land Use Change and Forestry and related applications of geographic information systems and remote sensing techniques.

Existing data management systems will be strengthened to ensure preparation of good quality inventories over the long term. Emissions of methane and nitrous oxide from international bunkers and aviation will also be estimated for the year 2000. The activity data of hydro fluorocarbons (HFCs), per fluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>) will also be collected for the same period where available.

Quality assurance and quality control (QA/QC) procedures based on the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories, will be applied as appropriate to ensure that the results of the inventory will be as reliable as possible.

Tables 1 and 2, as provided by the UNFCCC guidelines (annex to decision 17/CP.8) will be used for reporting the national GHG inventory. This activity will be coordinated with any regional efforts wherever possible.

At the end of the proposed activities, a workshop will be held to review the results. Policy makers and other stakeholders will be invited to participate in the workshop, so as to enhance their awareness on the importance of GHG inventory and on a long-term programme for the improvement of future GHG inventories.

The Thematic Working Group (TWG) on GHG Inventory will carry out the inventory work. Training on the application of IPCC methodology, including data collection, analysis and management, including the use of IPCC Good Practice Guidance and Uncertainty Management in National GHG Inventories will be conducted for the TWG.

The capacity-building activities would include the participation of some members of the TWG on GHG Inventory in the sub-regional, regional and international training workshops on GHG inventory, so as to share gain from exchange of experiences and lessons learned with other countries.

### Major Outputs and Indicators

The major outputs and indicators of this component will be:

- Establishment of thematic working group on GHG inventory;
- Updated and improved inventory data for CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, CO, NO<sub>x</sub>, NMVOC, and data on HFCs, PFCs and SF<sub>6</sub> for the year 2000;
- An updated, improved and user-friendly GHG inventory database;
- An updated GHG inventory report, including technical annexes that detail the inventory procedures and calculations;
- Further identification of shortcomings and gaps of the IPCC Guidelines in relation to the local conditions;
- A description of any original research needed to develop and/or apply new emission factors for specific activities;
- Recommendations on areas of targeted research to improve future inventories and to suggest revisions to the existing IPCC GHG inventory methodology;
- Strengthened human, scientific, technical and institutional capacity to undertake a GHG inventory; and
- The review workshop report, including major papers presented.

#### 4.3. PROGRAMMES CONTAINING MEASURES TO FACILITATE ADEQUATE ADAPTATION TO CLIMATE CHANGE

This component of the project will address gaps that were identified during the SNC stocktaking exercise regarding previous work on vulnerability and adaptation assessments during the INC.

##### Proposed Activities

Based on previous work, an integrated vulnerability assessment will be undertaken for key socio-economic sectors, such as coastal zone and reefs, agriculture, land-use change and forestry, water resources, health, fisheries, biodiversity, food security, and public infrastructure.

Relevant global and/or regional circulation models may be used to construct climate change scenarios for the region that includes Kiribati. Where possible, integrated assessment modeling will be used to assess the impacts of climate change in Kiribati. Based on these quantitative analyses, appropriate cost-effective adaptation options and measures will be assessed. The impacts of climate change on national development strategies; plans and programmes will be evaluated. Appropriate policy options will be identified and developed for response strategies.

Two of the possible major impacts of climate change are the shift in seasonal and latitudinal rainfall patterns, and the increase in extreme weather events, both of which could have significant implications for Kiribati in terms of tropical cyclones and drought. In addition, the frequency, persistence and magnitude of El Niño are projected to increase under the climate change scenario. El Niño could induce drought in Kiribati and many parts of the western Pacific. In view of these projected scenarios, further assessment of vulnerability will be carried out focusing on specific sectors using outputs of regional circulation models and targeted research.

The SNC will include (i) an integrated assessment of impacts and adaptation options including (ii) the identification of least-cost adaptation measures; (iii) a climate change-induced disaster prevention, preparedness and management plan; (iv) development of spatial information materials (e.g. maps, diagrams, decision matrices) for policy makers; (v) the list of high priority measures recommended for inclusion in sustainable development strategy; and (vi) analysis of barriers and opportunities for integration of adaptation measures in the medium and long-term national development plans. These assessments will build on the results of the National Adaptation Programme of Action recently completed, and will take into account the priorities and recommendations identified.

At the end of the assessment, a workshop will be held to review the results of the adaptation option and strategies. Policy makers and other stakeholders will be invited to participate in the workshop, so as to enhance their awareness on the various adaptation options, which should be taken into consideration in national development planning.

Thematic working group on vulnerability and adaptation will undertake the above tasks, using methodologies that they consider better reflecting the national situation, as well as existing methodologies and guidelines such as the *IPCC Technical Guidelines for Assessing Climate Change Impacts and Adaptations* (Carter et al., 1994); *UNEP Handbook on Methods for Climate Change Impact Assessment and Adaptation Strategies* (Feenstra et al., 1998); *International Handbook on Vulnerability and Adaptation Assessments* (Benioff et al., 1996); *Developing Socio-Economic Scenarios for Vulnerability and Adaptation Assessments*; *MAGICC/SCENGEN Climate Scenario Generator: Version 2.4, Technical Manual* (Wigley et al., 2000); *Compendium of Decision Tools to Evaluate Strategies for Adaptation to Climate Change* ([www.unfccc.int/issues/meth\\_tools.html](http://www.unfccc.int/issues/meth_tools.html)), the Adaptation Policy Framework (UNDP, 2004) and other regional methodologies where appropriate, will be used to undertake the assessment. Other methods to be used will include community vulnerability and adaptation assessment methodology, which was developed under the Canadian International Development Agency-funded project titled *Capacity Building for Development of Adaptation Measures in the Pacific Island countries (CBDAMPIC)*.

The capacity for this group on the application of the above-mentioned methodologies, including data collection, analysis and management, will be further strengthened and enhanced where necessary. The capacity-building activities will include the participation of the selected team members in sub-regional, regional and international training workshops on vulnerability and adaptation assessment, so as to share experiences and lessons learned with other countries.

#### Major Outputs and Indicators

The major outputs and indicators of this component will be:

- Strengthened and/or developed human, scientific, technical and institutional capabilities and capacities to undertake vulnerability and adaptation assessments will be developed and strengthened;
- A wide range of stakeholders involved in the preparation of vulnerability and adaptation assessments. The involvement and participation of communities in the assessment work will ensure heightened awareness of the risks imposed by climate change, variability and sea-level rise and also facilitate development of adaptation options, strategies and measures that would be viable and culturally acceptable;
- An improved, and/or better understanding of the key vulnerabilities and the risks imposed by climate change, climate variability and sea-level rise on various sectors, communities and infrastructure;
- An analysis (i.e., cost-benefit analyses, evaluation and prioritization) of the various adaptation options, strategies and measures for key/priority socio-economic sectors based on established methodologies, including possible least-cost adaptation options and adaptation technologies;
- Identification of targeted research on climate variability, climate change, tropical cyclones, drought and precipitation trends and their relation with El Niño;
- Policy options for adequate adaptation and response strategies for climate change impacts on key socio-economic sectors, including a draft National Climate Change Adaptation Action Plan;
- Further activities, gaps, constraints and research needs, as well as specific financial, technical and institutional and research needs for capacity-building will be identified and highlighted; and
- The review workshop report, including major papers presented.

#### 4.4. PROGRAMMES CONTAINING MEASURES TO MITIGATE CLIMATE CHANGE

Kiribati recognizes that undertaking climate change mitigation and assessment will provide ancillary benefits for sustainable development, such as increase in technological efficiency and effectiveness, improvements in the security and availability of power supply and increase in employment resulting from mitigation projects.

Significant constraints relating to the availability of data and information and, specific institutional arrangements to handle data acquisition and database maintenance for climate change mitigation still remain problematic. Mitigation assessment will entail the generation of information on the national analysis of the potential costs and impacts of the various technologies and practices to mitigate climate change. This information will also be relevant for sustainable development and useful for policy makers in formulating and prioritizing mitigation programmes.

##### Proposed Activities

In order for Kiribati to undertake mitigation assessment as part of its development strategy, the Thematic Group on Mitigation, including *inter alia*, will carry out a number of pertinent activities:

- Collection, collation, analysis and archiving of data for the different sectors of the economy, where appropriate and relevant;
- Training and capacity building for national experts and institutions to undertake the preparation of the mitigation assessment;
- Training of personnel in the use of methods, models and tools for the generation of climate and socioeconomic scenarios, at both the national and sectoral levels; and
- Preparation of mitigation projects for funding.

Training and capacity building will be required in the use of appropriate technologies, methodologies and tools for assessment of mitigations options and development of mitigation scenarios particularly in sectors with significant mitigation potential.

Several methods and models that may be used in mitigation assessment, ranging from a broad description of main development trends and statistics to formalized modeling at sector and macro-economic levels. Many of these methods and models are provided in a number of technical resource such as Such as *Technologies, Policies and Measures for Mitigating Climate Change* (IPCC Technical Paper I); *Greenhouse Gas Mitigation Assessment: A Guidebook by the U.S. Country Studies Program* and *Climate Change 2001: Mitigation* (Contribution of Working Group III to the Third Assessment Report of the IPCC). Given the likely dominance of the energy sector (including transport) in terms of emissions, models such as LEAP, ENPEP and MARKAL will be used to undertake mitigation assessment.

Based on the above analyses, a draft National Mitigation Plan for key socio-economic sectors will be developed. Both legal (e.g., law and legislation) and economic (e.g., tax incentives) instruments may be necessary for promoting mitigation measures. A list of environmentally friendly mitigation technologies, including renewable energy technologies, will be identified and assessed. Appropriate mitigation projects will also be identified for bilateral and multilateral funding.

At the end of the proposed activities, a workshop will be held to review the results and the draft National Mitigation Strategy for GHG Emission Reduction. Policy makers and other stakeholders will be invited to participate in the workshop, so as to enhance their awareness on the importance of GHG emission reduction, which should be taken into consideration in national development planning

Much of this work will build on and complement the work already started by the GEF-funded *Pacific Island Renewable Energy Project (PIREP)*, which focuses on the removal of barriers to the adoption of renewable energy technologies. The Mitigation Working Group will include the PIREP Task team.

The capacity-building for the Mitigation Working Group on the application of the above-mentioned methodologies and models, including data collection, analysis and management, will be further strengthened and enhanced. The capacity-building activities will include the participation of the selected team members in the sub-regional, regional and international training workshops on mitigation assessment, so as to share experiences and lessons learned with other countries. Training workshop on the application of macro-economic models and relevant energy models will be organized with the assistance of both national and, where appropriate, regional or international consultants as well as the use of expertise available from the UN agencies.

#### Major Outputs and Indicators

The major outputs and indicators of this Component will be:

- Important baseline data for key socio-economic sectors required for assessing GHG mitigation options;
- A comprehensive quantitative mitigation options assessment for key socio-economic sectors based on established methodologies, including possible least-cost mitigation options and environmentally friendly mitigation technologies;
- A draft Mitigation and Renewable Energy report including appropriate legal and economic instruments, and public-private partnerships for mitigation measures will be drafted;
- Strengthened human, scientific, technical and institutional capacity for mitigation assessment;
- Further constraints and specific financial, technical and institutional needs for capacity-building on mitigation and renewable energy technologies and on the development of mitigation measures and strategies will be identified and highlighted;
- The review workshop report, including major papers presented.

#### 4.5. OTHER INFORMATION CONSIDERED RELEVANT TO THE ACHIEVEMENT OF THE OBJECTIVE OF THE CONVENTION

##### **4.5.1. Development and transfer of technologies**

#### Proposed activities

A technology needs assessment (TNA) will be carried out by the thematic group on Technology Transfer to identify technology needs for adaptation and mitigation. The TNA will be undertaken by using the assessment methodology developed by UNDP. The TNA group will use a six-step process to complete the TNA.

The synthesis report from this assessment will provide input to the chapters on vulnerability and adaptation and mitigation assessments in the Second National Communication.

Thematic working group on technology transfer and research and systematic observation will carry out the following activities relating to technology transfer based on the previous activities and the technology needs assessment (TNA):

- A comprehensive analysis and assessment of the country-specific technological requirements and opportunities of their use, transfer and introduction in key socio-economic sectors, as well as their social, economic and environmental impacts for adaptation and mitigation;
- Capacity-building and training for the TWG will include learning how to apply the TNA methodology and the use of appropriate technology information databases such as the UNFCCC's TT:CLEAR and any relevant information provided by the Center for Technology Information.
- The barriers to the adoption of environmentally-sound technologies in Kiribati will be identified, with a view to facilitating their removal. The PIREP Team who has been working on these issues for the last two years will provide information on barriers to and possible adoption of technologies for mitigation.
- Various public awareness programmes focusing on the benefits of various technologies will be carried out in communities/villages.

The feasibility of other technological options, such as cogeneration of power by means of grid-connected solar systems that do not have battery storage; and the electric-powered car using excess wind to supply electricity (assuming that a proposed wind farm will come on line in the next decade) will be assessed and evaluated.

Selected members of the thematic working group on Technology transfer and research and systematic observation will participate in relevant sub-regional, regional and international training workshops and conferences to share experiences and lessons learned, as appropriate.

At the end of the proposed activities, a workshop will be held to review the results and outcomes, of technology needs assessments, which will serve as important inputs for both the National Adaptation Programme of Action and the National Mitigation Plan.

#### Major Outputs and Indicators

The major outputs and indicators of this Sub-Component will be:

- Completion of technology needs assessment;
- Completion of a TNA synthesis report including priorities for adaptation and mitigation;
- Important inputs for both the National Adaptation Programme of Action and the National Mitigation Plan;
- Technology information networks;
- Strengthened human, scientific, technical and institutional capacity;
- The reports of the review workshop, including major papers presented.

#### **4.5.2. Research and systematic observation**

##### Proposed Activities



Within the financial constraint of the present proposed project, the following activities are envisaged:

- Improvement in data collection, analysis and management, with emphasis on data quality assurance. This activity will build on the data recovery programme supported by the World Meteorological Organization through its South Pacific Sub-regional Office;
- Trend analysis in existing temperature and rainfall data;
- Establishment of early warning systems for ENSO and tropical cyclones as part of the work on vulnerability and adaptation assessment;
- Analysis of the impact of climate change on the frequency of extreme climatic events including ENSO. This work will also be part of the vulnerability and adaptation assessment work;
- Analysis of rainfall (including floods and drought) under future climate change scenarios, current climate variability including tropical cyclones and ENSO. This work will be carried out in close collaboration with the V&A thematic working group;
- Participation in and contribution to the activities and programmes, as appropriate, of regional and global research networks and observing systems, such as the Pacific Island - Global Climate Observing System (PI-GCOS) programme, which aims to establish a robust and sustainable climate observation and application system that meets the climate change and variability observations and application needs of the Pacific island nations and region and meets GCOS requirements;
- Climatic information networking with relevant regional and international organizations;
- Preparation of a draft Synthesis Report on Research and Systematic Observation with special focus on ENSO, tropical cyclones and drought, so as to provide technical and policy guidance for a more sustainable programme. The synthesis report will also include constraints, financial, technical, human and institutional needs for capacity-building needs.

The above activities will be undertaken by the Technology Transfer and Research and Systematic Observation Group, which is composed of staff members from the Kiribati Meteorological Observatory. The capacity of the study team members will be strengthened where necessary, including the participation in sub-regional/regional/international workshops. Special training in data collection, analysis and management on climate monitoring will also be required.

At the end of the proposed activities, a workshop will be held to review the results and outcomes, including the draft Synthesis Report on Research and Systematic Observation, with the participation of stakeholders from the public and private sectors, including NGOs, communities and civil societies.

#### Major Outputs and Indicators

The major outputs and indicators of this component will be:

- Improved climate database;
- Specific research relating to ENSO, tropical cyclones and drought;
- Early warning systems for ENSO, tropical cyclones and drought established;
- Participation in and contribution to the PI-GCOS programme;
- Climatic information networks with regional and international organizations;
- Draft National Strategy for Research and Systematic Observation;
- Strengthened human, scientific, technical and institutional capacity;

- The reports of the review workshop, including major papers presented.

### **4.5.3. Education, training and public awareness and information and networking**

#### Proposed Activities

Based on the previous activities, the following activities are proposed:

- Preparation of outreach materials (leaflets, booklets, calendars, posters, quarterly newsletters, video, CD) and dissemination of these materials through mass media (TV, radio, newspapers, magazines, Internet, etc.). The information provided by SPREP, IPCC, WMO, IUC/UNEP, UNITAR and the UNFCCC Secretariat through their web pages would be used as sources of information for outreach activities where appropriate. This activity will build on education, training and awareness initiatives that are already being undertaken in Kiribati.
- Establishment of a local website for climate change – This will facilitate information dissemination and sharing of experiences and lessons learned among communities. Capacity-building for updating and maintaining this website is essential in order to ensure its sustainability even after the completion of the project;
- Strengthening of education on climate change at the primary and secondary levels,
- Incorporation of climate change issues into non-formal education and into the different levels of curricula of the formal education systems;
- Identification of further constraints, gaps and specific financial, technical and institutional needs for capacity-building on public awareness, education and training will be identified and highlighted at the end of the activities.

In order to achieve the above proposed activities, which will be undertaken nationally throughout the various thematic working groups, reasonable financial resources will be needed, not only for both for human and institutional capacity strengthening, but also for the acquisition of relevant equipment.

#### Major Outputs and Indicators

The major outputs and indicators of this component will be:

- Educational and public awareness programmes at national and local village levels;
- Outreach materials in English and Kiribatin;
- Strengthened primary, secondary and post secondary school curriculum on climate change;
- Strengthened human, scientific, technical and institutional capacity;
- The reports of the review workshop, including major papers presented.

### **4.5.4. Improved information and networking**

Access to and the use of information technology, such as Internet, will be essential to ensure efficient exchange and sharing of information both within and outside the country. Information networking is an important activity in any project cycle. However, during the INC project, acquisition of computers and access to Internet has been fairly limited due to financial constraints.

#### Proposed Activities

- Establishment of list serve for various thematic working groups to facilitate information networking;
- Participation and contribution to sub-regional and regional information networks on climate change issues, especially those relating to national communications;
- Provision of a list of national experts, including their expertise, who have participated in the preparation of the SNC
- Assessment of current capacity in information communication technologies;
- Institutional strengthening, including human resources development, technical and technological capabilities on the use of information technology for climate change information sharing.

#### Major Outputs and Indicators

The major outputs and indicators of this component will be:

- Information networks and regular exchange of information among thematic working groups and between other countries of the region;
- Strengthened human, scientific, technical and institutional capacity in information networking.

#### **4.5.5. Capacity-building**

##### Previous Activities

The process of the preparation of the INC has highlighted limited human, scientific, technical, technological, organizational, and institutional and resources capabilities in Kiribati for fulfilling its commitments, including the reporting requirements. Based on the results of a survey, special capacity building needs have been identified in the INC.

##### Proposed Activities

Within the constraint of the limited financial resources, this proposal aims to address the specific needs that have been identified in the INC to the extent possible, taking into consideration of decision 2/CP.7, which provides that *“Capacity building is a continuous, progressive and iterative process, the implementation of which should be based on the priorities of developing countries.”*

As far as capacity building is concerned, it would be appropriate to maximize the synergies for implementing the UNFCCC and other global environmental agreements, such as UNCBD and UNCCD. The NCSA would provide a good basis for such synergies.

Every effort will be made to address some of the priority areas relating to the preparation of national communication (GHG inventory, V&A assessment, technology transfer, mitigation, research and systematic observation) as identified in the initial scope of the capacity building framework of the UNFCCC.

##### Major Outputs and Indicators

The major outputs and indicators of this component will be strengthened human, scientific, technical and institutional capacity at all levels on major aspects relating to climate change.

#### **4.6. CONSTRAINTS AND GAPS, AND RELATED FINANCIAL, TECHNICAL AND CAPACITY NEEDS**

New gaps and constraints if any, identified while undertaking each section of the SNC, would be reported along with related financial and technical capacity needs. Special attention will be paid to the *previously identified gaps and needs* under the previous activities such as INC. Explanations on whether and how they have been addressed under the SNC and their status will be reported. In addition, gaps and constraints relating to the implementation of the UNFCCC will be reported.

#### Main Outputs

- Status of the constraints and gaps (technical, institutional, methodological, financial, capacity) from previous studies
- New constraints and gaps (technical, institutional, methodological, financial, capacity), if any related to each thematic area (inventory, abatement analysis, V&A) and elaborate needs to overcome and fill them.
- Constraints and gaps (institutional, financial, and capacity) related to Article 6 activities, which are crosscutting the NC preparation exercise. Elaborate needs to overcome and fill them

#### 4.7. TECHNICAL SUPPORT

In recognition of the capacity constraints a regional support component is being proposed to provide, *inter alia*, technical advice and support (expertise, skills and know-how); nationally-adapted methods and tools; tool-kits, a roster of regional experts who could be used to assist the countries undertake some of the activities relating to the national communication; training and capacity building institutes on various elements of the national communication, and methodologies for prioritization and ranking of adaptation actions/activities.

Regional training, while focusing on vulnerability and adaptation assessments, national GHG inventories, mitigation analysis, should also focus on data management systems for various elements of the national communication. The training should also include best practices such as those initiated by the CIDA-sponsored work on adaptation, the evaluation (and costing) of adaptation options, strategies and measures.

Regional support may come from a planned clearinghouse mechanism for climate change, which will be hosted at SPREP. The clearinghouse and technical support will include support for capacity building, education, training and public awareness, technology transfer, research and systematic observation (PI-GCOS). Additionally, a Regional Climate Center to be hosted at SPREP with help from WMO RAV could be established to enhance capacity building in climate science and its related fields to support in-country activities/tasks on climate change.

UNDP, as the GEF Implementing Agency for this SNC preparation project, will be consulted on all aspects during the execution of the project. It will be fully informed of all activities and invited to actively participate in all technical and policy workshops related to the project, so that it can provide useful inputs and contributions to ensure the successful implementation of the project.

Technical assistance from other national, regional and international organizations, consultants and experts will be sought where and when necessary and appropriate.

## **5. INSTITUTIONAL FRAMEWORK FOR PROJECT IMPLEMENTATION**

The SC, CCST, the Climate Change Unit within the ECD, the SNC Project Coordinator and advisors will form the project management team for the preparation of the SNC. The Project Management Team (PMT) will work and undertake its tasks under the auspices of the Environment and Conservation Department, in consultation with other relevant government departments, the private sector and NGOs.

The following thematic working groups will be formed to assist with the preparation of various components of the national communication: (i) National Greenhouse Inventory, (ii) Vulnerability and Adaptation; (iii) Mitigation; (iv) Technology transfer, Research and systematic observation; and (v) Education, training, public awareness and information and networking and Capacity-building. Each thematic working group will comprise of a number of experts drawing both from public and private sectors, communities, and NGOs, as appropriate.

The SC will provide technical and policy oversight to the project, facilitated by the CCST who will be assisted by the SNC Project Coordinator and project staff. The Climate Change Unit (CCU) will report to the Director of the ECD and be responsible for the operational programme of project implementation and will be located in the ECD. The Project Management Unit (Director of ECD, CCU and SNC Project staff) will have adequate and appropriate computer and telecommunication facility, including Internet, to enable them to efficiently and effectively undertake their activities.

Figure 1 shows the institutional framework and project management structure. The SNC preparation project will be executed by the ECD, with the support of various government ministries. Additional assistance will be provided to the project by regional and international organizations where appropriate. The CCST comprises various ministries and departments, as well as representatives from the private sector, local communities and NGOs. The CCST will ensure that the recommendations of the project are integrated into overall national development planning process.

The SNC Project Coordinator will be appointed to coordinate the day-to-day execution of activities to be carried out by five thematic working groups, which will include experts both from public and private sectors, education institutions, local communities and NGOs. The CCU with the SNC Project Coordinator will provide secretariat support to the SC, CCST and Working Groups.

The SC will meet every two months to review project implementation and provide scientific, technical, policy and strategic guidance. The minutes of these meetings will be shared with all participating institutions.

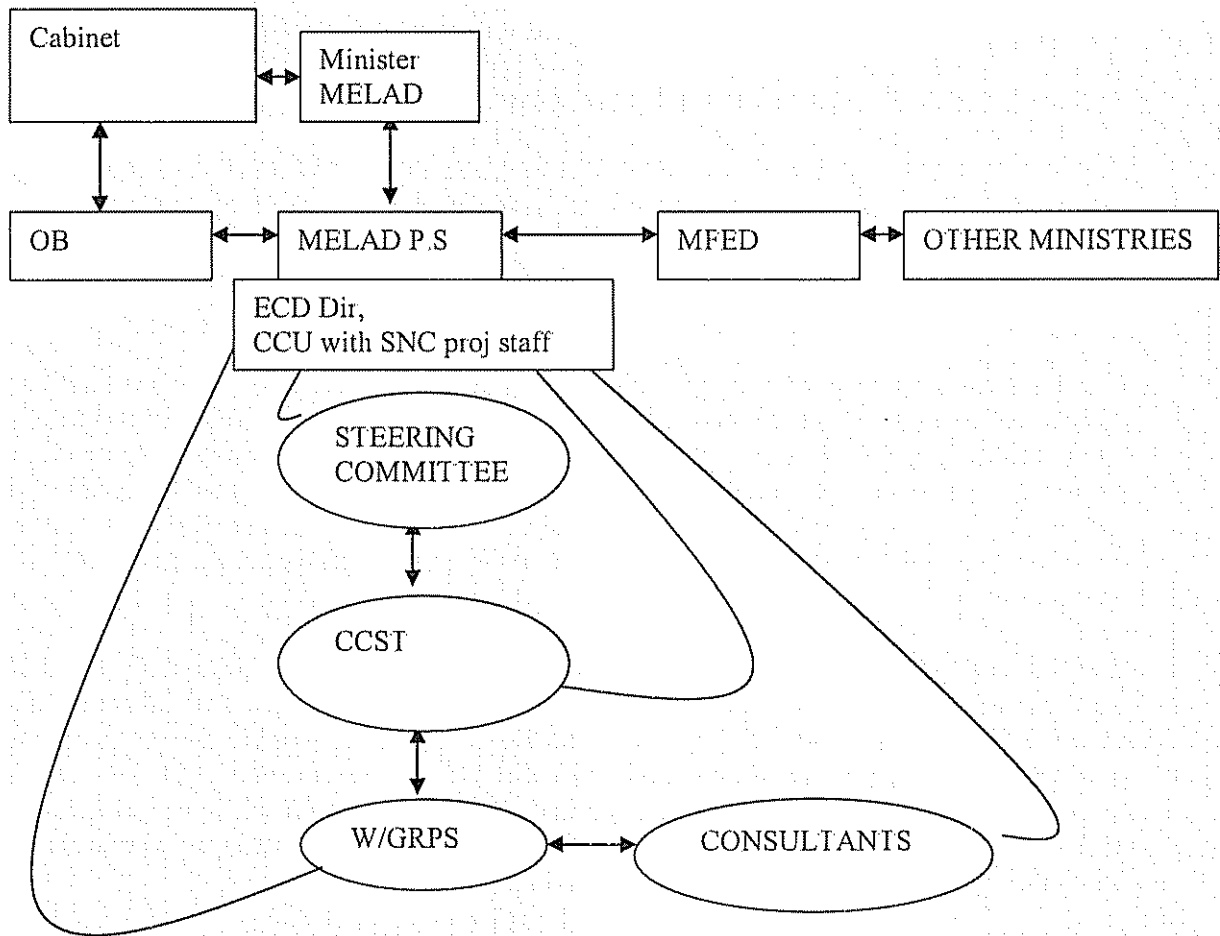


Fig. 1 - SNC Implementation Arrangements

## 6. ASSESSING PROJECT IMPACT

UNDP guidelines and procedures on reporting, monitoring and evaluation will be followed throughout the project cycle. In addition, the SNC Project Coordinator will provide a six-monthly progress report to UNDP and copy to all members of SC and the ECD who will be hosting and executing the project. If possible, these reports may be compiled into electronic newsletters that will be distributed to all participating institutions. These reports will enable the SC and UNDP to evaluate the progress of the project on a regular basis and identify difficulties and shortcomings with a view to overcoming them during the period of project implementation. These reports will be reviewed by UNDP for their quality and standard, comprehensiveness, and conformity to the proposed terms of reference and dates of completion. In addition, a mid-term review between UNDP and the DOE may be conducted. An independent evaluation by a qualified consultant will be conducted at the end of the project.

An independent financial audit will be conducted according to the UNDP rules and procedures. During the implementation of the project, regular financial statements will be prepared and provided to UNDP for accessing funds for project activities.

## **7. BUDGET**

As the proposed activities are standard enabling activities required for the preparation of national communication, so the incremental cost for undertaking these activities are also full cost, and hence no incremental cost analysis is required.

Thus, the total requested funding of US\$405,000 as itemized in Table B-1 reflects the current real needs and concerns of the country in order to cope with adverse effects of climate change. Although some capacity has already been built during the INC project, further capacity-building, including training, for the project team members, especially those new members, are still very much needed. A significant portion of the funding requested would be used for human and institutional capacity-building or strengthening, with a view to slowly building up a solid technical team that would be responsible for preparing future national communications in a sustainable manner.

The proposed budget for each proposed component of activity has been estimated and thoroughly reviewed by UNDP and the SC before it is fully endorsed by the UNFCCC Focal Point and the national GEF Operational Focal Point.

## **8. DETAILED WORK PLAN**

It is expected that the proposed three-year project will commence in first quarter 2007 and end in first quarter 2010. The detailed work plans for each component will be developed by the SNC Project Coordinator in full consultation with the SC after the approval of the project, with the guidance and assistance of UNDP, which will be consulted throughout the project cycle. Table B-2 shows the schedule of the SNC preparation activities.

**Table B-1: SNC Preparation Budget (US\$1,000)**

Activities	Costs	Total Costs
<b>National circumstances</b>		
Socio- Economic circumstances for baseline scenarios	3	19.5
Bio-physical circumstances for baseline scenarios	13.5	
Arrangement for preparing communications.	3	
<b>National greenhouse gas inventories</b>		
<b>National greenhouse gas inventories and printing</b>	11.4	42.5
<b>Data collection and surveys</b>	6.4	
Assess land use changes	22.8	
Design and set up database system for continuous GHG inventories	1.9	
<b>Programmes containing measures to facilitate adequate adaptation to climate change</b>		
Steps towards formulating plans for adequate adaptation	17.20	48.20
Vulnerability to climate change and on adaptation	7.5	
Development of tools to evaluate strategies to adaptation	8.5	
Policy framework for adaptation	15	
<b>Programmes containing measures to mitigate climate change</b>		
Steps taken to mitigate climate change	35.2	35.2
<b>Other relevant information</b>		
Technology transfer	8.4	47.8
	10	
<b>Research and systematic observation</b>		
Education, training and public awareness raising	11.4	
Capacity building	15	
Sharing information and networking	3	
<b>Constraints and gaps/Consultation</b>		
Constraints, gaps and needs, and activities for overcoming gaps	30	30
<b>Technical Assistance</b>	100.8	100.8
Compilation and production	18.0	18.0
Project Management	60	60
Monitoring and Reporting	3	3
<b>TOTAL</b>	<b>405.00</b>	<b>405.00</b>



Table B-2: SNC Preparation Project - Work Plan

Outputs/Activities	Year 1				Year 2				Year 3			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<b>National Circumstances</b>												
Analyze GOK official documents on socio-econ development to establish the national socio econ profiles.												
Analyze trends and establish baseline scenarios (CCST will determine for which yrs).												
Analyze technical information on biophysical features of Kiribati, with sector-relevant focus.												
Trend analysis and suggest baseline scenarios.												
Adopting and functioning of institutional arrangements, eg WG.												
<b>Work Plan</b>												
Develop work plan, study the current IPCC Guidelines.												
Establish data framework and collect available data, noting gaps and out dated data.												
Design, undertake surveys to fill gaps, update data.												
Obtain, assess data on land use changes.												
Design, set up database system, and provide guidelines for updating												
Compile and report on ghg inventory for yr 2000.												
<b>Final Report</b>												
Adopt a workplan and work methods.												
Analyse climate data-mean conditions, variability, and trends.												
Update some of the past vulnerability studies.												

Compile and customize, with explanation of rationales, vulnerability assessment tools particularly those that were used in Kiribati.												
Update climate change scenarios, using MAGICC/SCENGEN and other tools. Submit report on the work.												
Prepare a manual on adapted CHARM for Kiribati use.												
Develop and submit a Vulnerability and Adaptation assessment methodology for Kiribati												
Consultations												
<b>Programmes containing measures to mitigate climate change</b>												
Adopt a workplan and work methods.												
Review works related to renewable energy sources												
Assess opportunities for mitigation and provide incentives.												
Develop a policy facilitating mitigation												
<b>Other information relevant achievement of the UNFCCC objectives</b>												
Technology transfer opportunities – information collection.												
Equipment for database and research												
Evaluate curriculums, past activities on trainings, and awareness raising.												
Support to SNC institutional arrangements												
Internet and information exchanges.												
<b>Constraints, gaps and needs analysis, and proposals to overcome these</b>												
Review the process and gaps in availability of information.												
<b>Compilation and production of the SNC.</b>												
Adopt a structure of the SNC.												
Identify and allocate responsibility on elements of the SNC												

Compile a first draft, and reviews, locally and externally													
Refine the first draft and consultation within the CCST, interministerial, and the public.													
Submit to the SC.													
Submit to Cabinet.													
Production and submittal to UNDP, UNFCCC.													

## ANNEX C: TERMS OF REFERENCE

### PROJECT MANAGEMENT

The Management Unit of the Project as it was established in the Initial National Communication will be also responsible for the overall management of the Second National Communication. The Project Management Unit is composed of the SNC Project Coordinator, Senior Climate Change Project Advisor and the Climate Change Project Administrative Assistant.

#### **Post: SNC Project Coordinator (SNCPC)**

#### **I. Project background information**

Kiribati completed its initial national communication and submitted it to the secretariat of the UNFCCC in October 1999. The preparation of the initial national communication was supported by a GEF-funded enabling activity for the preparation of initial national communications.

In Kiribati the Climate Change Coordinator was appointed and assumed the role of a National Climate Change Project Manager. The CCC worked closely with the Climate Change Study Team (CCST) to implement the project in collaboration with the various government and non-government agencies, institutions and ministries.

The project for preparation of the Second National Communication on climate change is a logical continual step towards further implementation of the UNFCCC at national level. Its main objective is to prepare a comprehensive report on the climate change related issues. The analysis conducted within the INC will be updated and upgraded/extended, which will result in preparation of a comprehensive national report. Furthermore, it will work towards ensuring that climate change issues are not considered as separate to national and local environmental concerns by integrating objectives into national and local strategic planning processes.

Duration of the project is 36 months.

#### **II. Scope of the assignment**

The SNCPC will manage the project on a day-to-day basis and is accountable to the executing agency for the planning, management, quality control, timeliness and effectiveness of the activities carried out, as well as for the use of funds. The SNCPC will ensure the regular monitoring and feedback from activities already under implementation.

The SNCPC will be located within the Climate Change Unit (CCU) of Kiribati's Environment and Conservation Department. The SNCPC will work closely with the UNFCCC focal point, the Technical Working Group on Climate Change and the Climate Change Study Team.

### III. Duties and Responsibilities

The SNC Project Coordinator (SNCPC) will have the following duties:

- Work closely with the Environment and Conservation Department in implementing of the climate change enabling project as appropriate in a timely manner;
- Ensure proper and effective management of all project activities;
- Prepare a detailed work plan and budget for the project implementation;
- Organise and supervise the workshops and trainings needed for the project;
- Identify, hire and provide subcontracts in consultation with the Director of Environment
- Prepare and submit to UNDP and the ECD quarterly narrative and financial reports;
- Coordinate and oversee the preparation of the outputs of the SNC;
- Ensure effective communication and adequate information flow with the relevant authorities, institutions and government departments in close collaboration with the TWG and CCST;
- Liaise with relevant institutions in order to involve their staff in projects and disseminate information relevant to the project;
- Ensure appropriate stakeholder participation in the project implementation and coordinate the work of all stakeholders under the guidance of the ECD and CCST and in consultation with the UNDP office;
- Ensure that information is available to the CCST about all Government, private and public sector activities, which impact on capacity development;
- Maintain and establish additional links with other related national and international programs and other Enabling Activities such as NCSA, NBSAP, PIREP and other national projects;
- Prepare the Terms of Reference for consultants and experts in consultation with the Director of Environment and ensure their timely hiring;
- Guide the work of consultants and experts and oversee compliance with agreed work plan and timely completion of tasks;
- Organize and coordinate the procurement of services and goods under the project;
- Coordinate, manage and monitor the implementation of the project activities/tasks undertaken by the various technical working groups, local experts; consultants, sub-contractors and co-operating partners;
- Assume overall responsibility for the proper handling of logistics related to all project workshops and events;
- Manage the Project finance, oversee overall resource allocation and where relevant submit proposals for budget revisions with the help of the UNDP officer;
- Undertake any other actions related to the Project as requested by the ECD and UNDP.
- Serve as secretary to the CCST as it relates to climate change activities, projects and programmes;
- Prepare periodic progress reports and present to CCST members;
- Summarise the results of the project;
- Finalise the Second National Communication of Kiribati with the government personnel and national and technical experts
- Initiate and mobilize resources for the potential follow up activities;

#### **IV. Qualifications and Skills**

- Advanced University degree (Bachelors or Masters Level) in fields related to climate change, earth and planetary science as well as environmental management
- Minimum of 5 years of working experience in the area relevant to the project;
- Substantial involvement in the preparation of the national GHG inventory, vulnerability and adaptation assessment and the preparation of first national communication
- Demonstrated ability in managing projects, and in liaising and cooperating with all project stakeholders including government officials, scientific institutions, NGOs and private sector;
- Familiarity with international organizations operations and structure;
- Substantial experience in Government and in interdepartmental procedures
- Familiarity with international negotiations and processes under the UNFCCC
- Fluent written and oral communication in Kiribati and English
- Strong communications and interpersonal skills
- Excellent computer knowledge (MS Office, Internet)
- Kiribati citizenship

#### **Post: SENIOR CLIMATE CHANGE PROJECT ADVISOR (SCCPA)**

##### **I. Project background information**

In the light of the implementation of the project a Senior Climate Change Project Advisor (SCCPA) will be required to work closely with the SNCPC in advising, managing and supporting the implementation of the activities/tasks relating to the preparation of SNC. The SCCPA will be located in the CCU of the Kiribati Environment and Conservation Department who is responsible for the implementation of the UNFCCC.

Duration of the project is 36 months.

##### **II. Scope of Work**

The SCCPA will advise the SNCPC in the coordination and implementation of daily activities in the preparation of second national communication. He/she will be responsible for the provision/facilitation of all scientific and technical material (relating to GHG inventory, V&A assessment, mitigation, technology transfer, research and systematic observation, education, training, public awareness, capacity-building and information and networking) to support the work of consultants and experts involved in the project.

##### **III. Duties and Responsibilities**

The SCCPA will have the following duties:

- Advise and assist the SNC Project Coordinator in reporting requirements of the climate change enabling activity project;
- Assist and support the work of the SNC Project Coordinator;
- Assist the SNC Project Coordinator with the preparation and translation of project reports;

- Facilitate effective communication and adequate information flow with the relevant authorities, institutions and government departments in close collaboration with the TWG and CCST;
- Assist with the participation of appropriate stakeholders in the project implementation and provide support to the work of all stakeholders under the guidance of the SNCPC;
- Make available information on climate change to all government, private and public sector programmes and activities, which impact on climate change capacity development;
- Advice on database formulation and information on various activities and programmes on climate change and on the implementation of the UNFCCC at the national level;
- Assist with the work of the consultants and experts involved in the project;
- Assist with the work of consultants and experts to ensure timely completion of tasks;
- Coordinate, manage and monitor the implementation of the project activities/tasks undertaken by the various technical working groups, local experts; consultants, sub-contractors and co-operating partners; and
- Assume any other duties as determined by the SNCPC.

#### **IV. Qualifications and Skills**

- Advanced University Degree (Bachelors or Masters Level) in environmental science, climate change or related field;
- Minimum of 3 years of working experience in the area of climate change project implementation;
- Substantial knowledge of GHG inventory, vulnerability and adaptation, and mitigation issues (methods, tools, etc);
- Experience in Government and in interdepartmental procedures;
- Familiarity with environmental issues and UNFCCC
- Fluent written and oral communication in Kiribati and English;
- Strong time-management, organizational and communication skills;
- Excellent drafting skills for presentation of technical and scientific reports in meetings, workshops, and conferences;
- Experience with preparation of information for presentation in the national communication;
- Familiarity with various databases and information products and use of relevant websites for information collection and dissemination; and
- Kiribati citizenship.

#### **Post: Climate Change Project Administrative Assistant (CCPAA)**

##### **I. Project background in formation**

The preparation of SNC will involve a multitude of tasks/activities ranging from project management, financing and administration to the implementation of day-to-day activities or tasks, which would be carried out, by numerous individuals and organizations. The CCPAA will be located in the CCS of the Department of Environment who is responsible for the preparation of second national communication.

Project duration is 36 months

## **Scope of work**

The CCPA will assist the SNCPC and the SCCPO in the coordination and management of daily activities and the organization of local travel for national experts. He/she will also be responsible for all administrative (contractual, organizational and logistical) and all accounting (disbursements, record-keeping, cash management) matters under the Project.

### **III. Duties and responsibilities**

The CCPA will have the following duties:

- Manage the day-to-day operations of the Climate Change Section (CCU), particularly with respect to the provision of technical services and support;
- Ensure that necessary financial, procurement, disbursement and personnel matters are effectively addressed;
- Compile and/or prepare the documentation necessary for the procurement of services, goods and supplies under the project;
- Ensure timely disbursement of funds from the project bank account;
- Maintain the project's files and supporting documentations;
- Maintain the project's disbursement ledger and journal;
- Prepare internal and external correspondence for the CCU;
- Maintain files and assist in the preparation of documentation in advance of and following all meetings, edit reports and other documents for correctness of form and content;
- Assist the SNCPC and SCCPO in organizing meetings, training workshops, etc for the project personnel and the thematic working groups,
- Assist the SNCPC and SCCPO to organize and coordinate information exchange between participating institutions and internationally;
- Co-ordinate and assist in travel arrangements for project personnel or for representatives within the thematic working groups;
- Maintain and update the established national web site;
- Maintain and update project financial database;
- Provide oral interpretation and written translation as required;
- Assist in the preparation of documents related to project activities; and,
- Undertake other administrative/financial duties as requested by the NCCC.

### **IV. Qualifications and Skills**

- Diploma in administration, management, accounting;
- Minimum of 3 years of working experience in the area of project administration/accounting;
- Demonstrated ability to cope with spreadsheets and book-keeping;
- Experience in Government and in interdepartmental procedures;
- Familiarity with environmental issues and UNFCCC preferred
- Fluent written and oral communication in Kiribati and English;
- Strong time-management, organizational and inter-personal skills;
- Excellent computer knowledge (Word, Excel, Power Point, etc );
- Experience with preparation of information for presentation on web site; and
- Kiribati citizenship.



## **CLIMATE CHANGE STUDY TEAM (CCST)**

The Climate Change Study Team (CCST) will be responsible for supervising project execution. This will include evaluating project outputs to ensure that project activities are being carried out in a timely manner and to acceptable levels of quality, and reviewing the status and needs of countries throughout project implementation. The CCST will provide a policy and technical platform for the project and in that context it will have the following duties.

### **III. Duties and Responsibilities**

The CCST responsibilities will include the following:

- Provide operational directives to the SNC Project management team which will serve as a secretariat on matters relating to climate change,
- Make informed consensus decisions on issues arising from the Climate Change Convention, Kyoto Protocol and any future Plans for Action as decided by the Conferences of the Parties,
- Facilitating political inclusion in the national climate change process, particularly to encourage appropriate policy development to enable effective national responses to climate change.
- Coordinate International Climate Change negotiations, ensuring consistency, relevancy and real benefits to Kiribati in participation,
- Inform respective departments on Climate Change issues, particularly consideration of climate change issues in sectoral policies and other department plans,
- Monitor and facilitate the work of the Greenhouse Gas Inventory Network and including any relevant data collection and information systems.
- Recognize and encourage human resource development in the field of scientific research and development, including the formulations of projects and joint projects, particularly in the context of Climate Change,
- Establish and coordinate the work the National Group of Experts.
- Work to ensure that appropriate regulations/legislation are enacted to implement climate change obligations.
- Facilitate access to funding for the national climate change effort.
- Endorse the detailed work plan, produced thematic reports, Final SNC Report and Action Plans; and
- Propose to the Government to adopt the SNC for submission to the UNFCCC Secretariat.

## **TECHNICAL WORKING GROUPS**

### **A. THEMATIC WORKING GROUP ON GHG INVENTORY**

#### **I. Scope of Work**

The Technical Working Group on National GHG Inventory will be formed to carry out the inventory of GHG emissions in Kiribati. The group will consist of experts from relevant ministries, institutions and agencies of government and non-government organizations. The group will ensure that specific tasks relating to the national GHG inventory is carried out in a timely manner and will ensure efficient coordination of outputs of consultants and national institutions. The activities undertaken by the national institutions will contribute to strengthening institutional arrangements for compiling, archiving, updating and managing GHG inventories.

#### **II. Duties and Responsibilities**

Particular duties may be as follows:

- Undertake national GHG inventories for the year 2000, according to the guidelines for the preparation of National Communications (17/CP.8)
- Participate in the training workshop on the use of IPCC guidelines, and GPG including one for the LULUCF;
- Include information on the other non-direct GHGs such HFCs, PFCs and SF<sub>6</sub> as well as CO, NO<sub>x</sub>, SO<sub>x</sub> and NMVOCs;
- Revise the input data, taking into consideration data gaps and areas needing improvement identified in the stocktaking exercise
- Collect/gather available activity data from national sources to fill inventory data gaps
- Identify and develop methods for overcoming inventory data gaps if there is no available data Identify barriers to obtaining existing data for key sources and propose solutions;
- Archive relevant data for the project duration;
- Calculate emissions for the year 2000 for all sectors;
- Describe procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved;
- Utilize the deliverables under the regional project; and
- Organize (in cooperation with the SNCPC) workshop for presentation and discussion on the results obtained from the GHG Inventory.

#### **III. Qualifications and Skills**

The institutions and/ or expert individuals contracted for undertaking project activities should meet the following minimum criteria:

- Sound and broadly-recognized scientific expertise on climate research in Kiribati;
- Prior experience in inventory preparation, through involvement in the Initial National Communication;
- Highly qualified scientists working in the fields of emission factor development or data collection methods; and
- Familiarity with the UNFCCC and IPCC technical guidelines.

## **VI. Expected output:**

A report of the National GHG Inventory in accordance with the UNFCCC guidelines. The report should include information on other non- direct GHGs: HFCs, PFCs and SF<sub>6</sub> as well as CO, NO<sub>x</sub>, SO<sub>x</sub>.

## **B. TECHNICAL WORKING GROUP ON VULNERABILITY ASSESSMENT AND ADAPTATION**

### **I. Scope of Work**

The TWG on V&A will consist of teams that have been established for NAPA and PICCAP projects in Kiribati. The group will ensure implementation of specific activities outlined below, as well as coordination of the outputs of other consultants engaged outside the institution. The activities undertaken by the national institutions will also strengthen institutional arrangements for systematic climate observation, data management and control, processing and updating of meteorological and hydrological services data.

### **II. Duties and Responsibilities**

Particular duties may be as follows:

- Participate in the training workshop on V&A methods and tools available for V&A assessment work;
- Revise the scenarios for climate change, applying the most recent version of MAGICC-SCENGEN;
- Analyze the climate changes for the period 1961-2000 for existing stations of the following parameters: temperature, precipitation, wind, cloudiness and sunshine hours;
- Identify the data needs, availability and suitability, and establish datasets baselines of the assessment;
- Analyze the existing climate data and parameters, by months and years;
- Prepare climate maps using GIS technology;
- Review the vulnerability assessment of the following sectors: agriculture, water resources, natural ecosystems, forestry, and human health, including identification of vulnerable areas that are most critical;
- Describe links between climate, and socio-economic baseline conditions of the country in the most vulnerable sectors;
- Based on the output of the vulnerability assessment, evaluate the feasibility of available adaptation measures to meet their specific needs and concerns arising from the adverse effects from the climate change;
- Prepare a national adaptation action plan to implement those measures being of highest priority including clear distinction of responsibilities among the relevant stakeholders, timeframe for fulfillment/implementation of the recommended measures, financial means for implementation of the measures, and identification of possible barriers and risks;
- Liaise and consult with the TWG on Technology Transfer and Research and Systematic Observation on issues relating to technology needs assessment and climatic conditions of Kiribati;
- Organize (in cooperation with the SNCPC) a workshop to present the results from V&A;
- Prepare comprehensive report on Vulnerability assessment and national adaptation Action plan; and

- Prepare a chapter on “Programmes containing measures to facilitate adequate adaptation to climate change,” in accordance with the UNFCCC guidelines.

### **III. Qualifications and Skills**

The institutions and experts contracted for undertaking project activities should meet the following minimum criteria:

- Sound and broadly-recognized scientific expertise on climate research in Kiribati;
- Prior experience in vulnerability assessment and adaptation process, through involvement in the First National Communication;
- Highly qualified scientists working in the fields of climate observation and vulnerability analysis in the specific sectors; and
- Familiarity with the UNFCCC, IPCC methodology, MAGICC/SCENGEN and other methods.

### **IV. Expected output:**

Completed report on vulnerability assessment and adaptation strategy for the following sectors: agriculture, water resources, natural ecosystems, forestry and human health.

#### **Terms of reference for scoping and implementing the V&A component of the National Communication**

These generic terms of reference for the preparation of the V&A studies identify the basic set of activities that the V&A expert/consultant will be responsible for under the supervision of the National Communication’s Coordinator. It is important to note that these generic terms of reference do not intend to limit the work of the expert but to guide countries on the general profile of the V&A expert and on the activities generally expected to be carried out.

#### **Profile of the V&A expert/consultant**

The V&A expert should be very knowledgeable and with hands-on experiences on V&A issues, have a solid understanding of the gaps and needs for developing/improving vulnerability assessments, and have technical expertise in the formulation of adaptation options. The V&A expert should be able to scope technical studies in the V&A area and design an implementation strategy to carry out the different V&A activities within the framework of the NC. He/She should also have a solid understanding of the institutional arrangements and resources required to carry out the V&A work.

Although the NC project document already provides the framework for the V&A studies, the expert should be able to advise on any adjustments if needed, both at the organizational and technical levels, for a successful implementation of the V&A studies.

#### **Activities**

In general, the V&A expert/consultant should be responsible for ensuring that the following set of activities is carried out. Emphasis on different activities will depend on the scope of the work already described in the NC project document and/or on the specific activities the V&A expert would be assigned to.

## **Policy and institutional issues**

1. Identify the key policy issues the V&A study of the SNC project aims to address, e.g.,
  - a. to scope the scale of risks associated with projected climate change;
  - b. to aid in the identification of priorities for adaptation;
  - c. to support the development of a national adaptation strategy
2. Identify the expected output of the V&A study of the SNC project on the basis of the project document, e.g.,
  - a. impacts assessment at the sectoral level for the given priorities identified in the project document;
  - b. a national adaptation strategy, including policies, programs and projects.
3. Develop a clear strategy to link the V&A outputs to national development planning. This would include, among others:
  - a. assessment of institutional arrangements/stakeholders engagement required to facilitate linking the outcome of the V&A studies to sectoral or national planning;
  - b. framework for assessing how the above linkage can be monitored and measured in the short and long terms, for instance through the development of practical indicators.

## **Technical issues**

### ***Scope of the V&A study***

4. Elaborate on the scope (geographic, thematic, sectoral coverage, time horizon) of the V&A study, e.g.,
  - a. designing a strategy to build on but advance what was done within INC, and while applicable, NAPA project;
  - b. elaborating on the scope of studies to address sectors/regions not covered by INC, sectors/regions identified as sensitive/vulnerable to climate change, as per the NC project proposal;
  - c. preparing a detailed workplan for each of the study to be carried out, including a strategy to involve the relevant stakeholders, timeline, etc.;
  - d. designing a strategy, as applicable, to link the V&A studies with previous and ongoing related projects/activities (e.g., land degradation, biodiversity, international waters.)

### ***Methodological framework***

5. Elaborate on the overall methodological framework for the V&A study as per the project document and in consultation with the project coordinator. In doing so, the V&A expert should ensure that:
  - a. The proposed methodological framework is the most appropriate given the policy questions to be addressed, the characteristics of the study (e.g., sectoral focus, spatial and temporal scales, stakeholders involved, and data requirement, etc.), and data availability;
  - b. In-country expertise required for such a methodological framework is available. If needed, the V&A expert should develop a strategy to address technical capacity gaps. For instance, by exploring the possibility of applying

another framework in which more in-country expertise exists, or by designing a training/technical backstopping strategy, etc.

### *Scenarios development*

6. Identify the types of scenarios required to conduct the V&A assessment, e.g., climate, socio-economic, sea level, adaptive capacity, technology, land-use land-cover.
7. Identify the temporal and spatial resolution needed for these scenarios (e.g., national, sub-national, watershed, community, farm level, multi-decadal average, annual, monthly, daily, mean conditions, extreme events, etc.). In doing so, the expert should justify the choices.
8. Develop the strategies for developing such scenarios, e.g., model-based, expert judgment, etc.

In the preparation of the scenarios development strategy, the expert should assess the feasibility of the scenario needs and the methods for developing these scenarios, given the characteristics of the studies, and data availability. For instance, the expert would be expected to advise on alternative options to running regional climate models or other resource intensive and time consuming exercises. The V&A expert would also assess whether there is enough in-country expertise to develop such scenarios and/or identify options to address the needs for additional expertise.

### *Sectoral assessment (to be considered by each of the sectors to be covered in the V&A study)*

9. Elaborate on the methods and tools, as per the project document, chosen to undertake sectoral assessments, e.g., numerical models, elicitation of expert views, stakeholder consultations, focus groups, etc. In doing so, the expert will advise on any adjustments needed to the options identified in the project document.
10. Provide justifications for the selection of the methods/tools considering the research questions, characteristics of the study, and requirements of data and technical expertise of these methods/tools.
11. Assess in-country expertise required to apply the selected methods/tools and prepare training/technical backstopping strategy as required.
12. Develop a strategy to integrate findings from sectoral assessment, as needed. For instance, by applying an integrated model, synthesizing sectoral information, etc.

### **Technical assistance needs**

13. Develop a technical backstopping/training strategy to strengthen the national capacity needed to carry out the different V&A studies, This would include details on the type of support needed (training courses on particular methodological frameworks/tools, guidance material, technical documents and good practice) and the, timeline for such support.

## **C. TECHNICAL WORKING GROUP ON MITIGATION**

### **I. Scope of Work**

The Technical Working Group on Mitigation will be responsible for carrying out GHG mitigation analyses and identifying mitigation options for Kiribati. It will ensure timely and effective implementation of specific activities outlined below, as well as coordination with the outputs of other consultants engaged outside the institution.

### **II. Duties and Responsibilities**

- Based on the results from the GHG Inventory and future development plans, particularly in the energy and land use change and forestry sectors, develop a baseline and mitigation scenarios to abate the increase of GHG emissions;
- Consider the main national economic and social development trends in the analysis, including expected GHG emissions in energy, agriculture, land-use change and forestry and waste management;
- Extend the analysis on the side of energy consumption, including energy consumption in the industry (for heating, for technological processes), in the public sector and in the residential sector;
- Revise the measures contained in the INC according to the latest economic development, including quantitative measures in all sectors;
- Identify, formulate and prioritize programmes containing measures to mitigate climate change within the framework of sustainable development;
- Finalize the GHG mitigation analysis using the selected tools and additional background information in order to finalize the cost-benefit analysis of the different measures, develop a series of mitigation scenarios to abate the increase of the GHG emissions;
- Liaise and consult with the TWG on GHG Inventory and the TWG on Technology Transfer and Research and Systematic Observation on matters relating to GHG inventories and on technology needs for mitigation;
- Formulate a final national action plan to abate the GHG Emissions including information cost analysis, assessment of technology options for the different mitigation options in various sectors, institutional capacity-building needs to sustain mitigation work, and the related legal and institutional frameworks;
- Organize (in cooperation with the CCST) a workshop to present the results of the GHG Mitigation and draft national action plan; and
- Prepare final report on GHG mitigation and national action plan, including comments from the stakeholders

### **III. Qualifications and Skills**

The institutions contracted for undertaking project activities should meet the following minimum criteria:

- Sound and broadly-recognized scientific expertise on climate research in Kiribati;
- Experience in preparing scenarios for GHG mitigation through involvement in the First National Communication;
- Qualified scientists working in the related areas: Energy, Agriculture, Land Use Change and Forestry, Waste; and
- Familiarity with the UNFCCC, software modeling tools such as LEAP, ENPEP, WASP, GACMO, etc.

#### **IV. Expected output:**

A Completed GHG Mitigation report and National action plan for effective response to the GHG emissions.

The proposed activities will be undertaken in appropriate sequence so as to maximize the synergies between each component of the proposed activities, as well as the efficiency and cost-effectiveness for the implementation throughout the project cycle. Some proposed that are not related to each other, such as GHG inventory and vulnerability assessment, will be undertaken in parallel, as indicated in Table 5.

Good practices in project implementation, such as the efficient use of financial and human resources, the engagement of qualified local and regional consultants, public participation throughout the project cycle, will be adopted where appropriate. Established guidelines will be followed, while established tools and methodologies will be used.

### **D. TECHNICAL WORKING GROUP ON TECHNOLOGY TRANSFER AND RESEARCH AND SYSTEMATIC OBSERVATION**

#### **I. Scope of Work**

The Technical Working Group on Technology Transfer and Research and Systematic Observation will be responsible for carrying out technology needs assessment for mitigation and adaptation; and for assessing the needs and priorities for research and systematic observation in Kiribati. The group will ensure timely and effective implementation of specific activities outlined below, as well as coordination with the outputs of other consultants engaged outside the institution.

#### **II. Duties and Responsibilities**

- Participate in a training workshop on the technology needs assessment and the use of the UNFCCC guidelines on research and systematic observation;
- Carry out technology needs assessment for Kiribati;
- Undertake an assessment of the needs and priorities for research and systematic observation in close collaboration with Pacific Islands – Global Climate Observing System initiatives;
- Prepare an analysis of the climatic conditions of various stations in Kiribati;
- Liaise closely and consult with the TWGs on GHG inventory, Vulnerability and Adaptation, and Mitigation on issues of relevance, especially on climate data, technologies and capacity building;
- Provide substantive input to the work of TWGs on Vulnerability and Adaptation and Mitigation;
- Formulate an action plan for technology needs for mitigation and adaptation including assessment of technology options in various sectors, institutional capacity-building needs, related legal and institutional frameworks;
- Organize (in cooperation with the CCST) a workshop to present the results of the technology needs assessment and research and systematic observation; and
- Prepare final report on technology transfer issues and research and systematic observation, including comments from the stakeholders.



### **III. Qualifications and Skills**

The institutions and or expert individuals contracted for undertaking project activities should meet the following minimum criteria:

- Sound and broadly-recognized scientific expertise on various technologies and climate research in Kiribati;
- Experience in preparing a report on technology, research and systematic observation through involvement in the Initial National Communication;
- Qualified scientists working on issues relating to climate, weather, meteorology and hydrological services; and
- Familiarity with the methodologies for technology needs assessment and the UNFCCC guidelines.

### **IV. Expected output:**

A completed technology needs assessment for Kiribati and a final report on Research and Systematic Observation including emerging needs and priorities.

## **E. TECHNICAL WORKING GROUP ON EDUCATION, TRAINING AND PUBLIC AWARENESS, INFORMATION AND NETWORKING AND CAPACITY-BUILDING**

### **I. Scope of work**

The TWG will examine ways to promote climate change education, training and public awareness building on the work already done on this issue during Phase II enabling activities. The group will ensure timely and effective implementation of specific activities outlined below, as well as coordination with the outputs of other consultants engaged outside the institution.

### **II. Duties and responsibilities**

- Compile and analyze information on activities/tasks relating to the implementation of the New Delhi work program on Article 6 of the Convention;
- Compile and analyze information on activities/tasks relating to the implementation of the Capacity-building framework of the UNFCCC;
- Identify the needs and priorities for climate change education, training and public awareness and capacity-building as they relate to GHG inventory, vulnerability and adaptation assessment, mitigation, technology transfer, research and systematic observation and other emerging priorities;
- Liaise and consult with the various TWG under SNC project and the task team on National Capacity Self Assessment;
- Prepare a draft National plan for implementation of Article 6 of the Convention and the UNFCCC capacity building framework;
- Identify technology needs for information and networking;
- Conduct a workshop (in collaboration with CCST) on ways to promote climate change education, training and public awareness;
- Prepare a chapter on: (i) Education, Training and Public Awareness, (ii) Information and Networking, (iii) capacity-building for inclusion in the compilation of the SNC.

## **F. TECHNICAL WORKING GROUP ON NATIONAL CIRCUMSTANCES AND INTEGRATION OF SECOND NATIONAL COMMUNICATION**

### **I. Scope of work**

This Technical Working Group will be responsible for drafting a section on national circumstances and the integration of Second National Communication with input from the various thematic working groups. The group will ensure that all information pertaining to the SNC is compiled and disseminated for review and comment in a timely manner.

### **II. Duties and Responsibilities**

- Compile the SNC in accordance with the UNFCCC guidelines based on information and or reports provided by the various TWGs;
- Liaise and consult with the various TWGS on issues relating to their respective competencies;
- Promote the integration of climate change concerns and issues into various TWG reports;
- Identify and highlight evolving needs and priorities relating to the preparation of second national communication and the implementation of the Convention;
- Prepare a final draft of the SNC including a 10-page executive summary and technical annexes (if any);
- Conduct a national workshop in collaboration with the National Climate Change Implementation Committees and the TWGs on the SNC; and
- Prepare final draft of SNC, print and submit to the UNFCCC Secretariat and disseminate through CD-ROMs and a dedicated site on the ECD National Climate Change website.

## **SCOPE OF AUDIT**

### **I. Scope of work**

The scope of the audit should be sufficiently clear to properly define what is expected of the auditor but not in any way restrict the audit procedures or techniques the auditor may wish to use to form an opinion. It should specify at least the following:

- A definition of the entity or the portion of an entity that is subject to audit. (This will normally be the project office whether located within a government department or in a separate location.)
- That the audit will be carried out in accordance with either ISA1 or INTOSAI2 auditing standards.
- That the audit period is 1 January to 31 December of the year (for example: 2007, 2008 and 2009).
- That the scope of the audit is limited to the executing agency expenditures, which are defined as including (1) all disbursements listed in the quarterly financial reports submitted by the executing agency and (2) the direct payments processed by UNDP at the request of the executing agency.

---

<sup>1</sup> International Standards of Auditing (ISA) published by the International Auditing Practices Committee of the International Federation of Accountants

<sup>2</sup> International Organization of Supreme Audit Institutions

- That the auditor will verify the mathematical accuracy of the CDR by ensuring that the expenditures described in the supporting documentation (the quarterly financial reports, the list of direct payments processed by UNDP at the request of the government, the list of disbursements made by UNDP as part of support services, and the UN agency expenditure statement) are reconciled to the expenditures, by disbursing source, in the CDR.
- That the auditor will state in the audit report the CDR expenditures excluded from the scope of the audit because they were made by UNDP as part of support services and the total expenditures excluded because they were made by a UN agency.
- That the auditor will state in the audit report if the audit was not in conformity with any of the above and indicate the alternative standards or procedures followed.

## **II. The Audit Report**

The TOR should clearly indicate the expected content of the auditor's opinion. (Refer to Annex 2 for a sample Audit Report.) This would include at least the following:

- That it is a special purpose report and its intended use.
- The audit standards that were applied (INTOSAI standards, ISAs, or national standards that comply with one of these in all material respects).
- The period covered by the opinion.
- The scope restriction for those expenditures that are the responsibility of UNDP (as part of support services) or a UN agency.
- Whether the CDR presents fairly the expenditures for the project and that the funds were utilized for the purposes described in the project document and work plans.

This section should also indicate the due date for submission of a draft audit report and the signed audit report to the executing agency, as well as the due date for the submission of the signed audit report to UNDP.

## **III. Management Letter**

The TOR should specify that the auditor would submit a management letter at the completion of the audit. Guidance should be provided regarding the topics/issues to be covered in the management letter. At a minimum, the following topics/issues should be included:

- A general review of project progress and timeliness in relation to progress milestones and the planned completion date, both of which should be stated in the project document. This is not intended to address whether there has been compliance with specific covenants relating to specific performance criteria or outputs. However general compliance with broad covenants such as implementing the project with economy and efficiency might be commented upon but not with the legal force of an audit opinion.
- An assessment of the project's internal control system with equal emphasis on (i) the effectiveness of the system in providing the project management with useful and timely information for the proper management of the project and (ii) the general effectiveness of the internal control system in protecting the assets and resources of the project.
- A description of any specific internal control weaknesses noted in the financial management of the project and the audit procedures followed to address or compensate for the weaknesses. Recommendations to resolve/eliminate the internal control weaknesses noted should be included.

- Comments as to whether recommendations made in the management letter for the previous audit were implemented or, if not, the implementation status.

More detailed guidance for each of the above general categories is provided below.

#### Review of project progress

As part of the general review of project progress, specific steps could include the following:

- Review annual and quarterly work plans, quarterly financial reports, and requests for direct payments and assess in terms of their timeliness and their compliance with the project document and the UNDP Programming Manual (6.5.3 and 6.5.4).
- Review the Annual Project Reports prepared by the executing agency and assess in terms of compliance with UNDP guidelines and whether the executing agency met its responsibilities for monitoring described in the project document and work plans.
- Review whether the decisions and/or recommendations of the above activities have been followed through by the executing agency.
- Review the pace of project progress and comment on the causes for delays.
- Comment on whether implementation services of the UN Agency(s) were provided in line with project document and the work plan.

#### Assessment of internal control

The auditor is expected to conduct a general assessment of internal controls according to established internal control standards. An example of established internal control standards is available from the Organization of Supreme Audit Institutions (INTOSAI). The INTOSAI standards are intended for use by government managers to use as a framework to establish effective internal control structures. For further information, the INTOSAI *Guidelines for Internal Control Standards* can be found on the INTOSAI Web site [www.intosai.org](http://www.intosai.org). An overview of the standards can be found in the UNDP Contact tool (Chapter 6).

In addition to the above general assessment, additional specific steps could include the following:

- Review expenditures made by the executing agency and assess whether they are in accordance with project document, work plans and budgets; and are in compliance with the UNDP Programming Manual (6.4).
- Review the process for procurement/contracting activities and assess whether it was transparent and competitive.
- Review the use, control and disposal of non-expendable equipment and assess whether it is in compliance with the UNDP Programming Manual (6.4.5); and also whether the equipment procured met the identified needs and whether its use was in line with intended purposes.
- Review the process for recruiting project personnel and consultants and assess whether it was transparent and competitive.
- Review the executing agency accounting records and assess their adequacy for maintaining accurate and complete records of receipts and disbursements of cash; and for supporting the preparation of the quarterly financial report.
- Review the records of requests for direct payments and ensure that they were signed by authorized government officials.

#### **IV. Recommendations for Improvement**

- Recommendations should be directed to a specific entity so there is no confusion regarding who is responsible for implementation. The response of the entity should be included in the management letter, immediately following the recommendation.
- Also, the auditor may wish to comment on “good practices” (if any) that were developed by the executing agency that should be shared with other project personnel.

#### **IV. Available Facilities and Right of Access**

- There should be a description of the nature and the location of all records belonging to the project. This list should specify those records kept at the executing agency's headquarters and those that are located at other offices.
- The TOR should state that the auditor would have full and complete access at any time to all records and documents (including books of account, legal agreements, minutes of committee meetings, bank records, invoices and contracts etc.) and all employees of the entity. The auditor should be advised that he/she has a right of access to banks, consultants, contractors and other persons or firms engaged by the project management. If an auditor may not have unrestricted access to any records, person or location during the course of the audit, this restriction should be clearly defined, with reasons, in the TOR.

**APPENDIX D**  
**Endorsement Letters**  
**UNFCCC Focal Point and the GEF Focal Point**

SIGNATURE PAGE

Country: KIRIBATI

UNDAF Outcome(s)/Indicator(s):  
(Link to UNDAF outcome. If no UNDAF, leave blank) N/A

Expected Outcome(s)/Indicator (s): Enhanced Government capacity and commitment to meet its obligations under global conventions

(CP outcomes linked to the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s): Environmental considerations integrated into national development policies, strategies, programmes and projects

(CP outcomes linked to the SRF/MYFF goal and service line)

Implementing partner: Environment and Conservation Department

Other Partners: UNDP

Programme Period: 2007-2009  
Programme Component: Energy and Environment for Sustainable Development  
Project Title: ENABLING ACTIVITIES FOR THE PREPARATION OF KIRIBATI'S SECOND NATIONAL COMMUNICATION TO THE UNFCCC  
Project ID: 00052930  
Project Duration: 3 years  
Management Arrangement: NEX

Budget	US\$ 405,000
General Management Support Fee	
Total budget:	US\$ 405,000
Allocated resources:	
• Government (in kind)	US\$ 10,000
• Regular	_____
• Other:	
○ Donor	_____
○ Donor	_____
○ Donor	_____
• In kind contributions	_____
Unfunded budget:	_____

20/02/07 { Agreed by (Government): M. K. ...  
 SENIOR ASSISTANT SECRETARY, FOR SECRETARY, MELAD

Agreed by (Implementing partner/Executing agency): Shalita ...  
 DIRECTOR - ENVIRONMENT & CONSERVATION DIVISION, MELAD

Agreed by (UNDP): Felix ... (Deputy Resident Representative)

20/02/07

