

# **Government of Eritrea**

## **United Nations Development Programme**

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

#### **Brief description**

This project enables Eritrea to prepare its Second National Communication (SNC) to the Conference of the Parties (COP) of the UN Framework Convention on Climate Change (UNFCCC). The main components of the project are: (a) an update and inventory of greenhouse gases following the guidelines adopted by the CoP; (b) an assessment of potential impacts of climate change and adaptation analysis; (c) preparation of a national action plan to address climate change; and (d) preparation of the Second National Communication of Eritrea to the CoP. Beside the preparation of the Second National Communication, the project is expected to improve the information gaps, uncertainties and understanding of issues reported under Initial National Communication (INC) on the basis of new approaches. It is expected to introduce new areas of work as a foundation for development of additional national strategies and action plans. The project is also expected to enhance knowledge and general awareness on climate change related issues in Eritrea, and to strengthen the dialogue, information exchange, cooperation, coordination among all relevant stakeholders including governmental, non-governmental, academic, and private sectors.

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## Lists of Acronyms

CC	Climate Change
CBOs	Community Based Organizations
CoP	Conference of the Parties
ECMIB	Eritrean Coastal, Marine and Island Biodiversity
ESTs	Environmental Sound Technologies
GCM	Global Circulation Models
GEF	Global Environmental Facility
GHG	Greenhouse Gas
IGAD	Intergovernmental Agency for Development
IPCC	Intergovernmental Panel on Climate Change
LDCs	Least Developed Countries
LUCF	Land Use Change and Forestry
MDGs	Millennium Development Goals
MEAs	Multilateral Environmental Agreements
MOP	Montreal Protocol on Substances that Deplete the Ozone layer
NAP	The National Action Programme to Combat Desertification and Mitigate the Effects of Drought in Eritrea
SD	Sustainable Development
UN	United Nations
UNCBD	United Nations Convention on Biodiversity
UNCCD	United Nations Convention to combat Desertification
UNDAF	The UN Development Assistance Framework
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change

## **1. Elaboration of the Narrative**

### **1.1 Situation Analysis**

Eritrea is among the most vulnerable group of countries to the adverse effects of climate change, mainly because of its limited adaptive capacities and geographical location in the arid and semi-arid region of the Sahelian Africa. The country faces severe capacity limitations in implementing its national strategies (see section 1.2) in terms of financial, institutional, technical and human resource capacities, which is extremely lacking in Eritrea.

The UN Development Assistance Framework (UNDAF) selected the promotion of Pro-poor economic growth in sustainable livelihoods as one of its programmes. The environment and energy support areas fall under these category. One of the priority areas, as indicated in UNDAF and UNDP Country Programme (CP) is to support the implementation of selected elements of the national action programme on climate change/desertification. As a prerequisite, Eritrea has acceded to the common but differentiated responsibility of UN Framework Convention on Climate Change on 25 March 1995. Besides the efforts to mitigate the adverse impact of climate change, the government is in the process of implementing the relevant MDG 7- ensure environmental sustainability as part of its national developmental goals.

Department of Environment (DOE), of the Ministry of Land, Water and Environment is responsible for co-coordinating environmental actions in Eritrea. In addition, there are several Ministries that deal with climate related issues such as the Ministry of Energy and Mines, the Ministry of Agriculture, the Ministry of Trade and Industry, the Ministry of Transport and Communication, the Ministry of Fisheries, etc in Eritrea.

A National Climate Change Project Steering (PSC) Committee has been established under the auspices of the Department of Environment (DOE). This committee will provide policy guidance and management oversight during the implementation of the project. The Committee is composed of representatives from:

- DOE, Ministry of Land, Water and Environment (Chair & Secretary)
- Ministry of Energy and Mines
- Ministry of Agriculture (member)
- Ministry of Trade and Industry (member)
- Ministry of Fisheries (member)
- Ministry of Transport and Communication (member)
- Ministry of Health (member); and
- Asmara University (member)

The project will enhance the capacity of the Government of Eritrea and other participating institutions to better analyze the various aspects of CC and potential response measures to be undertaken in Eritrea. It will also strengthen the capacity of Eritrea to contribute on the ongoing international consultations related to CC. Since CC is a global concern, the target beneficiaries must be seen in a global context. By implementing a measure to fulfill the commitments of Eritrea to the UNFCCC, the project will contribute to the global effort to address CC and its adverse impacts.

## **1.2 Strategy**

Eritrea being a developing country and also one of the least developed countries (LDCs), of the world, the achievement of food security, poverty reduction and /or alleviation and sustainable development remain the preoccupation of the country. Government policies reflect these concerns at all times. All adaptation strategies to climate change should therefore fit in with these objectives. The UN Development Assistance Framework (UNDAF: 2002 - 2006) and UNDP Country Programme will support the government in the planning and implementation of its medium to long-term development programme to attain sustainable pro-poor economic growth and reduction of poverty in environmentally sound manner.

In the context of global environmental protection, the Government of Eritrea made its commitment by signing more than ten environmental conventions which also assist Eritrea in achieving its national strategies of poverty reduction, conservation and sustainability use of the environment. As a country with least capacity in terms of financial, human resource and institutional framework, the commitment would not take place without the assistance of the various entities of UN including UNEP, UNDP, GEF and others.

The project will implement activities needed to enable the Government of Eritrea to prepare its Second National Communication (SNC) in accordance with Article 12 of the UNFCCC, and following the guidelines adopted by the COP for the preparation of national communication from Parties not included in Annex I. The project outputs including GHG inventories and adaptation strategies for the various economic sectors, national strategy action plan, national plan for systematic observation, national plan for synergy of CC issues and the Second National Communication itself among others are ideal experiences for the success of national and global strategies.

As an implementing agency for GEF, UNDP has played the primary role in the development and management of policy issues, capacity building and technical assistance for projects funded by GEF. Through its global network of field offices, UNDP is in an excellent position to assist Eritrea in implementing and sustaining enabling activities of this type to ensure long-term results. As a result the government has selected UNDP to be the Implementing Agency (IA) of GEF.

### **1.3 Management Arrangements**

Please, see Management Arrangements in Appendix B, section 4.5, page 23.

### **1.4 Monitoring and Evaluation**

#### Monitoring responsibilities and events

A detailed schedule of project reviews 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* will be the responsibility of the Project Coordinator based on the project's Annual Work plan and its indicators. The Project Team 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* will be undertaken by the government in cooperation with UNDP-CO through quarterly meetings, 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 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.

##### **(a) 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 months time-frame.

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.

**(b) *Quarterly Progress Reports***

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 team.

**(c) *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 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 APRs. 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.

**(d) *Audit Clause***

The Government will provide the 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 between the Government of Eritrea and the United Nations Development Programme, signed by the parties on June 18, 1994. 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 GEF Unit and is assured that the other signatories to the Project Document have no objection to the proposed changes:

- a) Revision of, or addition to, any of the annexes to the Project Document;
- b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- c) 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
- d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

## **2. Total Budget**

The project duration is two years between the start of the third quarter of 2005 and the end of the second quarter of 2007. The total budget is 405,000.00 USD. The budget is further divided for 2005 (3<sup>rd</sup> and 4<sup>th</sup> quarters), 2006 and 2007 (1<sup>st</sup> and 2<sup>nd</sup> quarters) years as 88,250.00, 270,500.00 and 46,250.00 USD respectively as shown in Table 1 below.



**Table 1. Total budget for SNC preparation**

Expected Outcomes	Outputs & Indicators	Responsible Party	Planned budget (US \$)						
			Source Funds	Budget Code	Budget Description	2005 (3 <sup>rd</sup> & 4 <sup>th</sup> Q)	2006	2007 (1 <sup>st</sup> & 2 <sup>nd</sup> Q)	Total budget
<b>National Communication</b>	National circumstances	DOE	GEF	21.00	Contract	2,000.00	0.00	0.00	2,000.00
	National Greenhouse gas Inventories	DOE	GEF	21.01 21.02	Contract	70,000.00	0.00	0.00	70,000.00
	Programs containing measures to facilitate adequate adaptations to climate change	DOE	GEF	21.05 21.06 21.07 21.08	Contract	0.00	168,000.00	10,000.00	178,000.00
	Other relevant information (e.g. research and systematic observation, technology transfer, education and public awareness, capacity building)	DOE	GEF	30.00	Contract	0.00	40,000.00	10,000.00	50,000.00
	Constraints & gaps; Related financial, technical, & capacity needs	DOE	GEF	30.00	Contract	0.00	30,000.00	0.00	30,000.00
	Compilation, Production of communication, including Executive Summary & its translation	DOE	GEF	50.00	Contract	0.00	0.00	10,000.00	10,000.00
	Project Management	DOE	GEF	17.01	Contract	15,000.00	30,000.00	15,000.00	60,000.00
	Monitoring and Reporting	DOE	GEF	21.00	Contract	1,250.00	2,500.00	1,250.00	5,000.00
	Sub Total						<b>88,250.00</b>	<b>270,500.00</b>	<b>46,250.00</b>

## Appendices

### 3. Appendix A: Summary report of the self-assessment exercise

This summary report includes description of the process and approach adopted for the stocktaking exercise, main outcomes of the stocktaking, including priorities identified, main lessons learned of the self-assessment exercise and explanation of the stakeholder analysis for consultations and validation processes used for the preparation of Second National Communication (SNC) project proposal in Eritrea.

Department of Environment of the Ministry of Land, Water and Environment, as a focal point for enabling activities under UNFCCC, is responsible for the stocktaking exercise in cooperation with other relevant line ministries including Ministry of Agriculture, Ministry of Energy and Mines, Ministry of Fisheries and other relevant governmental and Civil organizations that had direct and indirect roles in the previous preparation of Initial National Communication (INC). The various experts and expert groups in these institutions have been concomitantly consulted throughout the process to come up with the out comes of the stocktaking and their prioritization.

The experts participated in the stocktaking and preparation of this project proposal are:

1. Mr. Seid Abdu Salih..... (Project Coordinator)
2. Mr. Tewelde G/Eyesus..... (Head of Env. Assessment & Info. Division)
3. Staff members ..... (Department of Environment, MLWE)
4. Members of PSC..... (Key Ministries)

#### 3.1.Main outcomes of the stocktaking

##### 3.1.1.Overview

To come up with the main outcomes of the exercise, the stocktaking tracks the main components of national communication in order to assist findings on what to search for during the stocktaking and how to use this information in the design of Second National Communication (SNC) proposals. Note that all the activities are selected based on criteria for priority selection. These criteria include if the activity is country-driven, having global environmental benefits and cost-effective. Country-driven ness is further examined in terms of food security, poverty reduction and sustainable development. Global environmental benefits are seen in terms of relevancy of the activity to various global environmental conventions including UNFCCC, UNCBD, UNCCD, MOP, etc. Cost-effectiveness is witnessed in terms of economy, ecological, social, cultural, educational, scientific, recreational and aesthetic services for human population. There shouldn't be confusion between the V & A activities identified for SNC and the ongoing National Adaptation Programs of Action (NAPA). The former is an enabling activity that identifies overall adaptive strategies and measures while the latter, as a follow up of the former, implements *priority activities* that address *Eritrea's urgent needs for adapting to the adverse impacts of CC*.

### **3.1.2. National Circumstances**

#### **3.1.2.1 Priorities identified for SNC**

Relevant topics that have not been addressed under national circumstances of the INC are institutional arrangement, global cooperation for environmental protection, geological features (e.g. rock formation, soil types, etc), land use, access to safe and adequate water, waste Generation and disposal method and human health and health facilities. Some updates are important for topics dealt with in the INC. These include historical background, population and economy. Other topics existing in the INC need no changes and the information provided in the INC is considered adequate and relevant.

### **3.1.3. GHG Inventories**

#### **3.1.3.1 Constraints**

The GHG inventory, in the INC, was conducted strictly based on the IPCC revised 1996 guidelines for National Greenhouse Gas Inventories. The Ministry of Land, Water and Environment, Ministry of Energy and Mines, Ministry of Agriculture, Ministry of Industry and Trade and Ministry of Transport and communications were involved in the data collection for greenhouse gas inventory. Sectors studied in this inventory include Energy, Transport, Agriculture, Forestry and Land use, Commerce and Household, and Solid Waste. Accordingly, an inventory of GHG emissions by sources and removal by sinks in Eritrea has been carried out for the 1994 base year. The major GHGs covered in this study are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Other GHGs, included are carbon monoxide (CO), Nitrogen oxides (NO<sub>x</sub>), and Non-methane Volatile Compounds (NMVOCs) and Sulphur dioxide (SO<sub>2</sub>). In terms of CO<sub>2</sub> emissions, there are uncertainties concerning the consumption data sources especially those obtained from national surveys, carbon content of fuels and products, and oxidation efficiencies. There was no information that could be collected on stock changes in fuels and these could affect intra-year emission totals. Estimates of methane emission (CH<sub>4</sub>) have not been made using direct relationship between the amount of volatile solids present in animal wastes and the potential for methane generation. The IPCC default values were used as a substitute. In order to come up with estimates of emission of GHG from land-use changes, it is necessary to have a judgment of past changes over time, 20-100 years. This has not been done in the case of Eritrea. There is a lot to do in the waste sector in the future, the composition of municipal waste, waste generated in major towns of Eritrea should be determined and estimated from the annual estimate of per capita waste generation. However, this was not made in the case of Eritrea.

#### **3.1.3.2 Priorities identified in GHG Inventories for SNC**

The following programs and activities are suggested for consideration in the SNC based on the above analysis:

- Update of the 1994 GHG Inventory with high uncertainties, gaps and sectors not covered fully such as Energy, LUCF, Agricultural and Waste sectors using tier 1;

- GHG inventory for the year 2000 using tier 2 of IPCC;
- Training on GHG inventory;
- Training on cost-effective programs to develop country-specific emission factors in key sources such as Agricultural, Energy, LUCF and Waste sectors; and
- Developing an inventory management system for Energy, Agricultural and Land Use Change and Forestry (LUCF) sectors having high uncertainty and key sources of GHG emissions;

### **3.1.4. Programmes containing measures to facilitate adequate adaptation to climate change**

#### **3.1.4.1 Constraints**

In terms of programs containing measures to facilitate adequate adaptation to climate change, the assessment focused on five sectors, namely, agriculture, water resources, forestry, coastal zone and human health. The main limitation of the vulnerability studies rests in terms of nonattendance of:

- Integrated Assessment Approach (IAA) of climate change impacts across the sectors to come up with more reliable findings and adaptation options to maximize opportunities;
- socio-economic scenarios;
- National Adaptation Programs of Action (NAPA) Scenarios;
- adaptation policy Framework scenario;
- technology scenario;
- qualitative assessments and their adaptation options;
- broad issues (sub sectors) in a given sector;
- sufficient scale and scope of the assessments in terms of space and time; and
- National Strategy Action Plan for Climate change;

#### **3.1.4.2 Priorities identified for SNC**

New areas of studies are optional to fill the above gaps encompassing the following features.

- socio-economic scenarios as a reference for vulnerability & adaptation assessments in sectors;
- improved climate scenarios, models and approaches appropriate to simulate more Eritrea's baseline climate (1X CO<sub>2</sub>) and circumstances;

- Integrated Assessment Approach (IAA) to integrate the various issues in the various sectors;
- quality related parameters in the vulnerability & adaptation assessments;
- coverage of broad sub sectors in a given sector;
- encompass at least two sites in a given agro ecological zone to improve the scale and reliability of the assessment; and
- Integration of the various CC issue findings to develop a National Strategy Action Plan for potential response measure of CC.

### **3.1.5. Other information considered relevant to the achievement of the objective of the convention**

#### **3.1.5.1 Constraints**

In terms of other information considered relevant to the achievement of the Objectives of the convention, an assessment has to be designed in relation to the existing limitations and potential remedies to improve the Research and Systematic Observation status of Eritrea. The GEF, IGAD, bilateral, multilateral, international organizations and UNFCCC sources of special funds for improving the systematic observation systems of developing countries may be explored in this context. After comprehensive needs assessment for systematic observation and research, proposals need to be prepared and directed towards these appropriate entities.

#### **3.1.5.2 Priorities for SNC**

The following programs are ideal to be addressed in the SNC:

- Needs assessment for developing a National Plan for Systematic Observation.

### **3.1.6. Constraints and gaps, and related financial, technical and capacity needs**

#### **3.1.6.1 Constraints**

In terms of constraints and gaps, and related financial, technical and capacity needs, eight specific areas are identified in relation to CC by the National Capacity Self-Assessment (NCSA) project currently on going in the country. Therefore, there is a need of close cooperation with NCSA project.

### **3.1.6.2 Priorities for SNC**

For immediate implementation of this project the following national training needs have to be put in place:

- Project initiation workshop;
- Inventory workshop; and
- V & A and National Strategy Action Plan workshops;

### **3.1.7. Lessons learned in the self-assessment exercise**

Main lessons learned in the self-assessment exercise are that the self-assessment process of INC and top-ups is a remarkable opportunity to the development of further national strategies and action plans uncovered during the preparation of INC. As a result, the project proposal for SNC will base on the findings of the self-assessment exercise. This process and arrangement has to be reproduced in the process of updating and preparation of the follow up national communications. Assessment of synergies with relevant national initiatives including UNCCD, UNCBD, ECMIB, MOP, NAPA, NCSA and others unfolds that a series of activities pertinent to climate change overlap consistently throughout these initiatives. Therefore, planning synergy for best ways of coordination and joint action mechanism has to be reckoned in the SNC. This should lead to a *National Climate Change Strategy* having a purpose of avoiding duplication of work in the various GEF funded initiatives and provide a more programmatic approach to GEF funded activities.

### **3.1.8. Stakeholder Consultation**

The second component of the self-assessment exercise is the stakeholder consultations and validation process used for the preparation of the Second National Communication project proposal. The following table (Table 2) summarizes the stakeholder analysis undertaken during the self-assessment exercise.

**Table 2. Summary of Stakeholder analysis for stakeholder consultation**

No	Name of Stakeholder	Stakeholder interests, official position or mandate	Reasons for inclusion
1.	Ministry of Fisheries	<ul style="list-style-type: none"> <li>• Fisheries resources;</li> <li>• Marine protected areas</li> </ul>	<ul style="list-style-type: none"> <li>• Focal point to ECMIB;</li> <li>• Key stakeholder;</li> <li>• Member of PSC.</li> </ul>
2.	Ministry of Energy & Mines	Energy and Mines resources	<ul style="list-style-type: none"> <li>• Key stakeholder;</li> <li>• Member of PSC;</li> <li>• Implementer of RET projects</li> </ul>
3.	Ministry of Transport & Communication	Land, Air & marine transport & Communications	<ul style="list-style-type: none"> <li>• Key stakeholder;</li> <li>• Member of PSC;</li> <li>• Focal point to marine conventions</li> </ul>
4.	Ministry of Agriculture	Agricultural resources	<ul style="list-style-type: none"> <li>• Key stakeholder;</li> <li>• Member of PSC;</li> <li>• Focal point of UNCCD</li> </ul>
5.	Ministry of Health	Human & environmental health	Member of PSC
6.	Ministry of Trade and Industry	Trade & Industry	Potential stakeholder
7.	Ministry of Tourism	Tourism	Potential stakeholder
8.	Ministry of Education	Education	Potential stakeholder
9.	Ministry of Public Works	Public works	Potential stakeholder
10.	Ministry of Labor and Human welfare	Labor & Human welfare	Potential stakeholder
11.	Ministry of Land, Water & Environment	Land, Water & Environmental Resources	<ul style="list-style-type: none"> <li>• Key stakeholder;</li> <li>• Chair of PSC;</li> <li>• Focal Point to UNCBD, UNFCCC, etc</li> </ul>
12.	Ministry of National Development	National development	<ul style="list-style-type: none"> <li>• Key stakeholder;</li> <li>• Responsible for the implementation of national projects</li> </ul>
13.	Ministry of Finance	Finance, Duty & custom	Potential stakeholder
14.	Ministry of Information	National & International Information	Potential stakeholder
15.	Ministry of Defense	National Security, Defense, etc	Potential stakeholder
16.	Ministry of Justice	Justice issues	Potential stakeholder
17.	Major Groups	Issues of Youth and Women	Potential stakeholder
18.	Eritrean Relief & Rehabilitation Commission	IDPs & Returnees	Potential stakeholder
19.	Chamber of Commerce, Commercial Banks, Insurance Companies and Micro-credit Organizations	Treasury, credit , investment, insurance	Potential stakeholder
20.	University of Asmara	Higher education	Member of PSC
21.	Zoba Administrations	Administrative issues	Potential stakeholder
22.	Indigenous People	Indigenous knowledge	Potential stakeholder
23.	Organizations (CBOs)	Community initiatives	Potential stakeholders

## **4. Appendix B: Technical Components of the Project Proposal**

### **4.1. Background /Context**

Eritrea is an arid to semi-arid country located in the Horn of Africa. It became independent on May 24, 1991 after a protracted war which lasted over three decades. Bordering the Red Sea, Eritrea has a land area of about 122,000 square km. Of the total land area, about 6,000 square Km. is categorized as crop land, and 49,000 square km. is categorized as grazing land.

Present estimates place the population at anywhere between 3 to 3.6 million. The urban population is about 700,000 and the average rate of population growth is estimated to be around 2.7 to 3 percent per year (NAP). Per capita income has been estimated at between U.S. \$ 130 and \$ 150. Average life expectancy is around 46 years and infant mortality is around 135 per 1000 live births. Nearly 80 percent of the population above the age of 15 is illiterate.

Agriculture accounts for 20 % of the GDP. Only between 3 to 5 percent of the land is under cultivation. In rural areas, agriculture is a dominant source of income and growth, attracting 80 % of the population. Industry accounts for about 20 % of GDP and the balance of the national income is accounted for by the service sector.

The 1997 energy balance of Eritrea indicates that approximately 77.3 % of the total final energy supply (TFES) is met from biomass. Actual consumption of biomass for energy in 1997 was circa 1,989 thousand tones, of which fuel wood accounted for 71 %, charcoal 6 %, animal dung 20 %, and agri-residues 3 %. 21.3 % of the TFES is accounted for by oil products and 1.4 % of the TFES is met from electricity (NAP). This estimates of biomass consumption not only has implications for global climate change and but also has directly contributed to a drastic loss in vegetative cover, and the over all degradation of Eritrea's terrestrial environment.

There are no definitive studies indicating the extent and scope of land use change and it is therefore difficult to offer an indication of the impact of land use change on the environment. Urban expansion and the changes in agricultural land due to urbanization are key aspects of this issue. According to the National Environmental Management Plan (NEMP-E 1995) urban population grows between 5 -7 percent per annum.

The process of the preparation of Initial National Communication in Eritrea has enabled the various relevant stakeholders to come together and act according to Eritrea's commitment to the UNFCCC- Common but differentiated responsibility. This experience will be a foundation for the preparation of additional climate communications.



## **4.2. Project's Development and Main Objective**

### **4.2.1 Project Development Objective**

The project will strengthen technical and institutional capacity to assist Eritrea mainstream climate change concerns into sectoral and national development priorities.

The project, in the long term, will also contribute to the global effort to get a better understanding of the sources and sinks of GHGs, potential impacts of climate change, and effective response measures to achieve the ultimate objective of the UNFCCC which is “to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”.

### **4.2.2 Project Immediate Objective**

The project will enable Eritrea to prepare and submit its Second National Communication to the UNFCCC and meet its Convention obligations.

## **4.3. Project Strategy**

The project will implement activities needed to enable Eritrea to prepare its Second National Communication in accordance with Article 12 of the UNFCCC, and following the guidelines adopted by the COP for the preparation of national communications from Parties not included in Annex I.

The project will involve best expert institutions in Eritrea to implement the project. In this line, the existing Project Steering Committee is noteworthy. The necessary external support will be provided by strengthening the information exchange between the national and relevant regional and international expert institutions, and, if seen necessary, by organizing separate training workshops or hiring short-term international consultants.

The main components of the project will be updating of the initial GHG inventory for the base year 1994, undertaking new GHG inventory for the year 2000 and assessment of potential impacts of climate change. Facilitating adaptation to climate change will be analyzed and, in consultation with the relevant stakeholders, a national action plan to address climate change and its adverse impacts will be prepared. Finally, the information gained will be communicated to the COP in the form of the Second National Communication. Preparation of national action plans for systematic observation and synergy among MEAs in Eritrea will also be part of main undertaking of this project.

The project will be executed by Department of Environment of Ministry of Land, Water and Environment and in consultation with the Project Steering Committee (PSC). A project Coordinator will be identified to work full time for the project. The PSC will be chaired by the representative of the DOE. The PSC will play advisory and project implementation oversight roles in terms of policy, management and technical issues.

## 4.4. Project's Activities / Outputs

### Output 4.4.1. National Circumstances

Relevant topics that have not been addressed under national circumstances in the INC and reckoned for significance in the SNC, as identified by the stocktaking process, are:

#### Activity 4.4.1.1 Identify and Assess missing information on:

- Institutional arrangement for the process of climate communication;
- Global cooperation for environmental protection- ratification of environmental conventions;
- Geological features (e.g. rock formations and soil types);
- Land use (as related to Land Use Change and Forestry);
- Waste generation and disposal method (as related to methane and carbon dioxide emissions through anaerobic or aerobic reaction respectively);
- Human health and health facilities (e.g. Flooding, drought, famine resulting in cholera, malaria, Acute Respiratory Infections (ARIs), etc.); and
- Access to safe and adequate water.

#### Activity 4.4.1.2 Update the existing information on the following:

- Historical background;
- Population; and
- Economy.

These topics should contain information relevant to other sections of the second national communication that could provide a better understanding of adaptation priorities or needs for research studies. The data and information are expected to be collected from the Department of Environment and Asmara University.

### Output 4.4.2 Greenhouse Gas Inventory

In the previous national communication, there are uncertainties concerning the consumption data sources related to **CO<sub>2</sub>** emissions especially those obtained from national surveys, carbon content of fuels and products, and oxidation efficiencies. For example, given the same primary fuel type (e.g., petroleum), the amount of carbon contained in the fuel per unit of useful energy can vary. Non-energy uses of the fuel can also create situations where the carbon is not emitted to the atmosphere (bitumen) or is emitted at a delayed rate. Additionally, inefficiencies in the combustion process, which can result in ash or soot remaining un-oxidized for long periods, were also assumed. *These factors all contribute to the uncertainty in CO<sub>2</sub> estimates.* There was no information that could be collected on stock changes in fuels and these could affect intra-year emission totals. No attempt has been done to disaggregate oil products consumption and GHGs emissions into *mobile* and *stationary sources* because of data limitations.

These constraints will be identified under the GHGs sources and sinks update and inventory related to the Energy sector.

Estimates of methane emission (**CH<sub>4</sub>**) have not been made using direct relationship between the amount of volatile solids present in animal wastes and the potential for methane generation. The IPCC default values were used instead. An estimate of emission of nitrous oxide (**N<sub>2</sub>O**) from each type of fertilizer used in the country is made from the product of fertilizer consumption and the emission coefficient (nitrous oxide released per unit weight of fertilizer used) usually specified as a range from low to medium and high. Nonetheless, these have to be updated and inventoried on the basis of available new approaches and methodologies in the agriculture sector.

In order to come up with estimates of emission of GHG from land-use changes, it is necessary to have an appreciation of past changes over time, 20-100 years. In addition, above ground biomass which remains on land after clearing decays over an average of 10 years. Ideally, land-use changes should be monitored and recorded on a yearly basis. This has not been done in the case of Eritrea.

There is a lot to do in the waste sector in the future, the composition of municipal waste, waste generated in major towns of Eritrea, should be determined and estimated from the annual estimate of per capita waste generation. Emission of methane from **waste water** and **sanitary systems** should have been estimated using gas collected and analyzed for composition from septic tanks, waste stabilization ponds, drop holes of pit latrines and inspection chambers of the existing sewerage systems. However, this was not made in the case of Eritrea.

The other important gap during the previous national communication is that the results of the inventory were not reserved in a data base maintaining the IPCC format that will create conducive condition for easy update and preparation of further national communications. Hence, the need for data base development and related capacity building for its establishment.

#### **Activity 4.4.2.1**

- Update the previous inventory in the key sources and those with high uncertainties, gaps and sectors not covered fully such as Energy, LUCF, Agricultural and Waste sectors using tier 1;

#### **Activity 4.4.2.2**

- Develop country specific emission factors and ratios in key sources such as Agricultural, Energy, LUCF and Waste sectors. Conduct training on cost-effective programs to develop country-specific emission factors in these sectors;

#### **Activity 4.4.2.3**

- Undertake new GHG inventory for the year 2000 using tier 2 of the IPCC improved methodology and conduct training on GHG inventory;

#### **Activity 4.4.2.4**

- Establish data base management system for the GHG inventories including relevant capacity for sustainability of the inventory process;

#### **Output 4.4.3 Programs containing measures to facilitate adequate adaptation to climate change**

The vulnerability and adaptation assessment in the INC focused on five sectors only, namely, agriculture, water resources, forestry, coastal zone and human health. On the basis of the stocktaking assessment, the following vulnerability studies have been identified to facilitate adequate adaptation to climate change in the SNC:

#### **Activity 4.4.3.1**

- Apply Integrated Assessment Approach (IAA) of climate change impacts across the sectors to come up with more reliable findings and adaptation options so as to maximize opportunities;

#### **Activity 4.4.3.2**

- Develop socio-economic scenario to foresee the actual impact of climate change on e.g. food security;

#### **Activity 4.4.3.3**

- Reassess emerging climate scenarios, models and approaches appropriate to simulate more Eritrea's baseline climate (1X CO<sub>2</sub>) and circumstances;

#### **Activity 4.4.3.4**

- Undertake qualitative and broaden quantitative assessments and their adaptation options within a sector (Agriculture, Coastal environment, forestry, Water resources and Health) for better informed decision making;

#### **Activity 4.4.3.5**

- Build capacity of national experts in the applications of climate scenarios, vulnerability and adaptation assessment models relevant to dry lands

#### **Activity 4.4.3.6**

- Develop National Action Plan for potential effective response measures to CC

### **Output 4.4.4 Other Information considered relevant to the achievement of the Objectives of the convention**

#### **Research and Systematic Observation**

The redesign of observing systems in Eritrea is essential because in many parts of the country the system simply does not exist, whereas in other parts it is partially satisfactory. The inadequacies of the present climate observing systems, in part, are attributed to the lack of priority given to the installation of automatic and first class stations in appropriate locations and capacity limitations for gathering, processing and dissemination of climate data. This has led to a number of key deficiencies. The main problems reside in the inexistence of satisfactory national coverage for many of the essential climate variables as well as national spatial coverage for research and development.

#### **Activity 4.4.4.1**

- Conduct needs assessment for developing a national plan for systematic observation.

#### **Synergies with other related activities**

Assessment of synergies with relevant national initiatives including UNFCCC, UNCCD, UNCBD, ECMIB, MOP, NAPA and NCSA unfolds that a series of activities in terms of climate change overlap consistently throughout these initiatives. For example, the following activities look perfect for implementing the UNFCCC, UNCCD and UNCBD conventions in synergy e.g. Poverty reduction and Food security, Sustainable management of natural resources, Promotion of alternative fuels, Capacity-building, In-situ conservation and Environmental public awareness and education.

Duplication of activities takes a high levy in terms of time and resources and a waste to be avoided. The way forward is to implement all environmental conventions in synergy. Therefore, planning synergy for best ways of coordination and joint action mechanism has to be reckoned in the SNC.

#### **Activity 4.4.4.2**

- Conduct assessment of climate change related activities in Multi-lateral Environmental Agreements (MEAs) ratified by Eritrea and prepare a common action plan for synergy.

## **Technology needs**

The absence of climate change home page hampered access to ESTs, transfer of development of endogenous capacities and enabling environments.

### **Activity 4.4.4.3**

#### **Capacity building**

- Develop institutional and human resource capacity on networking
  - Select, purchase & install the necessary equipment;
  - Establish climate change home page accessible to all PSC members; and
  - Train on the use and networking of information;

## **Education and public awareness**

### **Activity 4.4.4.4**

- Report to CoP the introduction of climate change issues in the school curriculum; and
- Promote climate change awareness of the public using different media.

### **Output 4.4.5 Constraints and gaps, and related financial, technical and capacity needs**

In terms of research, education, training and public awareness, capacity needs are required in relation to CC that have to be considered in close cooperation with the National Capacity Self-Assessment (NCSA) project currently assessing the overall capacity needs in the country. Immediate and short term training required in the processes of SNC preparation is related to the following activities.

#### **Activity 4.4.5.1**

##### **Short term training on climate change impact assessment and monitoring**

- Short term training (10 days) on standard scientific and technical assessment, monitoring and reporting of climate change issues by UNEP;

#### **Activity 4.4.5.2**

##### **National workshops on climate communication issues**

- Project initiation workshop;
- National coordination Inventory workshop;
- National coordination V & A workshop; and
- National strategy action plans for climate change, systematic observation and synergy workshop.

#### **4.5 Institutional Framework for Project Implementation**

The parties that will involve in the implementation of this project are UNFCCC secretariat, GEF, UNDP, UNEP, Ministry of National Development, Ministry of Land, Water and Environment, Key ministries contained in the National Project Steering committee, other relevant ministries, private sectors and NGOs. These parties will have roles, responsibilities and accountabilities for project resources in their areas of interest.

The GEF will fund this project. The GEF is a financial mechanism for the implementation of the Convention on UNFCCC. The GEF will function under the guidance of, and be accountable to, the CoPs. UNDP, as an implementing agency for GEF, will play the primary role in the development and management of capacity building and technical assistance for this project. Through its global network of field offices, UNDP is in an excellent position to assist Eritrea in developing and implementing activities of this type. Other international partners such as UNEP will assist in scientific and technical inputs to the project. Ministry of National Development is responsible for the smooth implementation of all national projects of this type and high level political supervision and coordination.

The principle executing agency of the project will be the Department of Environment (DoE) of Ministry of Land, Water and Environment as focal point for UNFCCC in Eritrea. The Department shall work closely with the relevant governmental Ministries. The Project steering committee, key group of ministries to be actively involved throughout the preparation of the SNC, chaired by the DoE will be charged with ensuring co-ordination in project implementation. The other relevant ministries, NGOs and private sectors will be consulted at different stages of the SNC preparation process for data collection and relevant activities in their interests. The DoE shall assign the management issues of the project to the Climate Change Management Committee (CCMC) housing in the DoE. Staff members of DoE will be recruited for CCMC. These personnel are supposed to have good experience in the previous enabling activities.

The DoE shall delegate the technical aspects of the project implementation to national and international consultants. National experts are expected to learn and develop their capacities in this process. The DoE and the Project Steering Committee shall assume responsibility for all decision making. A project Coordinator will be identified to work full time for the project, and he/ she will be responsible for the management of the project on day-to-day basis in cooperation with the climate change management committee. He / She will also be in charge of summarizing the results of the studies, supervising the workshops, and finalizing the national communication together with the Government personnel and the national experts.

Under different sub-tasks working links with international partners will be established in order to ensure effective exchange of information and appropriate implementation of the project. With these arrangements, the project seeks to establish close links with other climate change related activities being carried out by other GEF implementing agencies

or by other multilateral or bilateral organizations. It will do as practically as figured above and also by participating in informal consultative mechanism, CC: FORUM, being set up by the UNFCCC secretariat, to ensure that results of this project will be shared among all actors involved in climate change issues.

Access to internet among the members of PSC is essential. The most important activities under this issue are selection and installation of the equipments, training on the use of electronic networks and establishment and maintenance of a climate change home page. At least, one vehicle is necessary to monitor the various vulnerability and adaptation assessments scattered in the different parts of the country.

There is little difference between the institutional framework of the Initial National Communication and the proposed framework for the Second National Communication. There were no access to internet and (CCMC) in the previous national communication. The existence of these two elements is crucial for the sustainability of national communications in the future.

#### **4.6 Assessing Project Impact**

The environment is not a sector but is the resource base on which all sectoral development depends. Since the environment is not a sector it follows that it cannot be adequately and sustainably managed through a sectoral approach. Each sectoral development effort should have clear responsibility to protect and enhance the environment.

The preparation of SNC will involve the wide and active participation of stakeholders to bring them together in the process of the assessment of the implication of the existing sectoral developments for climate change. After identifying those inappropriate developmental activities, the SNC will come up with a component of national action plan for rectifying theme in the frame work of sustainable development, food security and poverty reduction strategies. The success of this undertaking will be evaluated with critical indicators including sectors developing sound economic polices in the context of climate change, sectoral EIAs, associated directives and integrating and enforcing these polices into sectoral legislations in their areas of mandate. DoE will coordinate, facilitate and assist the sectors to mainstream sound environmental policies, guidelines and legislations in the sectors.

Various stakeholders are currently mainstreaming climate change issues in their sectoral polices and legislations. Stakeholders are planning to develop their institutional and technical capacities in terms of climate change issues. For example, reform of the power sector of Eritrea is in the pipeline and already two proclamations have been designed. Water tariff policy and forest management directive under preparation, in the Water Resource Department and MoA respectively, are other interventions in the context of sectoral policy development.



Nonetheless, the sectors need to be assisted in capacity building, technical and financial matters to evaluate the existing policies, avoid ambitious policies and thereby develop new sound policies in the context of climate change.

NCSA project is currently assessing the status of existing capacity and future capacity needs in the area of Climate Change and other environmental conventions ongoing in the country. UNDP will be consulted to provide approaches for assessing Eritrea's capacity development including capacity development indicators in terms of sustainability of the national communication process and response measures for the adverse impact of CC

## 4.7 Detailed Budget

The detailed budget is tabulated in Table 3 below.

**Table 3. The detailed budget for the preparation of SNC of Eritrea in USD**

Activities/outputs in SNC of Eritrea		Outputs	US \$
<b>1. National circumstances</b>			
1.1	Identify and Assess missing information on:		
1.1.1	Global Cooperation– ratification of conventions	Assessment of national circumstances	1,500.00
1.1.2	Institutional arrangement for the process of climate communication		
1.1.3	Geological features (e.g. rock formation and soil type)		
1.1.4	Land Use ( as related to Land Use Change and Forestry)		
1.1.5	Waste generation and disposal method (as related to methane and carbon dioxide emissions through anaerobic and aerobic reaction respectively)		
1.1.6	Human Health and Health facilities (e.g. Flooding, drought, famine resulting in cholera, malaria, Acute Respiratory Infections (ARIs), etc.)		
1.1.7	Access to safe and adequate water		
1.2	Update the existing information on the following		
1.2.1	Historical Back ground	Updates of the existing information under national circumstances	500.00
1.2.2	Population		
1.2.3	Economy		
<b>Sub total ( National circumstances)</b>			<b>2,000.00</b>
<b>2. National Greenhouse Gas Inventories</b>			
2.1	Update the baseline GHG inventories in the Energy, LUCF, Agricultural and	Updates of the baseline GHG inventory in the Energy, LUCF,	5,000.00

		waste sectors using tier 1 methodology	Agriculture and Waste sectors according to tier 1 of the IPCC	
	2.2	Develop country specific emission factors and ratios through training in the Agricultural, Energy, LUCF and Waste sectors	Emission factors & ratios in Agriculture, LUCF, Energy and Waste sectors and improved national capacity on emission factors & ratios	40,000.00
	2.3	GHG inventory for 2000 including training in tier 2 of IPCC in Energy, Agricultural, Industrial process, Solvent & other product use, LUCF and Waste sectors	Complete national inventory of GHG emissions for 2000	10,000.00
	2.4	Establish data base management system for the GHG inventories including relevant capacity for sustainability of the inventory process	A data collection & management system for the GHG inventory of emissions	15,000.00
	<b>Sub total ( National GHG inventories)</b>			<b>70,000.00</b>
<b>3. Programs containing measures to facilitate adequate adaptation to CC</b>				
	3.1	Apply Integrated Assessment (IA) of climate change impacts across the sectors	Integrated Assessment in all sectors	168,000.00
	3.2	Develop socio-economic scenario to foresee the actual impact of climate change on e.g. food security	Socio-economic scenario relevant to Eritrea	
	3.3	Reassess emerging climate scenarios, models and approaches	Improved climate scenarios, models and approaches	
	3.4	Undertake qualitative and quantitative vulnerability and adaptation assessments in at least two sites in a given agro ecological zone in Agriculture, Coastal environment, forestry, water resources and health sectors	Qualitative and quantitative vulnerability and adaptation assessments of the impact of climate change	

	3.5	Build capacity of national experts in the applications of various assessment models such as DSSAT3, SWAT, PODIUM, etc	Improved national capacity on the application of various assessment models	
	3.6	Develop National Action Plan for potential effective response measures to CC	National Action Plan for adaptation to CC	10,000.00
<b>Sub Total (Programs containing measures to facilitate adequate adaptation to CC )</b>				<b>178,000.00</b>
<b>4. Other Relevant Information</b>				
4.1	Research and Systematic Observation			
	4.1.1	Conduct needs assessment for developing a National Plan for Systematic Observation	National Plan for systematic observation	30,000.00
4.2	Synergies with other relevant activities			
	4.2.1	Conduct assessment of climate change related activities in Multi-lateral Environmental Agreements (MEAs) ratified by Eritrea and prepare a common action plan for synergy	National Plan for synergy	10,000.00
4.3	Technology needs			
	4.3.1	Develop institutional and human resource capacity on networking	Improved capacity in the use and networking of information	10,000.00
4.4	Education and public awareness			--
<b>Sub Total (Other Relevant Information)</b>				<b>50,000.00</b>
<b>5. Constraints &amp; Gaps, Related Financial, Technical &amp; Capacity Needs</b>				
5.1	Short term training on climate change impact assessment and monitoring		Improved national capacity on climate change impact assessment and monitoring	10,000.00
5.2	National workshops on national communication issues		Improved national capacity on national communication climate change	20,000.00
<b>Sub Total (Constraints &amp; Gaps, Related</b>				<b>30,000.00</b>

	<b>Financial, Technical &amp; Capacity Needs)</b>			
<b>6. Compilation, Production of Communication, Including Executive Summary &amp; its Translation</b>				
	6.1	Prepare the Second National Communication (SNC) of Eritrea	SNC of Eritrea	10,000.00
	6.2	Translation of the Executive Summary of the SNC	Executive Summary in the UN working languages	
		<b>Sub Total (Compilation, Production of Communication, Including Executive Summary &amp; its Translation)</b>		<b>10,000.00</b>
<b>7. Project Management (Based on 2 years Duration)</b>				
	7.1	Salary for Project Management	Project coordinator and national experts	25,000.00
	7.2	One vehicle cost for project management (including car fuel and salary for 1 driver)	Effectively managed project	35,000.00
		<b>Sub Total ( Project Management)</b>		<b>60,000.00</b>
<b>8. Monitoring and Reporting</b>				
	8.1	Monitoring & Reporting	Preparing progress and financial reports	5,000.00
		<b>Sub Total ( Monitoring &amp; Reporting)</b>		<b>5,000.00</b>
		<b>GRAND TOTAL</b>		<b>405, 000.00</b>

## 4.8 Work plan

The detailed work plan is tabulated in Table 4 below.

**Table 4. Detailed work plan for the preparation of SNC of Eritrea to the CoP of UNFCCC**

Outputs/ Activities under SNC			Year 1		Year 2				Year 3	
			3 <sup>rd</sup> Q	4 <sup>th</sup> Q	1 <sup>st</sup> Q	2 <sup>nd</sup> Q	3 <sup>rd</sup> Q	4 <sup>th</sup> Q	1 <sup>st</sup> Q	2 <sup>nd</sup> Q
<b>1.</b>	<b>National Circumstances</b>									
	1.1	Identify and Assess missing information on:								
		1.1.1 Global Cooperation– ratification of conventions								
		1.1.2 Institutional arrangement for the process of climate communication								
		1.1.3 Geological features (e.g. rock formation and soil type)								
		1.1.4 Land Use ( as related to Land Use Change and Forestry)								
		1.1.5 Waste generation and disposal method (as related to methane and carbon dioxide emissions through anaerobic and aerobic reaction respectively)								
		1.1.6 Human Health and Health facilities (e.g. Flooding, drought, famine resulting in cholera, malaria, Acute Respiratory Infections (ARIs), etc.)								
		1.1.7 Access to safe and adequate water								
	1.2	Update the existing information on the following:								
		1.2.1 Historical Back ground								

	1.2.2	Population								
	1.2.3	Economy								
<b>2.</b>	<b>National GHG Inventory</b>									
	2.1	Update the baseline GHG inventories in the Energy, LUCF, Agricultural and waste sectors using tier 1 methodology								
	2.2	Develop country specific emission factors and ratios through training in the Agricultural, Energy, LUCF and Waste sectors								
	2.3	GHG inventory for 2000 including training in tier 2 of IPCC in Energy, Agricultural, Industrial process, Solvent & other product use, LUCF and Waste sectors								
	2.4	Establish data base management system for the GHG inventories including relevant capacity for sustainability of the inventory process								
<b>3.</b>	<b>Programs containing measures to facilitate adequate adaptation to CC</b>									
	3.1	Apply Integrated Assessment Approach (IAA) of climate change impacts across the sectors								
	3.2	Develop socio-economic scenario to foresee the actual impact of climate change on e.g. food security								
	3.3	Reassess emerging climate scenarios, models and approaches								
	3.4	Undertake qualitative and quantitative vulnerability and adaptation assessments in Agriculture, Coastal environment, forestry, water resources and health sectors								
	3.5	Build capacity of national experts in the applications of various models such as DSSAT3, SWAT, PODIUM, etc								
	3.6	Develop National Action Plan for potential effective response measures to								

		CC										
		3.6.1	Develop Draft National Action Plan for potential effective response measures to CC									
		3.6.2	National PSC meeting to evaluate the Draft National Action Plan									
		3.6.3	National workshop to evaluate the draft national action plan									
		3.6.4	Circulation of the Draft final national action plan for comments									
		3.6.5	Prepare & Publish the final national action plan for climate change									
<b>4. Other Relevant Information</b>												
	4.1	Research and Systematic Observation										
		4.1.1	Conduct needs assessment for developing a National Plan for Systematic Observation									
		4.1.2	Prepare the draft National Plan for systematic observation									
		4.1.3	National PSC meeting to evaluate the Draft National Plan for systematic observation									
		4.1.4	National workshop to evaluate the national plan for systematic observation									
		4.1.5	Circulation of the Draft national plan for comments									
		4.1.6	Prepare & Publish the final national plan for systematic observation									
	4.2	Synergies with other relevant activities										
		4.2.1	Conduct assessment of climate change related activities in Multi-lateral Environmental Agreements (MEAs) ratified by Eritrea and prepare a common action plan for synergy									



	4.2.2	Prepare the draft National Action Plan for synergy											
	4.2.3	National PSC meeting to evaluate the Draft National Plan for synergy											
	4.2.4	National workshop to evaluate the national plan for synergy											
	4.2.5	Circulation of the Draft national plan for synergy for comments											
	4.2.6	Prepare & Publish the final national plan for synergy											
	4.3	Technology needs											
	4.3.1	Develop institutional and human resource capacity on networking											
		4.3.1.1	Select, purchase and install the necessary equipment										
		4.3.1.2	Establish climate change home page accessible to all PSC members										
		4.3.1.3	Train on the use and networking of information										
	4.4	Education and public awareness											
	4.4.1	Report to CoP the introduction of climate change issues in school curriculum											
	4.4.2	Promote climate change awareness of the public using different media											
<b>5</b>	<b>Constraints &amp; Gaps, Related Financial, Technical &amp; Capacity Needs</b>												
	5.1	Short term training on climate change impact assessment and monitoring											
		5.1.1	Short term training (10 days) on standard scientific and technical assessment, monitoring and reporting of climate change issues by UNEP										
	5.2	National workshops on national communication issues											

	5.2.1	Project initiation workshop									
	5.2.2	National coordination inventory workshop									
	5.2.3	National coordination V & A workshop									
	5.2.4	National Action plans workshop for climate change , systematic observation and synergy									
<b>6</b>	<b>Compilation, Production of Communication, Including Executive Summary &amp; its Translation</b>										
	6.1	Prepare the Draft Second National Communication (SNC) of Eritrea									
	6.2	National PSC meeting to evaluate the Draft SNC									
	6.3	National workshop to evaluate the draft SNC									
	6.4	Circulation of the Draft final SNC for comments									
	6.5	Prepare & Publish the final SNC of Eritrea									
	6.6	Translation of the Executive Summary of the SNC									
<b>7</b>	<b>Project Management (Based on 2 years Duration)</b>										
	7.1	Hiring /salary of project coordinator									
	7.2	Assign Climate Change Management Committee (CCMC)									
	7.3	Preparation of a draft work plan & ToRs									
	7.4	Hiring / salary of national experts									
	7.5	Hiring of international and national consultants									
	7.6	Buying vehicle, hiring and salary of 1 driver									
<b>8</b>	<b>Monitoring and Reporting</b>										
	8.1	Monitoring & Reporting									

## **5. Appendix C**

### **Terms of Reference for National Project Steering Committee (PSC)**

#### **Background:**

As a party to the United Nations Convention on Climate Change (UNFCCC), Eritrea has committed itself to provide the Secretariat of the UNFCCC and the Conference of the Parties with a national climate communication containing, inter alia, information on greenhouse gas (GHG) sources and sinks, present and future steps affecting GHG sources and sinks as well as information regarding climate change vulnerability and adaptation opportunities for important natural and socio-economic sectors in Eritrea.

Eritrea intends to complete its second climate communication within three years. To assist Eritrea in preparing the second national communication as planned, the Department of Environment in cooperation with relevant governmental organizations, the DOE establishes National Project Steering Committee (PSC) for continuous national communication to the CoP.

#### **The Project:**

Under the Chairman and Secretary of the Department of Environment, and in close coordination with the Climate Change Management Committee, the PSC will:

- Give guidance and monitor the implementation of the project;
- Coordinate cooperation and communication with international organizations;
- Provide continuing interagency coordination on CC issues in Eritrea; and
- Ensure transition from enabling activities to the implementation of the identified response measures.

The PSC shall carry out the above-mentioned tasks in accordance with decisions made by the Conference of the Parties to the UNFCCC regarding preparation of a national communication and in accordance with the relevant guidelines developed and suggested by the IPCC guideline for National Greenhouse Gas Inventories and relevant vulnerability and adaptation assessment scenarios and models.

## **Terms of Reference for Climate Change Management Committee (CCMC)**

### **Background:**

As a party to the United Nations Convention on Climate Change (UNFCCC), Eritrea has committed itself to provide the Secretariat of the UNFCCC and the Conference of the Parties with a national climate communication containing, inter alia, information on greenhouse gas (GHG) sources and sinks, present and future steps affecting GHG sources and sinks as well as information regarding climate change vulnerability and adaptation opportunities for important natural and socio-economic sectors in Eritrea.

Eritrea intends to complete its second climate communication within three years. To assist Eritrea in preparing the second national communication as planned, the Department of Environment in consultation with the PSC establishes Climate Change Management Committee (CCMC) housing in the DOE for continuous national communication to the CoP.

### **The Project:**

Under the Department of Environment, and in close coordination with the National Project Steering Committee (PSC), the CCMC will:

- Be trained in the various technical components of climate communication;
- Coordinate cooperation and communication with national organizations;
- Assist project coordinator in the various issues relevant to the project;
- Manage the resources of the project in cooperation with the Project Coordinator; and
- Provide continuing coordination on CC issues with the PSC.

The CCMC shall carry out the above-mentioned tasks in accordance with decisions made by the Conference of the Parties to the UNFCCC regarding preparation of a national communication and in accordance with the relevant guidelines developed and suggested by the IPCC guideline for National Greenhouse Gas Inventories and relevant vulnerability and adaptation assessment scenarios and models.

## **JOB DESCRIPTION**

### **1. PROJECT CO-ORDINATOR**

#### **Duties**

In consultation with the DOE, Project Steering Committee (PSC) and the UNDP, the project co-coordinator will be recruited and will be directly responsible to the Director General of DOE for day-to-day management, coordination and supervision of the project.

In specific, his/her responsibilities are:

- Co-ordinate and get involved, among other things, in an inventory of GHGs, an assessment of potential impact of climate change in Eritrea, preparation of national action plans and second national communication to address climate change in Eritrea

#### **Qualification & Employment Condition**

- M.Sc in Environmental physics, Environmental chemistry, Physics, Meteorology, or related fields relevant to the project; a minimum of 3 years of working experience in the area relevant to the project;
- B. Sc in Environmental physics, Environmental chemistry, Physics, Meteorology, or related fields relevant to the project; a minimum of 5 years of working experience in the area relevant to the project;
- A demonstrated ability in managing projects, and in liaising and cooperating with all project personnel including government officials, scientific institutions, NGOs and private sector;
- Fluency in English and the Government official language (s);
- Capability in using computer and computer software for different activities of the project such as inventory and mitigation analysis; and
- Employment condition is on contract basis and for a duration of 3 years

## 6. Appendix D

### Endorsement Letter

To: Mr. Bartholomew Nyarko-mensah  
Resident Representative a.i.  
UNDP  
Asmara

**Subject: Request for Assistance- Second National Communication (SNC)**

Dear Mr. Nyarko-mensah,

On behalf of the Government of Eritrea and in my capacity as the Global Environment Facility (GEF) Operational Focal Point, I request UNDP's assistance to forward to GEF the project proposal entitled "*Enabling Activities for the Preparation of Eritrea's Second National Communication to the UNFCCC.*" prepared in accordance with UNDP's format for funding.

It gives us pleasure to submit the proposal for your attention and we take this opportunity to reiterate that the Government of Eritrea is fully committed to fulfilling its obligations under the convention and this project has therefore the highest level of priority.

We hope it will gain the support of GEF as soon as possible.

With kind regards.

CC: Office of the Minister of MLWE  
-Administration of MLWE

**UNITED NATIONS DEVELOPMENT PROGRAMME  
GLOBAL ENVIRONMENTAL FACILITY  
PROJECT DOCUMENT**

<b>Number</b>	<b>ERI/ / / /</b>
<b>Title</b>	<b>ENABLING ACTIVITIES FOR THE PREPARATION OF ERITREA'S SECOND NATIONAL COMMUNICATION TO THE UNFCCC</b>
<b>UNDP Sector &amp; Sub sector</b>	<b>Environment</b>
<b>GEF Theme</b>	<b>Climate Change</b>
<b>Total Project Cost:</b>	<b>\$ 420,000.00</b>
<b>UNDP/ GEF Financing:</b>	
<b>Preparatory Assistance</b>	<b>\$ 15,000.00</b>
<b>Main Budget</b>	<b>\$ 405,000.00</b>
<b>Eritrea's Contribution</b>	<b>In Kind</b>
<b>Implementing Agency</b>	<b>UNDP</b>
<b>Executing Agency</b>	<b>Department of Environment, MLWE</b>
<b>Estimated Starting Date</b>	<b>JUNE 2005</b>

**Brief Project Description:** Please, refer to the front page

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On behalf of	Signature & Date	Name/ Title
<b>The Government</b>	_____	_____
<b>Executing Agency</b>	_____	_____
<b>UNDP</b>	_____	_____