

Government of the Republic of Yemen

United Nations Development Programme

**ENABLING ACTIVITIES FOR THE PREPARATION OF YEMEN' SECOND NATIONAL COMMUNICATION TO THE UNFCCC**

**Brief description**

This project aims at assisting Yemen with the enabling activities necessary to prepare and report the Second National Communication to the Conference of Parties (CoP) in accordance with guidance of the UN Framework Convention on Climate Change (UNFCCC). In addition, this project will help strengthen Yemen's capacity to fulfill its commitments to the UNFCCC on a continuing basis. The structure of this project is based on the country's previous experience and studies already identified under a stocktaking exercise. The main components of the project are: (a) an inventory of greenhouse gases for the year 2000 and time series 1995-2000; (b) an update of analysis of potential measures to mitigate the increase in greenhouse gas emissions in Yemen; (c) an assessment of potential impacts of climate change in Yemen and adaptation measures; and (d) preparation of the Second National Communication of Yemen and submission to the CoP. In addition, public awareness activities and stakeholder consultations will be cross-cutting along the overall course of this project. Therefore, the preparation of the Second National Communication is expected to enhance general awareness and knowledge on climate change-related issues in Yemen, and to help into highly taking them into account in the process of national planning and policy.

## Table of Contents (Indexed)

<u>Subject</u>	<u>Page</u>
List of Acronyms/Abbreviations	04
Part 1: Elaboration of the Narrative	07
1.1 Situation Analysis	07
1.2. Strategy	08
1.3. Management Arrangements	08
1.4. Monitoring and Evaluation	
1.4.1 Project Inception Report	09
1.4.2 Quarterly Progress Reports	10
1.4.3 Technical Reports	10
1.4.4 Audit Clause	10
1.5. Legal Context	10
Part 2: Budget	12
Part 3: Appendix A: Summary report self-assessment exercise	16
I. Introduction	16
II. The Stocktaking Analysis	17
III. The Stocktaking Workshop	18
III.1 Assessment of Previous Work	
III.2 Lessons and Good Practice Learned from INC To be adopted in the SNC	19
III.3 Identification of Difficulties/Barriers of INC	19
III.4 Identification of Gaps and Uncertainties	20
III.5 New Studies and Areas of Work	21
III.6 Measures to Ensure the Sustainability of INC Recommendations	22
III.7 Priorities issues of SNC	22
III.8 Synergies	22

IV. Recommendations for the SNC	23
Appendix B: Technical components of the project proposal	25
I- Background and Project Context	25
II- Project Rationale	25
III- Project Components and Strategy	26
IV- Project Objectives	28
IV.1 Development Objective	28
IV.2 Immediate Objective	28
V- Project Outcomes, Outputs and Activities	29
V.1 Finalize institutional and other start-up arrangements	29
V.2 Identify new links to both national and International Sources of Information	29
V.3 Undertake and overview of National Circumstances relevant to SNC	30
V.4 Undertake a national GHG Inventory	33
V.5 Update existing and develop new programs that include Measures to abate GHG Emissions	
V.6 Develop a Policy Paper to facilitate adequate adaptation To Climate Change for the selected areas	35
V.7 Identify constraints, gaps, and related financial, technical And capacity needs	36
V.8 Compile a chapter on “other information” considered Relevant to the achievement of the objective of the Convention of the UNFCCC	44
V.9 Finalize and submit the Yemen’s Second National Communication to the COP of the UNFCCC	45
VI- Institutional Framework for Project Implementation	46
VII- Assessing Project Impacts	47
Appendix C: Past and Ongoing Projects Related to Climate Change	49
Appendix D: Stakeholder Affiliation	52
Appendix E: Detail Work plan	54
Appendix F: Structure and Framework of Yemen SNC	65
Appendix G: Terms of Reference TORs	66
Appendix H: Endorsement letter from GEF OFP and UNFCCC Focal Point	72
Appendix I: Signature Page	73

APF	Adaptation Policy Framework
APR	Annual Progress Report
ASLR	Annual Sea Level Rise
CC: FORUM	Climate Change Forum
CC: INFO	Climate Change Information
CCF	Country Cooperation Framework
CCT	Climate Change Team
CCT	Climate Change Team
CCU	Climate Change Unit
CDM	Clean Development Mechanism
CGE	Consultative Group of Experts
CGF	Consultative Group of Experts
CH4	Methane
CO	Carbon Monoxide
CO2	Carbon Dioxide
CoP	Conference of Parties
COZMIS	Coastal Zone Management Information System
CoP	Country Project
CSO	Central Statistics Organization
CZM	Coastal Zone Management
EF	Emission Factor
EPA	Environmental Protection Authority-Yemen
EPL	Environmental Protection Law
ESDIP	Environment and Sustainable Development Investment Program
FAO	Food and Agriculture Organization
FTNA	Financial and Technology Needs Assessment
GACMO	Greenhouse Gas Costing Model
GCM	General Circulation Model
GDP	General Domestic Product
GEF	Global Environment Facility
GEF SGP	GEF Small Grants Program
GHG	Greenhouse Gas
GHGNI	Greenhouse Gas National Inventory
GPG	General Practice Guidelines
HFCs	Hydro-fluorocarbons
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
LAM	Limited Area Nested Model
LEAP	Long – range Energy Alternative Planning
LPG	Liquid Petroleum Gas
LUCF	Land Use Change and Forestry
M&R	Monitoring and Reporting
MAGICC/SC	Model for Assessment of GHG Induced CC/Scenario
ENGEN	Generator

MAI	Ministry of Agriculture and Irrigation
MDGs	Millennium Development Goals
MFW	Ministry of Fish Wealth
MIC	Ministry of Industry and Commerce
MLF	Multilateral Fund
MOE	Ministry of Electricity
MOC	Ministry of Construction
MPD	Ministry of Planning and Development
MPIC	Ministry of Planning and International Cooperation
MTT	Ministry of Transport and Telecommunication
MWE	Ministry of Water and Environment
MYFF	Multi-Year Fund Framework
NAPA	National Adaptation Plan of Action
NBSAP	National Biodiversity Strategy and Action Plan
N <sub>2</sub> O	Nitrous Oxide
NC	National Communication
NCBNRM	National Capacity Building for Natural Resource Management
NCSA	National Capacity Self Assessment
NCSP	National Communication Support Program
NCSU	National Communication Support Unit
NEAP	National Environmental Action Plan
NGOs	Non-governmental Organizations
NMVOc	Non-methane Volatile Organic Components
NO <sub>x</sub>	Nitrogen Oxides
NPD	National Project Director
NPIWRM	National Program on Integrated Water Resources Management
NPM	National Project Manager
NSSed	National Strategy for Socio-Economic Development
NWRA	National Water Resource Authority
NWSA	National Water and Sanitation Authority
PERSC	Protection of the Environment of the Red Sea Coast
PFCs	Per-fluorocarbons
PIR	Project Inception Report
PRSP	Poverty Reduction Strategy Paper
PSC	Project Steering Committee
QA/QC	Quality Assurance/Quality Control
QPR	Quarterly Progress Report
SAA	Stabilization Association Agreement
SBAA	Standard Basic Assistant Agreement
SDBCPSQI	Sustainable Development of the Biodiversity for the Community People of Socotra Island
SF <sub>6</sub>	Sulphur Hexafluoride
SNC	Second National Communication
SO <sub>2</sub>	Sulphur Dioxide
SRF	Strategic Result Framework

TL	Team Leader
TNA	Technology Needs Assessment
TOR	Terms of References
TT	Technology Transfer
UN	United Nations
UNDAF	United Nation Development Assistance Framework
UNDP	United Nations Development Program
UNEP	United Nation Environmental Program
UNFCCC	United Nations Framework Convention for Climate Change
UNIDO	United Nation Industrial Development Organization
V&A	Vulnerability and Adaptation
WB	World Bank

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

### **1.1 Situation Analysis**

#### *Geographical and environmental features*

1. Yemen is an arid Middle Eastern country, occupying an area of 527,970 square kilometers at the south western tip of the Arabian Peninsula. It is bordered to the north by Saudi Arabia and to the East by Oman. It has a 1,900-kilometer coastline along the Gulf of Aden and the Red Sea. Yemen is characterized by five major land systems: (1) hot and humid coastal plain, (2) the temperate Yemen Highlands, (3) the Yemen High Plateaus and Hadramawt – Mahra Uplands, (4) the desert interior, and (5) the islands.
2. This geographic diversity demonstrates the global significance of most of Yemen's ecological zones, which though fragile and confined to small areas, human communities, flora and fauna are highly adapted to subsist within them. Other ecological zones are much larger, and are supporting the majority of the country's agricultural production. In both cases, climate change poses a major threat. Changing climatic conditions, resulting in changes in the distribution and productivity of Yemen's natural resources – in particular, its surface water, but also its soils, grasslands, mangroves, and forests – will have significant repercussions for scores of its people.
3. Recognizing climate change threats, the government of Yemen ratified the United Nations framework Convention on Climate Change (UNFCCC) on 21 February 1996 and immediately initiated a process to meet its commitments under the Convention. With the GEF/Netherlands financial/technical assistance (1997-2001), the GOY completed important enabling activities for climate change including, the Initial national communication (INC), the GHG inventory, mitigation analysis, policy frameworks for the reduction of GHG emissions and the enhancement of forest sinks.
4. The creation of the Ministry of Environment & Tourism (now Ministry of Water and Environment) in May 2001 (Decree No. 46/2001) constituted an important step. By lifting environmental concerns to cabinet level, it has raised hopes that environment protection will receive better attention in the future.
5. In June 2001 the Environment Protection Council (EPC) was replaced by the Environmental Protection Authority (EPA) (Decree No. 99/2000). This "new" agency is entrusted with a wider mandate, including the formulation of policies, strategies and action plans, drafting and implementation of pilot programs, drafting of environment-related laws and by-laws, provision of technical feed back and advice on regional and global environmental conventions, coordination, monitoring and evaluation of activities of different environmental protection agencies, establishing of contacts with regional and global agencies dealing with environmental issues, and implementation of a public awareness program.
6. The Government of Yemen has made important steps for setting a comprehensive development strategy both on the policy as well as the institutional framework levels. MDG needs assessment and the Third National Development Plan for Poverty Reduction have established national development priorities and are expected to guide future efforts. The National Environmental

Action Plan (NEAP) is in the process of updating. The role of the EPA has been strengthened by the incorporation of the Minister of Water and Environment into the Cabinet, stronger coordination functions and an expanded mandate.

7. The priorities set in this new policy framework are consistent and include: enhancing governance through decentralization and public participation; social investment and poverty reduction targeting vulnerable sectors and the rural poor; preserving the environment by rationalizing water use and combating desertification; and ensuring effective monitoring and evaluation, follow-up and donor coordination systems, among others.

### ***NDP's involvement***

8. UNDP's support to Yemen in terms of sustainable environmental development has focused assistance towards compliance with international environmental conventions, aiming at (a) promoting environmental governance in mainstreaming sustainable development and implementing relevant policy, legal and regulatory measures, and (b) capacity development to implement global environmental conventions primarily through UNDP-GEF portfolio for Climate Change (Yemen's Initial National Communication to the UNFCCC (1998-2001) and Top-up Enabling Activity (1999-2001). A detailed list of already accomplished and ongoing projects through UNDP-GEF or other supporting agencies that are related to climate change is given in Appendix C.
9. At present, two UNDP/GEF project is supporting the government of Yemen to address the issue of climate change in Yemen; 1) National Adaptation Action Plan (NAPA) has been prepared to broadly communicate to the international community priority activities that address Yemen's urgent needs for adapting to the adverse impacts of climate change. 2) National Capacity Self Assessment (NCSA) is preparing national strategy and action plan for addressing capacity constraints faced by the GOY to respond to the global conventions including the UNFCCC.

## **1.2. Strategy**

10. The SNC project is an integral part of UNDP-Sana'a second CCF (2002-2006), with its three programme areas, namely poverty reduction, democratic governance and sustainable resources management. It is worth noting that the CCF highlights as a key lesson learned from the first CCF the need for programmes to be accompanied by mechanisms that ensure coordination, promote ownership, and generate synergies among concerned institutions and funding sources.
11. The project supports the efforts of the CCA/UNDAF exercise for the same period undertaken by the UN Country Team in Yemen which identified three cross-cutting themes on which UN agencies would focus their collective attention, these themes include:
  - promoting gender equity with an emphasis on rural women
  - strengthening local governance and community participation
  - supporting data management for development planning, monitoring and evaluation



12. The project will enable Yemen to prepare its Second National Communication to the Conference of Parties (CoP) in accordance with Article 12 of the UNFCCC after the successful completion and submission of its Initial National Communication to the CoP8 in 2001. It will assist in building national capacities to fulfill Yemen's commitments to the Convention on a continuing basis; enhance general awareness and knowledge of government planners on issues related to climate change and reduction of greenhouse gas emissions, thus enabling them to take such issues into account in their national development agenda; and mobilize additional resources for projects related to climate change and mitigation of greenhouse gases; projects which may be eligible also for further funding or co-funding by GEF or other multilateral or bilateral organizations. Moreover, the project will address the energy sector as the main source of GHG emissions that is vulnerable to the expected climate change.

### 1.3 Management Arrangements

#### *Implementation framework*

13. This project will be nationally executed and implemented by the Environment Protection Authority (EPA) of Yemen with management support services provided to the EPA by the UNDP Country Office. This support will be clearly articulated in a Letter of Agreement (LOA) signed between the EPA and UNDP. The EPA will be responsible for planning, management and coordination of project activities.
14. UNDP's National Execution (NEX) rules and regulations will be applied in the execution and implementation of this project. The EPA will be responsible for achieving the desired results outlined in the project through the effective management and use of funds.
15. A **Project Steering Committee** (PSC) will review the project activities and may recommend modifications if needed. The Coordination committee will further provide guidance and back-up support for the implementation.
16. The EPA will be supported in the implementation of activities through a **National Project Coordination Unit** (NPCU) composed of two staff members (1) National Coordinator and , (2) Finance/Administrative Assistant. The National Coordinator and Finance/Administrative Assistants will be hired by UNDP in consultation with EPA. The EPA will provide a fully equipped office by at its premises.

#### *Role of Parties*

17. **EPA** as the executing agent for the project will be primarily responsible for the planning and overall management of project activities, reporting, accounting, monitoring and evaluation of project, for supervision of the additional national and international experts, NGOs and for the management and audit of the use of resources. EPA will be accountable to UNDP for the production of outputs, achievement of project objectives and use of funds and other provided resources.
18. **UNDP** approves project activities and work plan, ensures appropriate project appraisal, capacity assessment, coordinate auditing process, monitoring, evaluation, validation and ensures financial and substantive oversight of the project.

19. **The PSC** will be composed of the UNFCCC focal point, EPA's Chairman, EPA's proposed members of the board of directors (the Ministry of Water and Environment, the Ministry of Fish Wealth, the Ministry of Planning and International Cooperation, the Ministry of Electricity and the Ministry of Local Administration) and UNDP representative. The NPCU, under the authority of the EPA, will act as the Secretariat of the PSC.
20. The PSC will have dual responsibility: ensuring adequate coordination of the project activities in addition to assess the needs for the completion and enforcement of the legal framework and institutional mandates for environment management and sustainable development in Yemen.

*Points to be considered*

21. The project will follow the UNDP NEX guidelines for accounting and financial control. Training should be conducted for the staff who will be involved in this project to train them on the UNDP reporting requirements, financial rules, recruitment, procurement and other UNDP procedures.
22. UNDP will facilitate programme management in making direct payments to service providers based on receipt of Requests for Direct Payment from the NPCU.
23. Funds for O&M of the project will be released every quarter from UNDP to the NPCU as an advance payment based on approved work plans.

#### **1.4 Monitoring and Evaluation**

24. The project will follow the UNDP-GEF procedures for monitoring and evaluation.

Monitoring responsibilities and events

25. 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.
26. *Day to day monitoring of implementation progress* will be the responsibility of the Project Coordinator, Director or CTA (depending on the established project structure) based on the project's Annual Workplan 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.
27. *Periodic monitoring of implementation progress* 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

28. 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)***

29. 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.

30. 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.

31. 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***

32. 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***

33. 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.

## **Audit Clause**

34. 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**

35. This Project Document shall be the instrument referred to as such in Article I of the Standard Basic Assistance Agreement between the Government of Yemen and the United Nations Development Programme, signed by the parties in 1977. 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.
36. 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

<b>Award ID:</b>	<b>00039337</b>
<b>Award Title:</b>	<b>PIMS # 3420 Enabling Activities for the Preparation of <u>Yemen</u>' Second National Communication to the UNFCCC</b>
<b>Project ID:</b>	<b>00044077</b>
<b>Project Title:</b>	<b>PIMS # 3420 Enabling Activities for the Preparation of <u>Yemen</u>' Second National Communication to the UNFCCC</b>
<b>Executing Agency:</b>	<b>Ministry of Water and Environment (EPA)</b>

OUTPUTS (and corresponding indicators)	RESPONSIBLE PARTY	PLANNED BUDGET						
		Source of Funds	Budget Code	Budget Description	Year 1 (US\$)	Year 2 (US\$)	Year 3 (US\$)	Total Budget (US\$)
National Circumstances	EPA	GEF	71300	Local consultants	3,000	2,000	5,000	10,000
<b>TOTAL</b>					<b>3,000</b>	<b>2,000</b>	<b>5,000</b>	<b>10,000</b>
National Greenhouse Gas Inventories	EPA	GEF	71300	Local consultants	25,000	20,000	5,000	50,000
		GEF	71600	Travel	5,000	4,000	-	9,000
		GEF	71400	Contractual service/ individuals	5,000	5,000	5,000	15,000
		GEF	72200	Equipment & furniture	12,000	-	-	12,000
		GEF	74200	Audiovisual and printing production cost	4,000	2,000	-	6,000
		GEF	72400	Communication & audiovisual Equip.	2,000	1,000	-	3,000
		GEF	72500	Supply	2,000	-	-	2,000
		GEF	74000	Miscellaneous operating expenses	1,000	1,000	1,000	3,000
<b>TOTAL</b>					<b>56,000</b>	<b>33,000</b>	<b>11,000</b>	<b>100,000</b>

Programmes containing measures to facilitate adequate adaptation to climate change	EPA	GEF	71300	Local consultants	15,000	15,000	10,000	40,000
		GEF	71600	Travel	-	5,000	2,000	7,000
		GEF	71400	Contractual services /individuals	8,000	8,000	8,000	24,000
		GEF	72200	Equipment & furniture	3,000	1,000	-	4,000
		GEF	74200	Audiovisual and printing production cost	4,000	2,000		6,000
		GEF	72400	Communication & audiovisual Equip.	1,000	1,000	1,000	3,000
		GEF	743000	Supply	1,000	1,000	1,000	3,000
		GEF		Miscellaneous operating expenses	1,000	1,000	1,000	3,000
		GEF	71200	International consultants	5,000	5,000	-	10,000
<b>TOTAL</b>				<b>38,000</b>	<b>39,000</b>	<b>23,000</b>	<b>100,000</b>	
Programmes containing measures to mitigate climate change	EPA	GEF	71300	Local consultants	6,000	5,000	4,000	15,000
		GEF	71600	Travel		4,000	4,000	8,000
		GEF	71400	Contractual services /individuals	3,000	3,000	-	6,000
		GEF	72200	Equipment & furniture	3,000	1,000		4,000
		GEF	74200	Audiovisual and printing production cost	-	1,000	1,000	2,000
		GEF	72400	Communication & audiovisual Equip.	-	1,000	1,000	2,000
		GEF	743000	Supply	1,000	1,000		2,000
		GEF	74000	Miscellaneous operating expenses	1,000	1,000		2,000
		GEF	71200	International consultants	5,000	4,000		9,000
<b>TOTAL</b>				<b>19,000</b>	<b>21,000</b>	<b>10,000</b>	<b>50,000</b>	

Other relevant information (e.g. research and systematic observation, technology transfer, education and public awareness, capacity building)	EPA	GEF	71300	Local consultants	5,000	5,000	5,000	15,000
		GEF	74200	Miscellaneous expenses	1,000	1,000	3,000	5,000
<b>TOTAL</b>					<b>6,000</b>	<b>6,000</b>	<b>8,000</b>	<b>20,000</b>
Constraints & Gaps; Related Financial, technical, & capacity needs	EPA	GEF	71300	Local consultants			8,000	8,000
		GEF	74200	Miscellaneous expenses			2,000	2,000
<b>TOTAL</b>							<b>10,000</b>	<b>10,000</b>
Technical Assistance	EPA	GEF	71200	International consultant	5,000	5,000		10,000
<b>TOTAL</b>					<b>5,000</b>	<b>5,000</b>		<b>10,000</b>
Compilation, Production of communication, including Executive Summary & its translation	EPA	GEF	71300	Local consultant			9,000	9,000
		GEF	74200	Audiovisual and printing cost			6,000	6,000
<b>TOTAL</b>							<b>15,000</b>	<b>15,000</b>
Project Management	EPA & UNDP	GEF	71400	Contractual; services/individuals	15,000	15,000	15,000	45,000
		GEF	71300	Local consultant	8,000	8,000	8,000	24,000
		GEF	74200	Miscellaneous expenses	2,000	2,000	2,000	6,000
<b>TOTAL</b>				<b>25,000</b>	<b>25,000</b>	<b>25,000</b>	<b>75,000</b>	
Monitoring and reporting	EPA	GEF	74100	Professional services	5,000	5,000	5,000	15,000
<b>TOTAL</b>					<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>15,000</b>
		GEF						<b>405,000</b>

## Part 3: Appendixes

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

#### I. Scope and approach to the stocktaking

37. The self-assessment exercise was performed in accordance with GEF Operational Procedures for the Expedited Financing of National Communications from Non-Annex I Parties (GEF/C.22/Inf.16). The main objective of this exercise is to undertake a highly consultative and participatory process of needs assessment, to identify and validate the critical priorities for UNFCCC implementation in Yemen in general, and SNC project proposal in particular.
38. In preparing the SNC proposal, consultation of stakeholders is highly important to ensure the national ownership of the SNC. The identification of stakeholders has been based on the following criteria.
- Concerned experts in various ministries who have or will be contributing to the execution of the SNC.
  - Experts from regional and international organizations.
  - Experts from academic institutions and research centers who have participated in the preparation of the INC.
  - Experts from academic institutions and research centers that work in fields related to climate change issues.
  - Experts from ongoing climate change- related projects.
  - Representatives from professional associations.
  - Representatives from the private sector and major consulting firms.
  - Representatives from relevant NGOs.
  - Representatives from the expert press.
39. To facilitate the stocktaking exercise, the National consultants established close contact with EPA Directorate, their personnel and specialized units (Climate Change Unit (CCU), Ozone, forestry, natural Reserves...etc) who served as facilitators in accomplishing this exercise. The consultants focused on three main thematic areas (*GHG inventory, GHG mitigation, and Vulnerability and Adaptation (V&A)*) and held direct consultation with stakeholders concerned in these areas. The stakeholders (Appendix D) consists of a primary group who were involved in the INC preparation, and a secondary group that involved Steering Committee members, members from different ministries, research institutions, UNDP, NGOs, private sector etc.,. The Stakeholders provided initial information, feedback and comments that were highly taken in consideration and incorporated in the stocktaking report as part of the SNC project proposal document. In addition, other countries' experiences that have been completing the stocktaking exercise were also considered. Also, the *User Manual for the Guidelines on the Preparation of NC from non-Annex I Parties* prepared by the UNFCCC Secretariat and *the Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management* provided useful ideas on ensuring successful stakeholder participation. Step-by-step guidance / feedback provided by NCSP for the preparation of the SNC Project Documents and related issues on such matter have been very useful.



40. The main objectives of the stakeholder consultation process, as defined in the TOR, were to validate the stocktaking exercise to address the national priorities in the SNC, to agree on the institutional arrangements proposed for the SNC, to clarify the roles and responsibilities of concerned stakeholders, and to engage all concerned stakeholders and ensure adequate consultation mechanism for the SNC.
41. The stocktaking process involved conducting a stakeholder consultation and analysis, during which concerned stakeholders have been identified and initial contacts with them established. The stocktaking activity aimed at validating the methodology of selection of priority issues and new areas of action. The stakeholder consultation process is concluded by a stocktaking workshop to finalize the feedback from concerned stakeholders, and to have it considered in preparing the project proposal for the SNC.
42. Findings of the stakeholder consultation were used as a baseline document for the SNC proposal, as well as an input to identify and validate priorities for further in-depth studies and new areas of work to be carried out in preparing the SNC. In addition, it has provided an assessment of gaps, uncertainties, barriers and lessons learnt from previous and ongoing activities.

## II. The Stocktaking Analysis

43. The following main tools have been used for the stocktaking process:
  1. Desk review of relevant documents
  2. Stakeholders identification
  3. Interviews with stakeholders using Questionnaires outline topics and notes
  4. Discussions with/among stakeholders
  5. Stocktaking workshop.
44. The stocktaking exercise took about 16 weeks and identified together around 30 stakeholders from different ministries, public institutions, academia, international organizations based in Sana'a, private sector, NGOs, expert media, ..etc (**see Appendix D**).
45. For the thematic area of vulnerability and adaptation, three priority areas will be studied: water management, agriculture and food security and coastal zone development. These three sectors were studied under the NAPA as they are the most vulnerable areas to climate change in Yemen. While the NAPA process focuses on the national and short-term implications of climate change on these three sectors, the SNC will work at the level of specific geographical adaptation hotspots and will address long-term climate risks. The priority areas targeted by the SNC will be :
  - Surdoud Drainage basin for the water resources management adaptation study,
  - Sana'a-Almehweet-Ibb-Taiz-Mareb-Seioon areas for agricultural production adaptation study,
  - Aden city for the coastal adaptation study.
46. Prioritization of above issues / studies was based on discussions and decision made by previous team leaders, consultants and concerned stakeholders emphasizing, in particular, the EPA priorities. The selection of these pilot study areas has taken in consideration the areas

representation and terrain characteristics of the country, population density and vulnerability, data availability and sensitivity of areas to climate change. Assessment conducted through the NAPA process and resulting adaptation measures will also be taken into consideration in the development of V&A studies under the SNC and will form essential inputs for the V&A assessments to be conducted.

### **III. The Stocktaking Workshop and Main Findings**

47. A one-half day workshop was carried out with one main objective of gauging input from national and regional experts on key issues related to the stocktaking process and Yemen's SNC in general. The workshop was held in Aden city on February 4<sup>th</sup>, 2006 and organized by UNDP-Yemen. The consultants focused on the objectives, roles and approaches to be adopted for a successful implementation of the SNC.
48. Feedbacks and comments from stakeholders were relatively few, but considered important. They are mainly related to workplan format, budget allocations (especially the mitigation part being not sufficient), adaptation pilot study areas, information dissemination and fare participation in workshops, training and climate change studies.

#### **III.1 Assessment of Previous Works**

49. The main focus of assessment was Yemen's INC performed under the GEF funded project, namely "*Enabling Yemen to prepare its INC to the CoP of the UNFCCC*", followed by the Yemen's FTNA compiled under the Top-Up phase funded by GEF, namely "*Additional financing for capacity building, financial and technological needs assessment in priority areas*". The stocktaking and consultation process provided means of assessment of such projects. In addition, other projects funded either by GEF or other donors relevant to each thematic area were considered when available. They are listed in **Appendix C** "Past and Ongoing projects.."
50. The assessment is carried out to ensure that the SNC would be conducted taking into consideration the good practice and lessons learnt from the INC and other climate-change related projects. The overall activities can be grouped into GHG inventory, vulnerability assessment, adaptation and mitigation options, combating desertification, natural resources, and coastal area pilot studies; collection of data on "indicator" parameters to climate change. The energy sector in the country has been identified as the major GHG emitting sector. For the geographic and climatic profiles provided in Yemen's INC, the majority of information are regarded as sufficient, except for few changes.
51. Updates on infrastructure that include population, public health, education and environment will take in consideration the new trends of development for each item under this section. The state of the environment including urban air quality, solid waste, wastewater treatment and other related issues will be provided along with institutional framework, legal framework, public awareness and education on environment.

52. The natural resources review and update will target land use change, forests, pastures along with the most recent legal and policy framework that regulates them. The review and update of the information on economic and sector profile will consist first of the update of the information regarding the newly adopted strategies for socio-economic development.

### **III.2 Lessons and Good Practices Learned from INC, to be Adopted in the SNC**

53. The experience and good practice from the work conducted under the INC communication and its top-up enabling activities will provide a solid background for initiating and preparing the SNC. Such good practice is not only limited to technical issues but also covers other managerial aspects and processes. These lessons and good practices as concluded from the stocktaking process are:

- Yemen joining the international community in combating the climate change issue.
- Capable project managers that can lead the project to a successful conclusion.
- Limited collaboration among members of the teams involved in the preparation of the INC. The INC is considered as a baseline for various researchers and stakeholders to work together.
- High support from the Ministry of Water and Environment, and in a much lesser extent from other Ministries.
- Weak support from the public and private sectors to accept, assist, and participate in climate change activities.
- Some private and academic sectors gained professional and practical experience both on the local and international levels.
- Technical support provided by UNDP-GEF Netherlands through thematic workshops, help desk, news letters and peer review of all components of the NC was critical for the quality improvement of the National Communication.
- Maintenance of the expert teams involved in the NC was critical for the success of the process and need to be taken in consideration. This approach along with extension of the expert teams though *training the trainers* is a step towards sustainability of the process. Starting with inventory and then following with GHG abatement analysis by *engagement of the same team* of experts into both activities. Without GHG inventory preparation skills and input data, the work for GHG abatement would be hindered.
- Partnership with other UNDP programs and other national public institutions to address climate change issues into development agendas is a good practice and need to be implemented more.
- Working in synergy with other GEF climate change or non-climate change projects was an efficient way of getting good and desired results.

### **III.3 Identification of Difficulties/Barriers of INC**

54. Being the first of its kind in the country, the INC team faced many difficulties, some of which can be explained in the following:

A series of problems arose while conducting the climate change studies; including constraints on funding, human resources and technical assistance, and a lack of scientific research.

Significant constraints to conduct longitudinal or even medium-scale scientific research (i.e. including gathering field data); adversely affect the construction, validity, and reliability of these studies. Although the findings of pilot studies that focus on a "representative" area can be generalized, the results may not be totally realistic. Sufficient funding is needed to create an information pool and to make available the appropriate software programs for data review, analysis, documentation, and dissemination. The technical assistance available for enabling activities was inadequate for a country that is just beginning climate change studies and that greatly needs scientific capacity building. Decrease in the uncertainty of study results was achieved through making the project timetable period more flexible to allow teams to verify their data collection and techniques more than once. Moreover, other difficulties and barriers are as follows:

- Insufficient government support for climate change activities specifically at the decision taking and decision- making levels. This could be attributed to the lack of awareness, and the insufficient technical experience at the government level as well as other involved private stakeholders regarding climate change impacts, vulnerability and mitigation.
- Very little seriousness from the government side, and even from the civil society as a whole, towards the commitments made under the UNFCCC ratification. Again the lack of awareness and defined responsibilities are the main reasons.
- Inappropriate monetary compensation of team members.
- Absence of well established national CCU to continuously handle climate change as well as other related issues, whether on the national, regional or international level.
- Lack of adequate media campaign and education for climate change awareness issues.

#### **III-4. Identification of Gaps and Uncertainties**

55. The stocktaking process identified the following gaps in the INC, that may be avoided during the preparation of the SNC. These gaps/uncertainties include:

- Large uncertainties inherent in the present /collected/measured data due to the absence of the required technical and quality control systems and due to the absence of national standards/guidelines.
- Lack of a much-needed, accurate and scientific full-fledged database for the preparation and updating of national GHG inventories. Moreover, data obtained from many sources were not consistent.
- Lack of funding sources and even mechanisms for supporting the private or the academic sectors to undertake pilot projects and research activities to better understand and assess the extent and implications of climate change, vulnerability, and the potential relevant mitigation measures.
- Lack of mechanisms and systems within the government and private sectors to assist and cooperate with climate change initiatives.
- Impacts of climate change were not adequately correlated to national development encompassing health, economy, and welfare.

- Mitigation options that emphasized energy conservation measures were short of explaining the concept of sustainable development, and the sustainability of various economic sectors.
- Adaptation to climate change especially in the most sensitive areas did not receive special attention and follow-up from concerned governmental bodies.

### **III-5 New Studies and Areas of Work.**

56. Sectors/areas that were not covered in the INC and need to be covered in the SNC, in addition to means of improving some of the studies performed under INC, the studies and areas that are identified in the stocktaking process are as follows:

- Identification, categorization and mapping of climate change-sensitive areas in Yemen, especially in coastal areas.
- Health and socio-economic impacts, vulnerability and mitigation measures as well as adaptation strategies and programs especially in climate-change sensitive areas.
- Encouraging the establishment of national emissions factors for different sectors. Default factors provided by IPCC 1996 Revised Guidelines were used in the INC. In the SNC, in addition to default factors, available national emission factors will be utilized. The team will also see the possibility to use emission factors calculated under other studies and projects.
- Land-use change and forestry, desertification and their linkages to climate change deserve more focused attention in the SNC.
- Systematic observation networks and remote sensing analysis.
- Developments and changes in energy supply for Yemen over the past decade.
- Institutional arrangements to coordinate, conduct and follow-up on all climate change related issues on national, regional and international levels.
- Fisheries, transportation and industry sectors need to be emphasized in the SNC for their impacts on national economy and environment are highly effective.
- Studies on public and private sectors industrial and agricultural activities must be professionally investigated by academic institutions and research centers.
- The list of abatement options proposed for each sector must be reviewed and updated in light of new developments and needs. Key sources identified under the GHG inventory should be considered when making the selection of technology options. The impact of specific emission reduction actions /options can be measured (quantitative if possible) against the baseline scenario. The cost and benefit must be analyzed as well.

57. Attention must be put to the issue of, education, training, capacity building and information. The information on education and training may consist of the institutional (i) implemented or/and ongoing activities for education and training (ii) public access to information; (v) sub-regional, regional, and international cooperation to promote education and training.

58. Historical, archeological and paleoclimatic studies can be integrated into issues of climate change indicators. Recent studies by national and foreign researchers on Yemen have been identified and documented in professional meetings and can be utilized, for example, the Geological Society of America meetings.

### **III-6. Measures to Ensure the Sustainability of INC Recommendations.**

59. The following measures have been outlined as a mean to ensure the sustainability of the INC as well as SNC recommendation:
1. Signature and ratification of the Kyoto protocol by the Yemeni Government.
  2. Secure serious governmental/official commitment through the establishment of a joint mechanism amongst various ministries such as MWE/EPA, MOE, MOC, MPIC, MAI, MTT and among other concerned units, along with academic and research institutes and in collaboration with the private sector.
  3. Enhancement of the newly established CCU to continuously handle climate change issues, whether on the national, regional or international level.
  4. CCU needs to follow-up on all issues and government support and endorsement of the CCU activities and recommendations.
  5. Emphasize the economic benefits associated with some mitigation measures (win-win opportunities).
  6. Increase awareness of decision makers and encourage/support research community.

### **III-7. Priorities issues for SNC**

60. The stocktaking process identified some priority areas to be covered in the SNC among which are those where new information is more available, such as, energy sector including electric power, transport and industries, health and socio-economic linkage, institutional arrangements, land-use change, agriculture and forestry.
61. Emphasis can also be placed on the integration of selected recommendations into the governmental policies and planning such as privatization, availability of natural gas as a main energy resource through national networking, and the impact of national electrification on local electric power supply capacity.

### **III-8. Synergies**

62. The feedback obtained from the stocktaking process has identified associated projects and their links to climate change. Coordination measures have been initiated and information were partly shared. The main synergies include the National Adaptation Program of Action (NAPA), National Action Plan to Combat Desertification (NAPCD) in Yemen, National Biodiversity Strategy and Action Plan, Natural Reserves, Water Resource Basins, Renewable Energy Potential, Energy Efficiency, and others (see Appendix C).
63. NAPA currently in preparation in Yemen, serves as simplified and direct channels of communication for information relating to urgent and immediate needs of LDCs. As briefly explained in para. 45, the SNC will address management of long term climate risks on Yemen's most vulnerable development sectors which were identified during the NAPA process. These sectors are agriculture and food security, water resources management and costal zone development. The SNC will target geographical adaptation hotspots and will

build on the data and information gathered under the NAPA in order to develop long term adaptation strategies, policies and measures for each of the areas selected.

64. Means of coordination amongst projects may include the CCU, researcher's coordination, bilateral financial mechanisms, and civil society platforms. The Suggested joint- action mechanisms can be as follows:

- EPA- MoE-MOC-CCU
- EPA-UNIDO-Industries-CCU
- EPA-MOC-MOE-CCU
- EPA -MTT- CCU
- Awareness campaigns
- Research themes/applications.

### **III. Recommendations for the SNC**

65. The stocktaking process came out with a set of information and suggestions to be considered in preparing the SNC. The main points have been listed above. The recommendations that were suggested by stakeholders can be summarized as follows:

- For the Yemen Government to honor the signing and ratification of the Kyoto protocol, in agreement with other Arab countries.
- To adopt plans and strategies for better information dissemination of the findings of the SNC. Amongst suggested measures is to provide an executive summary and detail report of the SNC in Arabic, and to conduct awareness campaigns for the public as well as for decision makers.
- To coordinate the SNC activities amongst various ministries and other stakeholders through the national CCU that would continuously handle climate change as well as other issues, at the national, regional or international level.
- To establish a full database to assist in the preparation and updating of national GHG inventories on a scientific basis, and to minimize uncertainties inherent in collected or measured data due to absence of the required technical and quality control systems.
- To suggest a joint mechanism, in collaboration with concerned stakeholders, for securing funds for the private or the academic sectors to undertake pilot projects and research activities aimed at better understanding and assessing the extent and implications of climate change, and the potential of relevant mitigation measures.
- To identify joint-action mechanism amongst various national and international units for implementing the recommendation of national communications on climate change.
- To secure more feedback from public and private sector in the report preparation.
- Stress more the economic factors in the mitigation options to be suggested for various economic sectors, mainly the industrial and residential sectors. In this aspect emphasis should be put on the win- win opportunities, i.e. achieving GHG reduction jointly with some economic benefits.

- Emphasis on the concept of sustainable development and the sustainability of each of the economic sectors, and to come-up with suggestions to maintain the sustainability of various mitigation options.
- Emphasis on future national developments such as in the energy supply sector, namely the national gas networking and electrical networks planned among cities, towns and rural areas in the country.
- Emphasis on health and socio-economic impacts and adaptation measures.
- Stress highly the need to adopt capacity building activities.
- The establishment of a climatic data bank at the Environmental Protection Authority to facilitate the fulfillment of local-national and international climatic and environmental commitments.
- The development of a nested Limited Area Model LAM / GCM regional climate model for the Republic of Yemen.

## **Appendix B: Technical components of the project proposal**

### **I. Background and Project Context**

66. Since the INC was developed and published, the following major changes have taken place: (i) availability of new information and new technologies; (ii) new methodologies; (iii) structural changes in important sectors of Yemen's economy (e.g., new oil fields discoveries and economic reform activities.. etc.); and, (iv) additional capacity and experience acquired by the national technical experts who continue to be active in the field of climate change and who may play a role in the application of the Convention. It is proposed that the above developments be considered in Yemen's SNC
67. Yemen has submitted to the secretariat of the United Nations Framework Convention on Climate Change (UNFCCC) its Initial National Communication (INC) report in 2001, through funding from the Global Environment Facility (GEF), management of the United Nations Environment Program (UNEP) and execution by the Ministry of Water and Environment (MWE). The INC report established a national inventory of greenhouse gases (GHG), assessed Yemen's vulnerability to climate change, and proposed a mitigation strategy to reduce GHG emissions in the various sectors along with some adaptation measures. In December 2001, phase II of the climate change enabling activity was conducted, and national reports on financial and technological needs for three main specific sectors (energy, water and agriculture) were submitted and published. In order to continue to fulfill commitments to the UNFCCC in accordance with the relevant decisions of the Conference of Parties (CoP) using IPCC guidelines, this project intends to prepare Yemen's Second National Communication (SNC), and by recalculating 1995 Inventory (using GPG 2000 and GPG 2003) an updated GHG emission inventory will be generated to bridge the gaps and reduce the uncertainties encountered in the previous inventory.



## II. Project development and main objective

### **Project Development Objective:**

68. The project is to develop and enhance national capacities, and facilitate the process of mainstreaming climate change issues into national planning and policy, thus enabling the country to deal with climate change and consider it not only as environmental issue but also as an issue of sustainable development.

The immediate objectives of the project include:

### **Project Immediate Objective:**

69. This project will enable Yemen to prepare and submit its second national communication to the UNFCCC and meet its Convention obligations.
70. In order to continue to build the institutional capacity necessary to go beyond the INC and SNC, Yemen seeks to strengthen the technical-institutional capacity existing at a national level with regard to mitigation and adaptation measures, and legal-institutional instruments for addressing Climate Change.

## III. Project Strategy

71. The goal of this project is to prepare the Yemen's Second National Communication through building on previous work carried out under Yemen's First National Communication, Financial Technology Needs Assessment (FTNA), and other climate change related activities which *lays a baseline* for developing such a product. Working with *priority areas / issues* selected under the stocktaking exercises would be the main focus. *Synergies* with other climate change ongoing activities such as with NAPA's, for example, will be utilized. In more details, many outputs coming from this project such as the soft methodology to fill data gaps; QA/QC plan; National Manual of GHG Inventory; Archive of GHG inventory estimates and, a National Strategy for improvement of the GHG inventory will be utilized under the SNC exercise. As a result of such strategy the components prepared under Second National Communication will be of a higher quality than those prepared under First National Communication.
72. The strategy of the project is to *involve expert teams* already established under Yemen's INC/FTNA exercise and institutions that have already been put in a roster mainly for their experience and facilitation of administrative arrangements. New experts and institutions should be invited to join the teams after provision training-of-trainers on different thematic areas. This strategy will enhance the sustainability of the teams and the process of preparation of national communication. External technical support will be provided through information and experience exchange at regional and international level; participation in trainings and workshops to be organized from UNFCCC Secretariat, UNDP-GEF.. etc; hiring of short-term international consultants if deemed necessary.

73. Yemen's experience on *institutional and technical capacity* building and development regarding National Communication should be *sustained and leveraged* to support the preparation of the SNC exercise. This experience will be utilized taking highly in consideration climate change issues into national planning and policy and in programming purposes such as promotion of innovative financing schemes for climate friendly technology transfer and development in the country.
74. The strategy of *partnership* with governmental institutions, international organizations, academia and NGOs, that was found to be partially successful from the experience with Yemen's INC/FTNA will be utilized and improved by bringing more stakeholders on board and building an emerging partnership with the private sector that is crucial for promoting investments of cleaner technologies in the country. The role of the Project Steering Committee will be critical to the success of this strategy.
75. The initial *emphasis* of the project will be on GHG inventory and assessment of vulnerability for the selected areas (*Aden, Sana'a, Al-Mahweet, Ibb, Taiz, Mareb and Hadramout regions*). Building on results of these studies, the options to mitigate climate change by addressing GHG emissions and facilitating adaptation to climate change for the selected areas will be analyzed and reviewed in the light of country development context. Gaps, uncertainties and constraints along with other information related to the UNFCCC will be addressed as indicated by 17/CP.8. Finally, the information gained during the project will be communicated to the CoP in the form of the Second National Communication of Yemen.
76. The project will contribute to the on-going global effort to better understand the sources and sinks of greenhouse gases, 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".
77. The project helps to identify and develop projects related to climate change and mitigation of greenhouse gases, which may be eligible also for further funding or co-funding by GEF, other multilateral or bilateral organizations.
78. In addition, the project will contribute to enhance general awareness and knowledge on climate change related issues in Yemen, and to strengthen the dialogue, information exchange and cooperation among all the relevant stakeholders including governmental, non-governmental, academic, and private sectors in accordance to the Article 6 of the UNFCCC and Implementation of Buenos Aires Plan of Action.
79. In previous studies and evaluations, important sectors have not been addressed sufficiently (e.g., industry), and others were not addressed at all (e.g., health and fisheries). It is proposed that these sectors be addressed in details and subsequently included in the SNC.
80. The general description of steps, as they appeared in the INC, was developed after consideration of Yemen's experience and that of other institutions that co-operated in this respect. Although there were no difficulties with developing this section, a need for the

adoption of new measures has since been identified. For example, when the INC and the Top-up enabling activity were prepared, there was a lack of specific information related to project financing and technology transfer. There was also a lack of information about additional costs and estimated benefits associated with measures or concrete projects for mitigation. Based on the accumulated, since then knowledge, it is recognized that there is a need to develop policies and general measures for the reduction of emissions, and programs for ensuring the sustainability of such policies and general measures. The development of such programs is proposed in this project.

81. Yemen is also proposing to establish an institution to foster and facilitate the execution of projects and investments, both national and foreign. The objective is to introduce practical technologies and training processes that contribute to the reduction of GHG emissions (e.g., energy efficiency, renewable energy, livestock efficiency, and reforestation) and the increased absorption of GHG. A number of projects supporting this trend has already been undertaken and will constitute the basis for further development.
82. Finally, Yemen has started, and will continue with the development of public awareness, which has been partially successful in the past few years. It is anticipated that improvement of public awareness will make an important tool to facilitate the development and to assure the success of the whole project and the application of the UNFCCC at the national level.

#### **IV. Project outcome, outputs and activities**

83. The overall project outcome is to enable Yemen to prepare and submit its Second National Communication to the CoP of the UNFCCC in accordance to its commitments as a non - Annex 1 Party to the Convention as mandated by Article 4 and 12 of this Convention. A detailed work plan including the outputs, activities and time durations for completing the activities are summarized in **Appendix E**.

##### **IV.1 Output 1: Institutional and other start-up arrangements of the project are finalized**

84. The same project support team, which is composed of the National Manager, Administrative & Finance Assistant, and Information & Public Awareness Assistant that have managed and supported previous activities such as INC, FTNA and other climate change related activities would be hired in full-time basis under the SNC phase. The same technical team of experts along with respective Team Leaders who are already members of the climate change roster of experts will be hired in Ad-Hoc basis. New experts will be trained in the course of the project and engaged in order to ensure the sustainability of the expert teams. There is also a need to update the composition of the PSC that would continue to provide support and assistance to the project manager and expert teams. A Project initiation workshop will be held in during the first few months.

##### **Activities**

1. *Renew contracts* for the project office staff, with full-time National Project Manager (NPM), Administrative & Finance Assistant and Information & Public Awareness Assistant. Terms of Reference for the NPM are provided in

- Appendix G.** Responsible party: NPM, Admin & Finance Assistant (AFA), UNDP.
2. *Establish technical teams.* Short-term experts will be recruited as and when needed by the project, possibly including Team Leaders for each thematic area and technical experts as member of the teams. Terms of Reference for Team Leaders are provided in **Appendix G**. Responsible party: NPM, UNDP, NPD.
  3. *Update the composition of the PSC.* Invite new comers from institutions, NGOs that have not been represented before. Responsible party: EPA, NPD, NPM, UNDP.
  4. *Organize a project initiation workshop* aiming at presenting objectives and activities of the project; clarifying the link between previous, ongoing and future climate change activities; identifying possible synergies with other projects; finalizing the project work plan and TORs. This workshop will also serve at raising awareness among the invited stakeholders about climate change issues. Responsible party: NPM, UNDP, NPD.
  5. *Organize a scoping meeting.* The TORs of the SNC which will consist on structure and content of each chapter of the Yemen's SNC will be drafted at the start up phase of the project and discussed during a scoping meeting with Team Leaders, Experts and PSC members. Responsible party: NPM, TLs.

#### **IV.2 Output 2: New links to both national and international sources of information are identify**

85. The network of e-communication already established under previous activities among national experts / institutions will be maintained and upgraded for the purposes of effective communication and dissemination of relevant information received from UNFCCC, UNDP/GEF NCSU, UNIDO, IPCC, CC:INFO, CC: TRAIN, TT CLEAR, CTI networks and UNDP Knowledge Management Network, if available. In addition links to ongoing similar project in other countries, especially from the region / sub-region will help to gain information to support the implementation of this project and to learn from experiences of similar exercises elsewhere. These links will also help to identify potential international partners to cooperate with, either on this project or on the eventual follow-up projects, dealing with the implementation of the identified response measures.

#### **Output 2.1: The e-communication among the project team and relevant institutions facilitated.**

##### **Activities**

1. *Maintain and upgrade the electronic network among national experts / institutions to ensure an effective communication and dissemination of project relevant information.* Responsible party: NPM, Information & Public Awareness Assistant (IPAA).

2. *Establish and maintain a national climate change web page.* Add links to national, regional and international sources of information. Responsible party: NPM, Information & Public Awareness Assistant.

**Output 2.2 Internationally available information on climate change via the internet provided to the project management team, relevant participating experts and, institutions. Responsible party: NPM, TLs, Information & Public Awareness Assistant.**

### Activities

1. *Identify and create links to gain information* either electronically or by other means (e.g. workshops, training, or seminars) on internationally available methodologies and tools for inventories, vulnerability assessments, mitigation and adaptation analysis, and their applicability in country specific circumstances; specific technologies and measures relevant to mitigation of greenhouse gases or adaptation to climate change; and potential international partners to cooperate with either on this project or on the identified follow-up measures. Responsible party:

### **IV.3 Output 3 An overview of National Circumstances relevant to the Yemen's Second National Communication is undertaken**

86. Information provided on National Circumstances under Yemen's INC was relevant to the thematic areas covered by National Communication, aiming at giving a clear and full picture of geography, climate, natural resources, relevant economic sectors, resources and infrastructure. In addition, Yemen's FTNA provides some updates of the sectors relevant to FTNA process. Given that the inventory base year was the year 1995, the relevant inventory sectors were analyzed around this year. For majority of sectors /areas the reporting time frame was around 1990-2000 although there were many cases that due to the lack of data and information the analysis was made for fewer years (1995-1999). The information provided so far on National Circumstances *lacks* country development context; sector profile including policy and legal framework description of institutional arrangements relevant to the preparation of NC on regular basis. Knowing the very drastic nature of change of many of relevant economic sectors in the course of the years 1995-2000, there is a *strong need to update* the sectors profiles, specially for energy, transport, agriculture, land use change (LUC), industrial processes and waste for such a time frame.
87. This activity will crosscut among other activities. Each team will be responsible in providing relevant national circumstances section, which will be summarized at the end. Referring to 17/CP.8, the National Circumstances chapter under Yemen's SNC shall contain updated and additional information on all items as indicated by this decision. The *geographic profile* might need only some minor additions such as land and international waters that Yemen shares with other neighbors and update on population changes and distribution during the recent years. There is a need to update the *climate profile* with recent extreme weather events and data on temperature and precipitation for the period 1995-2005, which is additional to

the INC baseline (1995-2000). As per the *natural resources* the majority of the updated information will be provided on forests, pastures and land use change along with the most recent legal and policy framework. The review and update of the information on *economic and sector profile* will mainly consist on the update regarding the newly adopted strategies such as, PRSP, MDGs, SAA, National Energy Strategy, National Strategy for Development of non-Food Industry Sector, Strategy for Development of Agriculture, and Strategy for Development of Tourism etc. Update of the information on *infrastructure* such as: population; public health; education; environment will consist on the update of the new trends of development for each item under this section. The information on *institutional arrangements* relevant to the implementation of the UNFCCC and preparation of NC would be new as it was also missing to the Yemen's INC.

### **Output 3.1 National circumstances reviewed, updated and described.**

#### **Activities**

1. *Validate the gaps of information* identified under stocktaking exercise in the light of recent /new developments, if any. Responsible party: NPM, TLs, Information & PA Assistant.
2. *Identify the respective sources of information* and establish links to get these data as necessary. Responsible party: NPM, TL, Information & PA Assistant.
3. *Collect data and information* from different sources in the course of the project implementation. Responsible party: NPM, TL, Information & PA Assistant, National Expert (NE).
4. *Fill the gaps, update and add the new information* in accordance to the TORs for National Circumstances section of the Yemen's SNC. Responsible party: NPM, TL, Information & PA Assistant, National Experts.
5. *Draft national circumstances sections* that would be respectively relevant to each thematic area. Responsible party: TL, Information & PA Assistant, and National Experts.
6. *Draft the National Circumstances section* under the SNC in compliance with the guidelines set by 17CP/8. Responsible party: NPM, TLs, Information & PA Assistant.
7. *Circulate the National Circumstances section for comments*, receive comments and incorporate them into the report. Responsible party: NPM, Information & PA Assistant.
8. *Finalize the National Circumstances section* under the SNC. Responsible party: NPM, Information & PA Assistant

#### **IV.4 Output 4 A national GHG inventory of emissions by sources and removals by sinks for the year 2000 is undertake and time series for 1995-2000 following the new guidelines adopted by CoP is developed.**

88. Uncertainty estimates haven't been reported in the Yemen's INC. We think that uncertainty estimates are necessary in order to complete the INC emission inventory. This concerns the

ensemble of uncertainties associated with the data collected and with the aggregation thereof towards sector or national totals.

89. It is important to realize that uncertainty information is not intended to dispute the validity of the INC inventory estimates, but to: 1) Help priorities efforts to improve the accuracy of SNC inventory and guide decisions on methodological choice, and 2) Inform users of inventory data on the scientific quality of the data, supporting them to perform uncertainty evaluations of their own applications and to consider the usability of the results of air quality models and projection studies. Understanding the uncertainties in an emission inventory can support both the validation and verification of emission inventories.
90. By using GPG 2000, GPG 2003 and 2006 IPCC Guidelines (to be approved by Mai 2006) and during preparation of the Yemen 2000 national greenhouse gas inventory, work will be started on the implementation of the Yemen National Greenhouse Gas Inventory Quality Control and Quality Assurance Plan. Tier 1 quality checks for key sources will be used on the 1995 data as well as on the 2000 data. In addition to the QC checks, a number of informal checks on the data must be completed including checking sectoral spreadsheets and methodology reports for inconsistencies as well as visual checks once data are received. Checks on the energy sector data for anomalies and inconsistencies must be carried out by national experts. Trends from 1995 to 2000 will be examined using available data and using available national emission factors like those of Aden and Mareb refineries.
91. Improvement of the quality of GHG inventory has not been made after completing the INC. Improved estimates of GHG emissions are expected through the assistance of GEF regional project on GHG inventories. A national strategy aiming at improvement of quality of GHG inventories can be drafted. The strategy can focus on activity data collection and identification of methods/approaches for reducing the activity data gaps. This plan can be put into place for SNC if additional funding is available. It consists on the development of a *soft methodology* for filling the Activity data gaps that would be implemented during the SNC preparation. *Survey method* stands in the heart of such methodology. It will be used for priority categories selected from the key source analysis in order to fill the activity data gaps, which do not exist in disaggregate form. This is the case for *fuel combustion in industry*, *mobile sources*, *fuel wood* and *solid wastes*. Yemen's second national GHG inventory will cover all sources and sinks as well as all gases as mandated by 17/CP.8 to the best possible extent. In addition to those reported under INC estimates of new gases such as *HFCs*, *PFCs* and *SF6* will be provided. Estimates of the *key sources*, *sensitivity analysis* and *uncertainty level* will be provided.
92. *CO<sub>2</sub>/GDP* and *CO<sub>2</sub>/Capita* would be estimated mainly for comparability purposes. Estimates under Yemen's second national GHG inventory shall be made for the *base year 2000*. Re-estimates for the year 1995 will be made as well. Given the variability of activity data after '90s, it is agreed to develop *time series for a 10-year time frame (1995-2005)* in order to provide a clear view of the emission trends. This will also create a clear background for the abatement analysis.

**Output 4.1 The GHG inventory team maintained, sustained and strengthened with new comers.**

**Activities**

1. *Train new GHG inventory experts* for each GHG inventory category on IPCC Guidelines and IPCC GPG. Responsible party: TL, National Experts.
2. *Review the existing information on the first GHG inventory already archived and documented in the GHG Inventory Manual of Procedures.* Responsible party: TL, National Experts.
3. *Train university students to carry out surveys* for filling data gaps as a cost-effective approach. Responsible party: TL, National Experts

**Output 4.2: Methodologies for GHG inventory estimates analyzed, validated and selected.**

**Activities**

1. *Analyze the acceptability of the available methodologies* of estimates under the Yemen's specific conditions for each category. Responsible party: TL, National Experts
2. *Decide on the Tier level based on the decision trees as guided by IPCC GPG.* Responsible party: TL, National Experts.
3. *Decide and select the methodology for estimates* of emissions from the new group of GHG gases such as HFCs, PFCs and SF6. Responsible party: TL, National Expaupt
4. *Decide on the source categories* to which surveys for filling data gaps will be carried out. Responsible party: NPM, TL, National Experts.

**Output 4.3: GHG inventory data collected**

**Activities**

1. *Review available activity data already archived.* Responsible party: TL, National Experts
2. *Identify new activity data* needed for estimates of GHG emissions for 1995-2000. Responsible party: TL, National Experts
3. *Identify possible sources of data* for estimates of GHG emissions for 1995-2000. Responsible party: TL, National Experts
4. *Collect the necessary activity data* from the available sources. Responsible party: TL, National Experts.
5. *Utilize a methodology* developed in a previous GEF project, if any, to fill the data gaps.
  - a. *Undertake surveys* to get the data that does not exist for the year 2000 for those categories considered as priority ones such as: fuel consumption from mobile sources, fuel combustion in industry, fuel wood collection in rural areas, solid



wastes. Use interpolation method for getting the data for 1995-2000. Responsible party: TL, National Experts

- b. *Find ways for getting data* on coal, oil and gas production, refining and transportation from public and private sectors for the year 2000 and use interpolation method for 1995-2000.
6. *Decide on EFs to be utilized.* Analyze the suitability of Emission Factors developed by a GEF project in the region (if any) on GHG inventors to Yemen's circumstances. Identify national studies that can provide EFs. Responsible parties: NPM, TL, National Experts.
7. *Identify data gaps, if available.* Responsible party: TL, National Experts.

**Output 4.4 A completed national inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks for 2000 following the guidelines adopted by the CoP (17/CP8) developed. Time series 1995-2005 developed.**

**Activities**

1. *Re-estimate GHG emissions inventory for 1995.* Responsible party: TL, National Experts.
2. *Estimate the GHG emissions inventory for 2000 and develop time series for 1995-2005.* Responsible party: TL, National Experts
3. *Prepare a draft inventory* of anthropogenic greenhouse gas emissions by sources and removals by sinks for 2000 and time series for 1995-2005 following the guidelines adopted by CoP. Responsible party: TL, National Experts.
4. *Develop key sources analysis (year 2000) and sensitivity analysis (years 1995-2000)* as guided by IPCC GPG. Responsible party: TL, National Experts.
5. *Develop a key sources inventory for 2000.* Responsible party: TL, National Experts.
6. *Undertake uncertainty assessment* as guided by GPG IPCC. Responsible party: TL, National Experts
7. *Circulate the inventory* for internal review as part of QA/QC plan. Responsible party: NPM, TL, National Experts.
8. *Technical peer review* performed as part of QA/QC plan. Responsible party: NPM, TL, NCSU.
9. *Organize a national workshop* to present findings from the GHG inventory exercise and get more comments. Responsible party: NPM, TL.
10. *Incorporate comments received from the review process.* TL, National Experts.
11. *Finalize the inventory* to be submitted as a part of the SNC of Yemen. NPM, TL, National Experts.

## Output 4.5 GHG inventory data and estimates documented and archived

### Activities

1. *Archive activity data, emission factors and estimates to the template developed under any GEF regional project in the region on GHG inventories.* Responsible party: TL, National Experts, and Information & PA Assistant.
2. *Update the Manual of Procedures and National Inventory Report with new GHG inventory data and estimates.* Responsible party: TL, National Experts, and Information & PA Assistant

## IV.5 Output 5 Existing new programs that include measures to abate GHG emissions are updated and developed

93. The first GHG emission abatement analysis for Yemen performed in the frame of the Yemen's INC consisted of development of two GHG scenarios: (i) GHG baseline scenario and (ii) GHG abatement scenario. Projections have already been made for the time horizon 1995-2020 and were to a great extent sector-specific ones. They were built up for three direct GHGs and some GHG source categories such as: *energy & transport; LUC; agriculture; waste, industrial processes*. Energy and transport have been analyzed in semi-quantitative manner. A cost-benefit analysis has been carried out for such sectors. The rest of the sectors are analyzed *qualitatively*. Selection of measures for energy and transport sectors has been made taking into account situation of energy sector at that time and key sources of GHG emissions. The tool used for development of energy & transport emissions scenario was the LEAP version 95.0 for baseline scenario.
94. GHG abatement measures/technology options identified under Yemen's INC have undergone a prioritization process through the Yemen's FTNA exercise. The FTNA was a continuation of the work carried out under Yemen's INC and other related activities.
95. Having the GHG inventory as the starting point for the GHG abatement analysis and given the data gaps related to this inventory, gaps and uncertainties of the same nature were present to the abatement analysis exercise as well. There are some new strategies and action plans recently adopted by the Government of Yemen that would have their impact to the GHG abatement in Yemen, therefore both scenarios (baseline and abatement scenario) need to be updated and improved.
96. The GHG abatement analysis under the SNC will be sector-specific, by covering more sectors than previous studies but putting a high emphasis on energy and transport sectors which contribute a significant share to the Yemen's overall emissions. The Baseline Scenario developed under the Yemen's INC will be subject to revision, update and adjustments in accordance with the new development conditions. The GHG inventory base year 2000 will serve as the starting point of the GHG analysis. The GHG abatement analysis will go up to 2025, i.e., 5 years beyond the analysis carried out under INC. There is also a need to update and revise all details and assumptions made. The list of abatement options proposed for the abatement scenario for each sector will be reviewed and updated in the light of new

developments and needs and key source categories. The impact of specific emission reduction actions / options will be measured (quantitative to the possible extent) against the baseline scenario. The cost and benefit will be analyzed. Criteria of prioritization will be revisited and updated as well. In the course of the selection process, the stocktaking team agreed to consider two distinct Tiers of options/measures (Tier 1 and Tier 2) as following:

- *Win-win* options /measures that could be delivered / implemented faster, cheaper and easier.
- Long – term options that need significant resources.

97. The scenarios for energy, including transport sector will be based on LEAP 2000 Software (the latest version). As per other sectors the team will see the possibility to utilize appropriate models/ software such as STAIR or COPATH for Agriculture. IPCC Excel Spreadsheets will be utilized in case that no specific software will be available. Selection of abatement options will be done through a multi-criteria analysis.

#### **Output 5.1 Necessary data and relevant information for scenario development collected, analyzed and taken into consideration for scenario development.**

##### *Activities*

1. *Consider estimates of GHG inventory for the base year 2000*, which will serve as starting point for the analysis of the GHG emissions towards 2025; Responsible party: TL and, National Experts.
2. *Develop a comparative analysis* of figures /estimates obtained under the GHG Inventory for 2000 to those figures forecasted for the same year (2000) under Yemen’s First National Communication. Define the *uncertainty level* for such a case and take it into account for the scenario development/update. Responsible party: TL and, National Experts.
3. *Collect all relevant macro-economic data* and set *assumptions* to be made for the purpose of emission scenario development. Responsible party: TL, Information and PA Assistant and, National Experts.
4. *Assess at what extent GHG abatement measures (if any)* are undertaken (*if so*) into all adopted National Strategies and Action Plans. Responsible party: NPM, TL, Legal expert (LE), PSC, National Experts.
5. *Review the status of the relevant policy and legal framework* in cooperation with all relevant Ministries. Responsible party: NPM, TL, Legal expert, National Experts.
6. *Process the collected data and make them ready* as required by the software that are going to be utilized for the purpose of scenario generator. Responsible party: TL, Information and PA Assistant and, National Experts.

## **Output 5.2 A revised GHG baseline scenario developed.**

### **Activities**

1. *Develop a revised baseline GHG emission scenario for energy & transport for 2000-2025 by using the software LEAP (version 2000). Responsible party: TL, National experts.*
2. *Develop a revised baseline GHG emission scenario for the rest of sectors (non-energy ones) for 2000-2025 by using STAIR or COPATH for agriculture and IPCC for the rest. Responsible party: TL, National experts.*
3. *Identify any difference / change to the GHG baseline scenario developed under Yemen's INC, if any and, explain the reasons for such differences. Responsible party: TL, National experts.*

## **Output 5.3 The tier of GHG abatement measures / technology options revisited and revised.**

### **Activities**

1. *Re-visit the list of GHG abatement measures /technology options already developed under INC and FTNA for each sector under analysis. Responsible party: NPM, TL, National experts.*
2. *Add new GHG abatement measure/technology options, if data available. Put a special attention to energy and transport category. Responsible party: NPM, TL, National experts.*

## **Output 5.4 GHG abatement scenario developed / updated**

### **Activities**

1. *Develop/ update the GHG abatement scenario for energy and transport category for 2000-2025 by using the software CACMO and LEAP. Take into consideration the tier of measures selected.  
Responsible party: TL and, National experts*
2. *Estimate the GHG reduction potential against the baseline scenario, cost of reduction and penetration rate of each measure proposed under GHG abatement scenario for energy and transport sector. Responsible party: TL and, National experts*
3. *Develop / update the GHG abatement scenario for non-energy sectors. Use IPCC software if other sector-specific software would not be available. Take into consideration the tier of measures selected. Responsible party: TL and, National experts*
4. *Identify any difference / change to the abatement scenario developed under Yemen's INC, if any and, explain the reasons for such differences. Responsible party TL, National experts*

## **Output 5.5 GHG abatement priority measures / technologies selected**

### **Activities**

1. *Re-visit and validate criteria for assessment of measures and respective weights* already used under FTNA exercise and identify whether they are relevant to the Yemen's circumstances and development priorities. Responsible party: NPM, TL, National experts, PSC.
2. *Undertake an assessment of measures according to the criteria decided by using a multi-criteria analysis.* Select priorities for energy and transport. In addition, develop a second tier of win-win measures that could be implemented faster, cheaper and easier. Select priority measures for non-energy sectors. Responsible party: NPM, TL, National experts, PSC.
3. *Identify barriers and policy needs* for implementation of such measures. Propose *policy interventions and financing schemes* (GEF, WB, CDM, bilateral, other) to address these measures into national planning and policy process for respective sectors. Responsible party: NPM, TL, National experts, PSC, Legal expert.
4. *Update the package of project proposals developed under FTNA with new ones, if other priorities identified.* Responsible party: NPM, TL, National experts, PSC, Legal expert.

## **Output 5.6 A GHG abatement analysis completed for the period 2000-2025.**

### **Activities**

1. *Develop the draft chapter* of the GHG abatement analysis. Responsible party: TL.
2. *Circulate the draft chapter of GHG abatement analysis for internal review and comments.* Responsible party: NPM, TL.
3. *Circulate the draft chapter* of GHG abatement analysis for external peer review and comments. Responsible party: NPM.
4. *Receive comments and reflect* to the document. Responsible party: NPM, TL, National experts.
5. *Organize a national workshop* to highlight findings from the GHG abatement analysis and get more comments. Responsible party: NPM, TL.
6. *Finalize the GHG abatement analysis chapter* to be submitted as a part of the SNC of Yemen. Responsible party: NPM, TL, National Experts.
7. *Archive and document all the GHG abatement analysis related studies and estimates.* Responsible party: NPM, TL, National Experts.

## **IV.6 Output 6 A Policy Framework to facilitate adequate adaptation to climate change is developed for the selected areas.**

98. The first assessment of Yemen's climate vulnerability and adaptation options was carried out as part of Yemen INC, which covered a small part of Yemen's area. The study covered the vulnerability and adaptation measures for some parts of Yemen territories. Future time

horizons and projections were considered. The assessment process carried out was to some extent sector-specific. It covered: (i) water resources, (ii) agriculture, and (iii) coastal zones. Priority selection measures were presented at the end. The Top-Up phase focused on issues not completed during the INC phase and on building national capacity and expertise to conduct research to assess technology needs for various mitigation options that had been identified during the preparation of the national communication.

99. The Top-Up phase reports described the final results of undertaken process of identification of financial and technological needs for three main sectors of national economies, namely; energy, water and agricultural sectors. For energy sector, a number of aspects were studied including conventional energy sources, the existing energy balance of the country and electricity industry, before assessing the potential application of renewable energy sources. For renewable energy sources, attempts were made to identify sources and suppliers of relevant technologies needed, modalities and the acquisition and absorption of these technologies.
100. The assessment of vulnerabilities and adaptation was guided by IPCC guidelines, 1996. The LEAP software has been used for impact assessment in energy sector. A simple statistical model is used in the runoff assessment. For the rest of sectors, statistical models are developed or empirical analogues are used. The need to use socio-economic scenarios or integrated system models are highly stressed. All climatologically data were received from concerned authorities. Data regarding relevant sectors have been received from other relevant institutions/ministries ..etc. However, the team lacked data from systematic monitoring, and simulation of extreme weather events and cost benefit analysis were not assessed.
101. In the course of the stocktaking the team agreed to retain the three most vulnerable sectors highlighted by the INC while narrowing the focus of the assessment to be carried out under the SNC to some specific geographical areas with subset of vulnerabilities, likelihood of significant impacts of climate change and significant development context (“climate change hotspots”). After a multi-criteria analysis, the priority study areas selected are Aden city for coastal adaptation, Surdoud Drainage Basin for water resource and Sana’a-Almahweet-Ibb-Taiz-Mareb-Seioon for agricultural production, as indicated earlier, and they can be further narrowed down to specific sub-areas. The criteria used for selecting priority areas include: widespread area coverage; different geographical and climatic regions; level of socio-economic livelihood; and reasonably different environmental status. The selected areas also have significant representative patterns: is widespread, from north to south of the country putting together an interesting topographic diversity such as mountains, terraces, plateaus, valleys, plains, coast, seashore and cities. Also the assessment of vulnerability will be sector-specific, it will consider other sectors like agriculture (irrigations systems), forests (erosion).. etc., therefore, an integrated assessment will be done to the extent possible. .
102. Current climate vulnerability will be assessed in the priority areas, as a new area of study and future climate risk to sectors, will be assessed through the use of some indicators: For the climate system the indicators will be temperature (seasonal), precipitation (seasonal), wind, cloudiness and sunshine duration. The average change in mean runoff will be selected as the

main indicator for water resources. For energy sector the main indicators would be the energy demand and supply. Forests area and eroded land would be the main indicators to assess the forests sector. Plant production, irrigation systems, cattle breeding poultry production would be as indicators for agriculture/livestock. Coastal tourism will be assessed in terms of the impact of the sea level rise and the rise of temperature. Impact to population / settlements will be assessed in terms of frequency and scale of droughts and flooding into people's wellbeing.

103. Along with information available from NAPA process currently under preparation, a design of an Adaptation Policy Framework for the selected areas is possible using at the extent possible the respective technical papers. This may be viewed as the main outcome of the vulnerability and adaptation exercise under the SNC. The strategy framework will outline long-term adaptation measures and plans of implementation (what); the way of implementation and resources needed (how); time frame (when); responsible parties for its implementation (who). It will serve as the basic document that will create the momentum for a follow-up of this process, i.e. addressing climate variability and change to the national planning and policy. As the NAPA focus is on the identification of urgent, immediate and short term adaptation strategies for the priority areas, the SNC will give more emphasis on the development of long term adaptation strategies, policies and measures in the three targeted sectors. Synergy with activities identified under the NAPA will be considered as both initiatives "NAPA and SNC" are covering the same priority areas with the variation in terms of geographical and time horizons (NAPA takes a nationwide and short term approach, while the SNC will focus on long-term and geographical "hotspots").

**Output 6.1 Specific approaches, tools and methods to be used under APF decided. Pertinent data and information assembled, analyzed, and synthesized.**

**Activities**

1. *Decide on the range of the assessment:* qualitative versus quantitative. Decide on the *approaches, tools and methods* to be used for the assessment. Responsible party: NPM, TL, and National Experts.
2. *Identify the type and scope of data and information* needed in order to use the above models and tools. Responsible party: NPM, TL, and National Experts.
3. *Review the policy process and development context for the selected areas* in order to explore how adaptation measures can be introduced into decision-making agenda and what is the best way of addressing them. Responsible Party: NPM, PSC, TL, National Experts.
4. *Collect and synthesize the necessary data and information.* Responsible party: TL, and National Experts

## **Output 6.2 Current vulnerability and adaptation of the priority selected areas assessed**

### **Activities**

1. *Develop respective indicators* for the purpose of the baseline development. Responsible party: NPM, PSC, TL, and National Experts
2. *Develop a climate baseline* for the priority area by highly taking into consideration the baseline developed under stocktaking exercise. Responsible party: TL, and National Experts
3. *Develop an environmental-socio-economic baseline.* Responsible party: TL, and National Experts.
4. *Access current vulnerability of climate and sectors under the priority area.* Responsible party: TL, and National Experts

## **Output 6.3 Future climate risk and adaptation measures assessed for the priority area. A policy framework for adaptation for the selected areas developed.**

### **Activities**

1. *Develop climate trends and risks* by using MAGIC/SCHENGEN. Responsible party: TL, and National Experts
2. *Develop environmental-socio-economic trends and risks* (water resources, energy, agriculture, forests, tourism, population and settlements). Put more attention to waters resources and energy generation as priorities. Responsible party: TL, and National Experts.
3. *Develop adaptation response measures*, identify barriers and opportunities. Responsible party: TL, and National Experts.
4. *Compile an Adaptation Policy Paper* of the selected area. Responsible party: NPM, PSC, TL, and National Expert

## **Output 6.4 Chapter of Vulnerability and Adaptation (V&A) for the priority system completed**

### **Activities**

1. *Develop the draft chapter* of the V&A. Responsible party: TL.
2. *Circulate the draft chapter of V&A for internal review and comments.* Responsible party: NPM, TL.
3. *Circulate the draft chapter* of V&A for external peer review and comments. Responsible party: NPM.
4. *Receive comments and reflect* to the document. Responsible party: NPM, TL, National experts.



5. *Organize a national workshop* to highlight findings from the V&A study and get more comments. Responsible party: NPM, TL.
6. *Finalize the V&A chapter* to be submitted as a part of the SNC of Yemen. Responsible party: NPM, TL, National Experts.
7. *Archive and document all the V&A related studies and estimates.* Responsible party: NPM, TL, National Experts.

**IV.7 Output 7 constraints, gaps, and related financial, technical and capacity needs are identified.**

104. The issue of gaps and constraints is addressed under Yemen 's INC. It is provided in thematic-area-specific manner by giving information from institutional, technical, methodological and resource point of view. The FTNA addressed the needs for technology transfer and constraints are addressed in terms of barriers. Most of the needs are provided in the form of project ideas.
105. A separate section will be elaborated on the issue under Yemen's SNC. 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. A special attention will be paid to the *previously identified gaps and needs* under the previous activities such as INC and Top-Ups and explanations whether and how they have been addressed under the SNC and their status. In addition, gaps and constraints while implementing the UNFCCC will be reported.

**Output 7.1 Constraint, gaps and related needs (financial, technical and capacity) identified and reported.**

**Activities**

1. *Review the status of the constraints and gaps (technical, institutional, methodological, financial, capacity) from previous studies.* Responsible party: NPM, TLs, National Experts.
2. *Identify 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.* Responsible party: NPM, TLs, National Experts.
3. *Identify constraints and gaps (institutional, financial, capacity) related to Article 6 activities, which are crosscutting the NC preparation exercise.* Elaborate needs to overcome and fill them. Responsible party: NPM, Information and PA assistant; TLs, National Experts.
4. *Summarize constraints, gaps and needs identified and draft a synthesis report as a separate chapter on that regard.* Responsible party: NPM, TLs, National Experts.
5. *Distribute the above draft chapter for comments, collect comments and reflect in the document.* Responsible party: NPM, TLs, Information and PA assistant, National Experts.
6. *Finalize the above chapter as part of the Yemen's SNC.* Responsible party: NPM, TLs, Information and PA assistant.

#### **IV.8 Output 8 A chapter on “other information” considered relevant to the achievement of the objective of the Convention is compiled**

106. The Yemen’s INC contains also a separate chapter regarding Public Awareness, Education and Training. This chapter highlights these issues as relevant and crosscutting ones to the NC preparation exercise. The Yemen’s SNC will have a separate chapter on “other information”. A special attention will be given to in information about *Article 6 activities* (Public Awareness, Education, and Training). This section will also provide information on any steps that have been taken to *mainstreaming climate change* into national development agenda and activities related to *technology transfer* as indicated under Article 4/CP7 and, climate change research and systematic observation systems. In addition, information on all relevant ongoing projects / programs relevant to climate change will be reported.

#### **Output 8.1: The information considered relevant to the achievement of objective of the UNFCCC compiled and synthesized**

##### **Activities**

1. Collect, synthesize and provide the overall *information relevant to the Article 6 activities*. Responsible Party: NPM, Information and Public awareness assistant, TLs.
2. Collect, synthesize and provide the *information on steps taken to integrate climate change* into socio-economic and environmental policies in Yemen. Responsible Party: NPM, Information and Public awareness assistant, TLs, National Experts.
3. Collect, synthesize and provide information on how Yemen is addressing activities related to the *transfer of, access to environmentally sound technologies and know-how*. Responsible Party: NPM, Information and Public awareness assistant, TLs, National Experts.
4. Collect, synthesize and provide information on the *research and systematic observation systems*. Responsible Party: TL of V&A, Information and Public awareness assistant, National Experts.
5. Collect, synthesize and provide *information on ongoing programs and project relevant to climate change and National Communication* process. Responsible Party: NPM, Information and Public awareness assistant, TLs, National Experts.
6. *Summarize all the information* collected in a draft chapter. Distribute it for *review and comments* (internally). Responsible Party: NPM, Information and Public awareness assistant, TLs, National Experts.
7. Incorporate comments to the above draft chapter and *finalize* it as part of the Yemen’s SNC. Responsible Party: NPM, Information and Public awareness assistant, TLs.

#### **IV.9 Output 9 The Yemen’s Second National Communication to the CoP of the UNFCCC is finalized and submitted**

107. The overall findings from the studies carried out under the SNC project will be synthesized and reported under a National Report namely Yemen’s Second National Communication to the CoP of UNFCCC. The structure and scope of the report will be designed as guided by the 17/CP8. After the completion, the report will be published in English. An

electronic version in a CD-ROM will be attached to it. The same distribution scheme and launching as for Yemen's INC will follow. The SNC report will be submitted to the UNFCCC secretariat and distributed internally (to the relevant stakeholders) and externally (to the Parties). It will be internally launched in a national workshop and externally to a CC: FORUM to be organized as a side event in the course of the nearest CoP/ Subsidiary Body sessions.

### **Output 9.1 Yemen's SNC finalized**

#### **Activities**

1. Based on the results and findings from studies made under the project, *compile a draft* of the Yemen's Second National Communication to the CoP. Responsible parties: NPM, TLs.
2. *Circulate the draft for comments and review* and incorporate them into the document. Responsible parties: NPM, TLs, Review Team, Information and PA assistant.
3. *Endorse* the document by the PSC. Responsible parties: PSC, NPM, TLs.
4. *Finalize* the Second National Communication of Yemen to the CoP following the revised guidelines adopted by the CoP for preparation of initial national communications by Parties not included in Annex I to the Convention (17/CP8). Responsible parties: NPM, TLs, Review Team, Information and PA assistant.

### **Output 9.2: Yemen's SNC submitted to the CoP of the UNFCCC.**

#### **Activities**

1. *Publish* the Yemen's SNC to the CoP of UNFCCC. Responsible parties: NPM, Information & PA assistant.
2. *Develop electronic copies* of Yemen's SNC in CD-ROMs. Responsible parties: NPM, Information & PA assistant.
3. *Submit officially the Yemen's SNC to the CoP of the UNFCCC*. Responsible parties: NPM, NPD.
4. *Organize a national workshop* to launch and present the findings of the Yemen's SNC. Responsible parties: NPM, NPD, TLs, PSC
5. *Launch the report in a side event* during the CoP /Subsidiary Body sessions. Responsible party: NPM, TLs, UNFCCC Secretariat.

## **V. Institutional Framework for Project Implementation**

108. This exercise will utilize the National Execution modality with the Environment Protection Authority (EPA) as the Executing Agency. Given that responsibility, the EPA will be responsible for the overall management of the project, primarily with regard to the achievement of the outputs (results), impact and objectives. Similarly, EPA will be accountable to UNDP for use of project resources.

109. In order to ensure the sustainability, efficient use of resources and linkages between prior and ongoing climate change enabling activities, the SNC processes will be fully executed under the same structures (**see Appendix F**), already established since 1998, when the Yemen's INC started. The Climate Change Unit (CCU) established during Yemen's INC implementation is responsible not only for the planning, coordination and management of UNDP-GEF climate change portfolio but also for the overall UNFCCC implementation process.
110. The National Project Coordinator (NPC), to be hired in full-time basis will coordinate the day-to-day project execution activities and will be responsible for meeting the objectives of the project. An Administrative and Finance Assistant will be hired in full-time basis, will assist the NPC. In addition, the NPC will be assisted by three technical teams, respectively GHG inventory team, GHG abatement team and V&A team which will perform technical tasks and activities proposed under this project. A National Team Leader will lead each team. It is expected that this exercise involve the majority of the experts who have been previously engaged under First National Communication and Top-up phase. They are already filed in a roster of national experts. However, new comers are expected to enter the process as Train of Trainers exercises will be held in the course of the years to come. National experts will be coming from key relevant sectors including government agencies, academic institutions, NGOs, and private sector as necessary. National experts mentioned above will be hired in Ad-Hoc basis under Special Service Agreements. The recruitment process will be made according the UNDP rules and regulations. The NPC will also be supported by a Reviewers team, composed of national specialist and high officials that will review the various SNC products and ensure quality insurance of the process outcomes.
111. The ultimate responsibility in the EPA or managing the project will be placed on the senior Government official designated as the National Project Director (NPD). The NPD will liaise with the members of Project Steering Committee in terms of decision-making and guidance for the project.
112. The Climate Change Project Steering Committee already established since 1998 as a high level body will continue to provide support and guidance to the implementation of the project and support this exercise by ensuring that the results will be disseminated to, and validated by, all the relevant stakeholders in Yemen. An update and revision of the composition of the PSC is also planned. This will be done at the start up phase of the project. The members of the PSC will be from, but not limited to the Ministry of Water and Environment, Ministry of Electricity, Ministry of and Industry and Commerce, Ministry of Agriculture and Irrigation, Academia, Environmental Centers, UNDP-Yemen, NGOs and Private sector.
113. The project will maintain links to the UNDP-GEF NCSP, which will be regularly updated through UNDP regional office for the status of activities and will provide in the same time technical assistance as required. Technical assistance is also expected by the UNFCCC secretariat /Consultative Group of Experts (CGE), mainly through the workshops and trainings.
114. A summary of the institutional arrangements for the project for preparation of the Yemen's SNC to the CoP of the UNFCCC is provided in a chart form under Appendix F

## **VI. Assessing project impact**

115. Provision has been made to conduct an end-of-project evaluation a few months after the completion and submission of the SNC. A short-term consultant will be for this purpose. The UNDP country office may decide to utilize the UNDP Environmental Outcome Evaluation to determine the impact of the project.
116. At the beginning of the project, a practical framework to assess capacity development and the potential impacts of the national communication process will be developed. The framework may look into five strategic areas: 1) Capacity to conceptualize and formulate policies, legislation, strategies and programmes; 2) Capacity to implement policies, legislation, strategies and programmes; 3) Capacity to engage and build consensus among all stakeholders; 4) Capacity to mobilize information and knowledge; 5) Capacity to monitor, evaluate, report and learn will be included in the framework.
117. The framework will identify a few practical indicators to assess the impacts of the SNC in incorporation climate change concerns into development and sectoral planning, as appropriate. The National Communications Support Programme (NCSP) would provide guidance on developing an impact assessment framework, linked to the different components of the SNC, and the possible indicators that may used to assess impacts.
118. In developing this framework, capacity development impacts may be given special attention. In general, capacity development can be assessed at three levels:
- a) At the individual level - the process of changing attitudes and behaviors, most frequently through imparting knowledge and developing skills through training, learning by doing, participation, ownership, and processes associated with increasing performance through changes in management, motivation, morale, and levels of accountability and responsibility.
  - b) Capacity development at the organizational level - overall performance and functioning capabilities, such as developing mandates, tools, guidelines and information management systems for the ability of the organization to adopt change.
  - c) At the systemic level - creation of enabling environments i.e. the overall policy, economic, regulatory and accountability frameworks within which institutions and individuals operate, relationships and processes between institutions.
119. It is important to note that the development and adoption of such a framework would be a country-driven exercise that seeks to bring the SNC process closer to development priorities in the context on national policy-making. Under the guidance of the NCSP, Yemen would design an impact assessment framework that meets the country's needs and priorities in terms of facilitating the linkage between the SNC and development issues.

**Appendix C : Past and ongoing projects/plans related to climate change in the Republic of Yemen**

<b>Project/Plans</b>	<b>Funded by</b>	<b>Duration/Year</b>	<b>Aim</b>
National Environmental Action Plan <b>(NEAP)</b>	Yemen Gov.	1996 - 2000	Promotes sustainable use of natural resources through a set of policy options in addressing priority issues.
The Poverty Reduction Strategy Paper <b>(PRSP)</b>	Yemen Gov.	2003 - 2005	The plan reinforce sustainable management of natural resources, mobilize beneficiaries, involve the poor and support the role of women and youth in environmental conservation
Environment and Sustainable Development Investment Programme <b>(ESDIP)</b>	Yemen Gov.	2003 - 2008	The plan presents an outline strategy and priority interventions aimed at controlling and gradually reversing environmental impacts. It also aims at supporting sustainable human development for the people of Yemen.
Country Cooperation Framework <b>(CCF)</b>	UNDP	2002 - 2005	Provide sustainable natural resources management and promote the integration of environmental management with national development policies and programmes
National Programme on Integrated Water Resources Management, YEM/03/013 <b>(NPIWRM)</b>	UNDP - Yemen Gov	2003 - 2008	Provide a comprehensive response to water management issues in Yemen with the objective to alleviate poverty and secure basis for sustainable development
Sustainable Development and Biodiversity Conservation for the People of Socotra Island, YEM/03/004 <b>(SDBCPSQI)</b>	UNDP - Yemen Gov	2003 - 08	Support human development for the people of Socotra islands, through the conservation and sustainable use of its unique biodiversity and natural resources
National Recovery and Recycling Programme for Refrigerators in the Commercial and MAC Sectors in Yemen, YEM02/G61 <b>(NRRPR)</b>	GEF	2002 - 05	Implement a comprehensive national programme for recovery and recycling of refrigerants in the refrigeration and air-conditioning sub-sectors according to the refrigerant management plan

<b>Project/Plans</b>	<b>Funded by</b>	<b>Duration/Year</b>	<b>Aim</b>
GEF Small Grant Programme <b>(GEF SGP)</b>	GEF	2004	Deliver global environmental benefits in the area of biodiversity conservation, climate change mitigation, protection of international waters, prevention of land degradation (primarily desertification and deforestation), and elimination of persistent organic pollutants through community based approaches.
National Adaptation Programme of Action, YEM/03/G37 <b>(NAPA)</b>	GEF	2003 - 2004	Broadly communicate to the international community priority activities that address Yemen's urgent needs for adapting to the adverse impacts of climate change.
National Biodiversity Strategy and Action Plan, YEM/96/G31 <b>(NBSAP)</b>	GEF	1997 - 2004	Assist the government in development of a national biodiversity strategy and action plan
Protection of the Marine Ecosystems of the Red Sea Coast Yemen, YEM/97/G32 <b>(PERSC)</b>	GEF	1997 - 2004	Protection of the Marine Ecosystems of the Red Sea Coast of Yemen.
UN-Nexen Water Resources Management, Community Water Supply and Sanitation in Masila, Hadhramaut "The Ressib Water and Sanitation Project", YEM/03/005 <b>(UN-NEXEN WRM CWSS)</b>	UNDP-NEXEN	2003 - 2006	Develop a model for long-term stewardship of water and sanitation services at the community level within the Masila Region of Hadhramaut Governrate.

<b>Project/Plans</b>	<b>Funded by</b>	<b>Duration/Year</b>	<b>Aim</b>
National Capacity Building for Natural Resources Management <b>(NCBNRM)</b>	UNDP	2004 - 2008	Strengthen the performance of environmental protection and national poverty alleviation policies, to build capacities of central and local level institutions on integration of environmental and sustainability issues within the district development process, to enhance awareness at the local and policy making levels and to promote sustainable livelihood approaches in management of natural resources including establishment of nature reserves.
National Capacity Self-Assessment <b>(NCSA)</b>	GEF	2004 - 05	Identify and determining the nature of capacity constrains faced by the country to respond to the global conventions and ways to address these constraints
<b>Inter-linkage programmes with UNDP Practice Areas:</b>			
Assistance to the Government of Yemen to Coordinate and Monitor Implementation of Poverty Reduction Initiatives, YEM/03/001	UNDP	-	Incorporating environmental assessment, social participation and the consideration of sustainability issues with poverty reduction strategy
Decentralization and Local Development Support Programme, YEM/03/008	UNDP	-	A pilot intervention, which is expected to develop into a major programme to support national strategy for implementation of decentralization reform.



<b>Project/Plans</b>	<b>Funded by</b>	<b>Duration/Year</b>	<b>Aim</b>
Sustainable Development and Biodiversity Conservation for the People of Socotra Islands, YEM/03/004	UNDP	<b>July 2003 – June 2008</b>	The programme gives equal weight to biodiversity conservation requirements and developments of Socotra, through supporting the main engines of growth for the local economy, addressing most pressing basic community development needs and enhancing the professional capacities of the local government to steer the path of sustainable development.
National Programme for Integrated Water Resources Management, YEM/03/013	UNDP	<b>May 2003- 30 April 2003</b>	The programme gives equal weights to planning of water basin management and implementation of these plans through establishment of water basin communities ensuring the participation of the local councils and communities in management of water basin in their area.
National Capacity Building for Natural resources Management	UNDP	<b>July 2004 – June 2007</b>	Support environmental management both at upstream and downstream levels.

#### Appendix D: Stakeholders Affiliation.

Name	Affiliation	Reasons for Inclusion	Role in Self-Assessment
Mohamed L. Al-Eryani	MWE/ Former Minister and Professor, Sana'a University	INC/ Climate Change Impact on Water Resources of Abyan Delta Team Leader	Consultation
Mohamed Al-Hamdi	MWE/Deputy Minister	Water resource and geohydrology specialist	Consultation
Eng. Mahmoud Shediwa	EPA/ Chairman	INC/involved in the follow-up of INC findings	Consultation
Anwar Abdulaziz	EPA	CCU/Head/EPA	Stakeholders coordinator, data provider and assistant in report preparation
Hiroe Ishihara	UNDP/Project Officer	Representative	Draft report review and preparation
Fouad Al-Kadasi	UNDP	Representative	Data provider
Abdullah Baisa	Sana'a University, Professor, Chemistry Department	National Consultant for preparing the SNC proposal, water and pollutants expert	Stocktaking, stakeholders consultation and draft report preparation
Saif Ali Othman	Sana'a University, Assistant Professor, Department of Earth & Environmental Sciences	Assistant National Consultant for preparing the SNC proposal, environmental surficial processes specialist	Stocktaking, stakeholders consultation and draft report preparation
Abdulhaq Sultan	Sana'a University, Professor, Physics Department	INC/ GHGI Team Leader	Consultation
Tawfiq Sufian	Sana'a University, Professor, Department of Electrical Engineering	INC/ Energy Mitigation Assessment/Team Leader	Consultation
Abdulkareem Alsubary	Sana'a University, Department of Earth & Environmental Sciences	INC/ Climate Change Impact and Adaptation Assessment on Coastal Zone/ Team Leader	Consultation
Mohamed Mahdi	Sana'a University, Department of Earth & Environmental Sciences	INC/ Climate Change Impact and Adaptation Assessment on Coastal Zone/ Team Member	Consultation

Dr. Ghazi Alsakkaf	Socio-economic Consultant	INC/ Climate Change Impact and Adaptation Assessment on Agricultural Production/ Team Member/Socio-economic Expert	Consultation
Abdo Ali Othman	Sana'a University, Professor, Sociology Department	Socio-economic Expert	Consultation
Eng. Mahmoud Al-saghiry	MFW, Minister	Synergy with relevant activities	Consultation/ Data Provider
Daniel Maco	ADRA	NGO's	Consultation
Eng. Salem Ba-Shoaib	NWRA/Director	Synergy with relevant activities	Consultation/ Data provider
Eltaf M. Al-Hamdani	October 14 Journal/Aden	Expert Media	Consultation
Mohamed A. Al-Ariqi	Al-Thawra Newspaper/ Sana'a	Expert Media	Consultation
Hassan Moghalis	Oil and Gas Authority	Synergy with relevant activities	Data provider
Dr. Abdulsamad Alhakimi	Ministry of Health	Synergy with relevant activities	Data provider
Hussein Oglah	Central Statistics Organization	Synergy with relevant activities	Data provider
Faisal Ahmed Naser	Ozone Unit/ EPA	Synergy with relevant activities and Data provider	Data provider
Ahmed Salem	D.G. Planning and Information/ EPA	Synergy with relevant activities	Data provider
Abdulhakim Rajeh	Biodiversity /EPA	Synergy with relevant activities	Data provider
Abdulla Abolfotooh	D.G. Natural Resources /EPA	Synergy with relevant activities	Data provider
Salim Bagahaizel	D.G. Env. Monitoring/EPA	Synergy with relevant activities	Data provider
Abdulwahed Mukrid	Agricultural Research and Extension Authority/Dhamar	Synergy with relevant activities	Data provider
Eng. Adel Abdulghani	Ministry of Electricity	Synergy with relevant activities	Data provider
Eng. Ahmed Yehia Ali	Ministry of Agriculture	Synergy with relevant activities	Data provider
Hasan Zabarah	NWSA representative	Synergy with relevant activities	Data provider

## Appendix E: Detail Work Plan

ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<b>Output 1: Institutional and other start-up arrangements of the project are finalized:</b>								
<i>Output 1.1: Institutional and other start-up arrangements finalized.</i>								
1. Renew contracts for the project office staff.								
2. Establish technical teams.								
3. Update the composition of the PSC.								
4. Organize a project initiation workshop								
5. Organize a scoping meeting								
<b>Output 2: Identify new links to both national and international sources of information</b>								
<i>Output 2.1: The e- communication among the project team and relevant institutions facilitated</i>								
1. Maintain and upgrade the electronic network among national experts / institutions								
2. Create and maintain a national climate change web page								
<i>Output 2.2: Available international information on climate change provided to the project management team via the internet</i>								
1. Identify and create links to gain information by all means								
<b>Output 3: An overview of National Circumstances relevant to the Yemen's Second National Communication is undertaken</b>								
<i>Output 3.1: National circumstances reviewed, updated and described.</i>								
1. Validate the gaps of information identified under stocktaking exercise in the light of recent /new data								
2. Identify the respective sources of information								
3. Collect data and information from different sources								
4. Fill the gaps, update and add the new information								
5. Draft national circumstances sections that would be respectively relevant to each thematic area								
6. Draft the National Circumstances section under the SNC								
7. Circulate the National Circumstances section for comments								
8. Finalize the National Circumstances section under the SNC								

	ACTIVITY								
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
<b>Output 4: A national GHG inventory of emissions by sources and removals by sinks for the year 2000 and time series for 1995-2000 following the new guidelines adopted by CoP is undertaken is developed.</b>									
<i>Output 4.1: The GHG inventory team maintained, sustained and strengthened with new comers.</i>									
1. Train new GHG inventory experts for each GHG inventory category on IPCC Guidelines and IPCC GPG									
2. Review the existing information on the first GHG inventory already archived and documented in the GHG Inventory Manual of Procedures									
3. Train university students to carry out surveys for filling data gaps as a cost-effective approach.									
<i>Output 4.2: Methodologies for GHG inventory estimates analyzed, validated and selected.</i>									
1. Analyze the acceptability of the available methodologies estimates									
2. Decide on the Tier level based on the decision trees as guided by IPCC GPG									
3. Decide and select the methodology for estimates of emissions from the new group of GHG gases such as HFCs, PFCs and SF6									
4. Decide on the source categories to which surveys for filling data gaps will be carried out									

ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	
<b>Output 4.3: GHG inventory data collected</b>									
1. Review available activity data archived, if any									
2. Identify new activity data needed for estimates of GHG emissions for 1995-2000									
3. Identify possible sources of data for estimates of GHG emissions for 1995-2000									
4. Collect the necessary activity data from the available sources									
5. Utilize the methodology developed under the GEF regional project, if any, to fill the data gaps									
6. Decide on EFs to be utilized									
7. Identify data gaps, if available									
<b>Output 4.4: A completed national inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks for 2000 following the guidelines adopted by the CoP (17/CP8) developed. Time series 1995-2000 developed</b>									
ACTIVITY									
1. Re-estimate GHG emissions inventory for 1995									
2. Estimate the GHG emissions inventory for 2000 and develop time series for 1995-2000									
3. Prepare a draft inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks for 2000 and time series for 1995-2000									
4. Develop key sources analysis (year 2000) and sensitivity analysis (years 1995-2000) as guided by IPCC GPG									
5. Develop a key sources inventory for 2000									
6. Undertake uncertainty assessment as guided by GPG IPCC									
7. Circulate the inventory									
8. Technical peer review performed as part of QA/QC plan									
9. Organize a national workshop to present findings from the GHG inventory exercise and get comments									

10. Incorporate comments received from the review process									
11. Finalize the inventory to be submitted as a part of the SNC of Yemen									
<b>Output 4.5: GHG inventory data and estimates documented and archived</b>									
1. Archive activity data, emission factors and estimates to a template developed in a project by GEF, if any									
2. Update the Manual of Procedures and National Inventory Report with new GHG inventory data and estimates									
<b>ACTIVITY</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>	
<b>Output 5: existing new programs that include measures to abate GHG emissions is updated and develop</b>									
<b>Output 5.1: Necessary data and relevant information for scenario development collected, analyzed and taken into consideration for scenario development.</b>									
<b>ACTIVITY</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>	
1. Consider estimates of GHG inventory for the base year 2000									
2. Develop a comparative analysis of figures /estimates obtained under the GHG Inventory for 2000 to those figures forecasted for the same year (2000) under Yemen's First National Communication									
3. Collect all relevant macro-economic data and set assumptions									
4. Assess at what extent GHG abatement measures (if any) are undertaken (if so) into all adopted National Strategies and Action Plans									
5. Review the status of the relevant policy and legal framework in cooperation with all relevant Ministries									
6. Process the collected data and make them ready as required by the software that are going to be utilized for the purpose of scenario generator									

<b><i>Output 5.2: A revised GHG baseline scenario developed.</i></b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>
1. Develop a revised baseline GHG emission scenario for energy & transport for 2000-2025 by using the software LEAP (version 2000)				██████████				
2. Develop a revised baseline GHG emission scenario for the rest of sectors (non-energy ones) for 2000-2025 by using STAIR or COPATH for agriculture and IPCC for the rest.				██████████				
3. Identify any difference / change to the GHG baseline scenario developed under Yemen's INC, if any						██████████		
<b><i>Output 5.3: The tier of GHG abatement measures / technology options revisited and revised.</i></b>								
<b>ACTIVITY</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>
1. Re-visit the list of GHG abatement measures /technology options already developed under INC and FTNA for each sector under analysis			██████████					
2. Add new GHG abatement measure/technology options, if data available, especially for energy and transport		██████████						
<b><i>Output 5.4: GHG abatement scenario developed / updated</i></b>								
1. Develop/ update the GHG abatement scenario for energy and transport category for 2000-2025 by using the software CACMO and LEAP			██████████					
2. Estimate the GHG reduction potential against the baseline scenario, cost of reduction and penetration rate of each measure proposed under GHG abatement scenario for energy and transport sector			██████████					
3. Develop / update the GHG abatement scenario for non-energy sectors				██████████				
4. Identify any difference / change to the abatement scenario developed under Yemen's INC						██████████		



<b><i>Output 5.5: GHG abatement priority measures / technologies selected</i></b>	
1. Re-visit and validate criteria for assessment of measures and respective weights used under FTNA exercise, if any.	██████████
2. Undertake an assessment of measures according to the criteria decided by using a multi-criteria analysis	██████████
3. Identify barriers and policy needs for implementation of such measures	██████████
4. Update the package of project proposals developed under FTNA with new ones, if other priorities identified	██████████


<b>ACTIVITY</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Q5</b>	<b>Q6</b>	<b>Q7</b>	<b>Q8</b>
<b><i>Output 5.6: A GHG abatement analysis completed for the period 2000-2025.</i></b>								
1. Develop the draft chapter of the GHG abatement analysis				██████████				
2. Circulate the draft chapter of GHG abatement analysis for internal review and comments				██████████	██████████			
3. Circulate the draft chapter of GHG abatement analysis for external peer review and comments				██████████	██████████			
4. Receive comments and reflect to the document					██████████			
5. Organize a national workshop to highlight findings from the GHG abatement analysis and get more comments					██████████	██████████		
6. Finalize the GHG abatement analysis chapter to be submitted as part of the SNC of Yemen								
7. Archive and document all the GHG abatement analysis related studies and estimates								

ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<b>Output 6: A policy framework to facilitate adequate adaptation to climate change for selected areas is developed.</b>								
<i>Output 6.1: Specific approaches, tools and methods to be used under APF decided. Pertinent data and information assembled, analyzed, and synthesized</i>								
1. Decide on the range of the assessment								
2. Identify the type and scope of data and information needed								
3. Review the policy process and development context for the selected areas								
4. Collect and synthesize the necessary data and information								
ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<i>Output 6.2: Current vulnerability and adaptation of the priority selected areas assessed</i>								
1. Develop respective indicators for the purpose of the baseline development								
2. Develop a climate baseline for the priority area								
3. Develop an environmental-socio-economic baseline								
4. Access current vulnerability of climate and sectors under the priority area								
<i>Output 6.3: Future climate risk and adaptation measures assessed for the priority areas. A policy framework for adaptation for the selected areas developed</i>								
1. Develop climate trends and risks by using MAGIC/SCHENGEN								
2. Develop environmental-socio-economic trends and risks (water resources, energy, agriculture, forests, tourism, population and settlements)								
3. Develop adaptation response measures								
4. Compile an Adaptation Policy framework of areas selected								

ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<b>Output 6.4: Chapter of Vulnerability and Adaptation (V&amp;A) for the priority system completed</b>								
1. Develop the draft chapter of the V&A								
2. Circulate the draft chapter of V&A for internal review and comments								
3. Develop adaptation response measures								
4. Receive comments and reflect to the document								
5. Organize e national workshop to highlight findings from the V&A study and get more comments								
6. Finalize the V&A chapter to be submitted as a part of the SNC of Yemen								
7. Archive and document all the V&A related studies and estimates								
<b>Output 7: constraints, gaps, and related financial, technical and capacity needs are identify.</b>								
<b>Output 7.1: Constraint, gaps and related needs (financial, technical and capacity) identified and reported.</b>								
ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1. Review the status of the constraints and gaps (technical, institutional, methodological, financial, capacity) from previous studies								
2. Identify new constraints and gaps (technical, institutional, methodological, financial, capacity), if any, related to each thematic area (GHG inventory, abatement analysis, V&A) and elaborate needs to overcome and fill them								
3. Identify constraints and gaps (institutional, financial, capacity) related to Article 6 activities, which are crosscutting the NC preparation exercise								
4. Summarize constraints, gaps and needs identified and draft a synthesis report as a separate chapter on that regard.								
5. Distribute the above draft chapter for comments, collect comments and reflect in the document								
6. Finalize the above chapter as part of the Yemen's SNC								

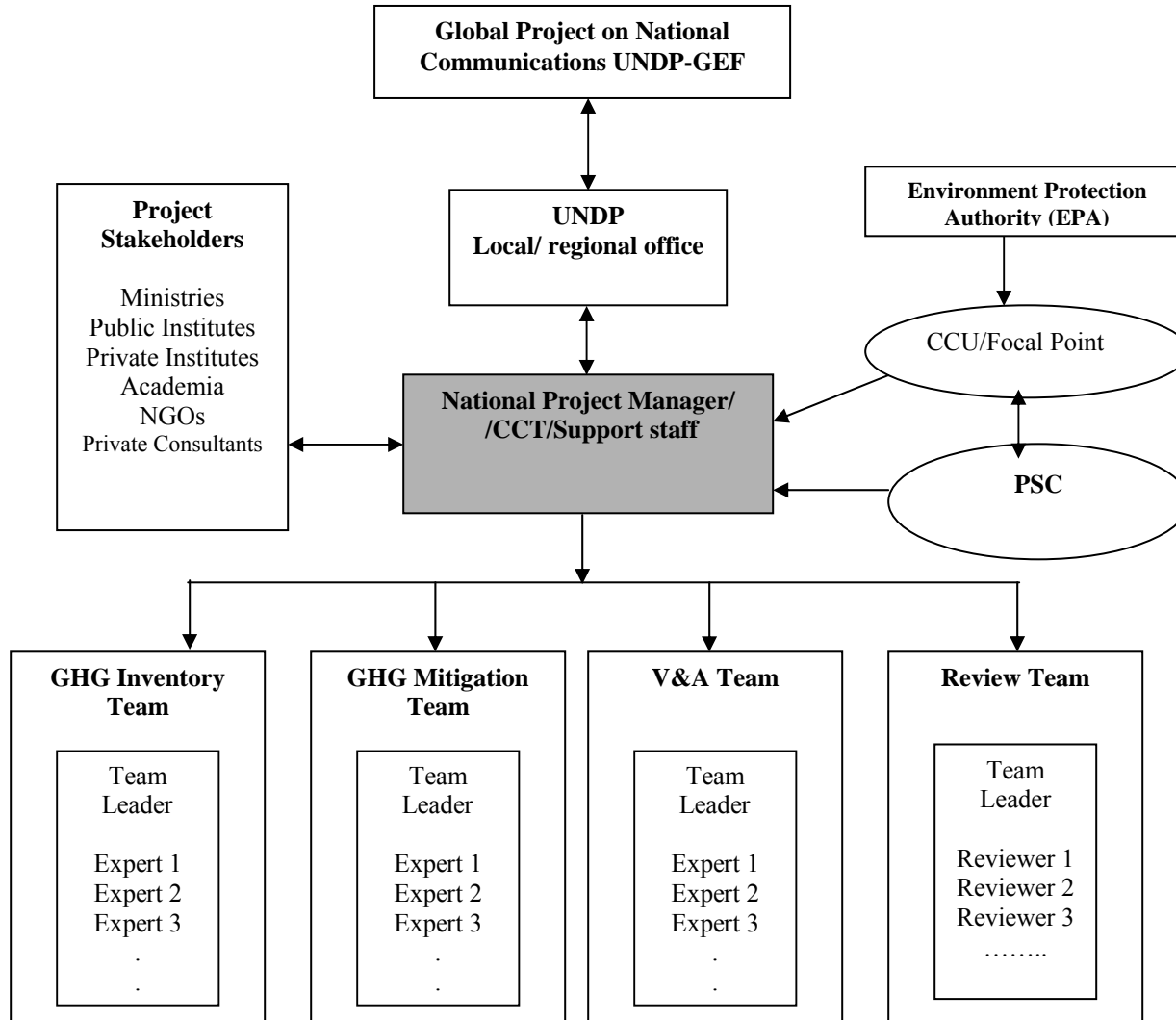
ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<b>Output 8: Compile a chapter on “other information” considered relevant to the achievement of the objective of the Convention</b>								
<i>Output 8.1 The information considered relevant to the achievement of objective of the UNFCCC compiled and synthesized</i>								
1. Collect, synthesize and provide the overall information relevant to the Article 6 activities								
2. Collect, synthesize and provide the information on steps taken to integrate climate change into socio-economic and environmental policies in Yemen								
3. Collect, synthesize and provide information on how Yemen is addressing activities related to the transfer of, access to environmentally sound technologies and know-how								
4. Collect, synthesize and provide information on the research and systematic observation systems								
5. Collect, synthesize and provide information on ongoing programs and project relevant to climate change and National Communication process								
6. Summarize all the information collected in a draft chapter. Distribute it for review and comments								
7. Incorporate comments to the above draft chapter and finalize it as part of the Yemen’s SNC								

<b>Output 9: Finalize and submit the Yemen’s Second National Communication to the CoP of the UNFCCC</b>								
<i>Output 9.1: Yemen’s SNC finalized</i>								
ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
1. Based on the results and findings from studies made under the project compile a draft of the Yemen’s Second National Communication to the CoP								
2. Circulate the draft for comments and review and incorporate them into the document								
3. Endorse the document by the PSC								
4. Finalize the Second National Communication of Yemen to the CoP								

ACTIVITY	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
<b><i>Output 9.2: Yemen's SNC submitted to the CoP of the UNFCCC.</i></b>								
1. <i>Publish the Yemen's SNC to the CoP of UNFCCC</i>								
2. <i>Develop e-CoPies of Yemen's SNC in CD-ROMs</i>								
3. <i>Submit officially the Yemen's SNC to the CoP of the UNFCCC</i>								
4. <i>Organize a national workshop to launch and present the findings of the Yemen's SNC</i>								
5. <i>Launch the report in a side event during the CoP /Subsidiary Body sessions</i>								

# Appendix F

## Structure and Framework of Yemen SNC



## **Appendix G: Terms of Reference**

### **1. TOR for National Project Manager (NPM)**

In consultation with the Project Steering Committee (PSC), the National Project Manager (NPM) is responsible for day-to-day management, co-ordination and supervision of the implementation of the SNC project. Specifically, his/her responsibilities are but not limited to the following:

- Supervises and ensures the timely implementation of the project relevant activities as scheduled in the working plan
- Prepares a detailed work plan for the project and draft terms of reference for the subcontracts (in consultation with the PSC and UNDP);
- Compiles the sCoPe and content of the overall SNC report and relevant sections in consultation with Team Leaders;
- Develops the sCoPe of the work and TORs and other procurement documentation required to identify and facilitate recruitment of experts and consultants;
- Identifies and hire/subcontract the national experts and institutions (in consultation with the PSC and UNDP);
- Supervises project support staff national consultants who are recruited to provide technical assistance
- Organizes and supervises the workshops and training needed during the project;
- Liaises with the relevant ministries, national and international research institutes, NGOs, and other relevant institutions in order to involve their staff in project activities, and to gather and disseminate information relevant to the project;
- Prepares periodic progress reports of the project;
- Controls the expenditures and otherwise ensures adequate management of the resources provided for the project;
- Summarizes and synthesizes the results of the project;
- Identifies the follow up activities and mobilizes other resources at the extend possible;
- Identifies and ensures synergy of the SNC with other relevant ongoing / new projects.
- Finalizes the Second National Communication of Yemen along with the government personnel and national experts;
- Ensures that the SNC process is in the line with guidance provided by the CoP of the UNFCCC and contributes to the improvement of the UNFCCC reporting process.
- Oversees the maintenance and update of Yemen's climate change web page;
- Collaborates with all relevant stakeholders and the Project Steering Committee and other partners to ensure their involvement in the SNC

#### Qualifications And Experience

- Preferably master's degree in environment-related studies and other related disciplines;
- Good understanding of Yemen's environment/development issues as well as the three thematic areas under investigations;
- At least six to eight years experience relevant to the project;
- Excellent communication (Written and Oral) Skills;
- Demonstrated experience in project management;

- Expertise in putting together results-oriented action plans;
- Demonstrated experience in working with government, donors and the United Nations system;
- Appropriate experience working with government structures at local levels, and working with NGOs and private sector;
- Substantial involvement in the preparation of the national GHG inventory and the initial National Communication is mandatory
- Substantial knowledge of methodologies for inventories (*IPCC Revised 1996 Guidelines* and *Good Practice Guidance, LEAP etc*)
- Substantial experience in Government and in inter-departmental procedures preferred
- Familiarity with international negotiations and processes under the UNFCCC preferred
- Familiarity with computers and word processing

## **2. TOR for Assistant Project Manager**

In consultation with the Project Manager (PM), the Assistant Project Manager is responsible for assisting in day-to-day management and implementation of project tasks. Specifically, his/her responsibilities are but not limited to the following:

- Assist in the preparation of project work plan and TOR for the subcontracts (in consultation with the NPM);
- Coordinate the work of national experts and institutions (in consultation with the NPM);
- Assist in the organization of the workshops and training needed during the project;
- Assist in the preparation of periodic progress reports of the project;
- Assist in the development of the SNC report of Yemen by liaising with government personnel and national experts;
- Report to the NPM on the SNC process to ensure that it is in line with guidance provided by the CoP of the UNFCCC.
- Supervise the maintenance and update of Yemen's climate change web page;
- Assist the PM in the daily execution of the project.

### Qualifications And Experience

- University degree in environment-related studies or other related disciplines;
- Good understanding of Yemen's environment/development issues;
- At least five years experience relevant to the project;
- Appropriate experience working with government, NGOs and private sector;
- Familiarity with computers and word processing
- Excellent communication (written and oral) skills;
- A very good knowledge in English is absolutely necessary.



### **3. TOR for National GHG Inventory Team Leader**

The National GHG inventory Team Leader should work in consultation with and under the guidance and supervision of the National Project Manager. Specifically, his\her responsibilities are but not limited to the following:

- Assists the NPM in establishing the team of experts for performing the GHG inventory on the basis of the roster of experts;
- Oversees the training-of-trainers sessions on GHG inventory.
- Assists NPM to organize GHG inventory relevant training and workshops.
- Prepares a detailed work-plan for GHG inventory exercise on the basis of the overall project work plan.
- Provides periodic progress report to the NPM on the GHG inventory thematic area
- Develops the sCoPe of work and respective terms of reference for the team members
- Leads the data collection process, including surveys.
- Leads and oversees the team to conduct the GHGs national inventory
- Ensures synergy with Regional Project on GHG inventories
- Ensures the timely and effective management of the activities as scheduled;
- Selects and implement, in consultation with NPM, the methodologies for conducting the GHGs inventory;
- Identifies gaps and key sectors for GHGs inventory;
- Incorporates comments received from the review process.
- Drafts the National Inventory Report and respective chapter of Yemen's SNC along with the respective part of executive summary.
- Leads and coordinates the updating the Manual of Procedures in the light of the new findings under the SNC exercise.
- Archives new data and estimates of new inventory.

#### Qualifications and experience

- An advanced degree in energy, environmental management or other field relevant to the project;
- A minimum of 7 years of working experience in the area relevant to the Climate Change;
- Substantial involvement in the preparation of the First National Communication is mandatory (GHG inventory and abatement analysis) ;
- Good understanding of GHGs inventory process and demonstrable knowledge of IPCC and GPG;
- Demonstrated ability of analytical and drafting work;
- Familiarity with computers and word processing (EXCEL; ACCESS)
- Fluency in English;

#### **4. TOR for GHG Abatement Analysis Team Leader**

The team leader of scenarios development sector should work in consultation with and under the guidance and supervision of the National Project Manager. Specifically, his\her responsibilities are but not limited to the following:

- Assists the NPM in establishing the team of experts for performing the GHG abatement analysis on the basis of the roster of experts;
- Prepares a detailed work-plan for GHG abatement analysis on the basis of the overall project work plan.
- Provides periodic progress report to the NPM on the GHG abatement analysis thematic area
- Develops the sCoPe of work and respective terms of reference for the team members;
- Leads the data and information collection process.
- Decides, in consultation with PM, on methodologies for the elaboration of scenarios for sectors than energy;
- Leads and oversees the scenario development and update
- Organizes the scheduled consultations/workshops and ensure their success;
- Ensures synergy with other relevant projects;
- Ensures the timely and effective management of the activities as scheduled;
- Incorporates comments received from the review process.
- Drafts the GHG Abatement Analysis Report and respective chapter of Yemen's SNC along with the respective part of executive summary.
- Oversees the documentation of the studies made and archiving.

#### Qualifications and experience

- An advanced degree in energy, environmental management or other field relevant to the project;
- A minimum of 7 years of working experience in the area relevant to the Climate Change;
- Substantial involvement in the preparation of the First National Communication is mandatory (inventory and abatement and analysis);
- Good understanding of GHGs inventory process and projection;
- Demonstrable knowledge of IPCC 1996, IPCC GPG, LEAP etc.
- Demonstrated ability of analytical and drafting work;
- Familiarity with computers and word processing;
- Fluency in English;

## **6. TOR 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.

### **Qualifications and experience**

- An advanced degree in energy, environmental management or other field relevant to the project;
- A minimum of 7 years of working experience in the area relevant to the Climate Change;
- Substantial involvement in the preparation of the initial National Communication is mandatory (V&A);
- Good understanding of climate change and sustainable development issues;
- Demonstrated ability of analytical and drafting work;
- Demonstrable knowledge of IPCC 1994, MAGIC / SCHENGEN etc.
- Familiarity with computers and word processing;
- Fluency in English;

### **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 advice 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.

## **6. TOR for Project Steering Committee (PSC)**

In order to ensure a successful implementation of the UNDP-GEF climate change projects, the Environment Protection Authority of Yemen as the Executing Agency of this Project has agreed on establishment of a Project Steering Committee (PCC), being chaired by the National Project Manager (NPM) and composed of senior officials from the relevant ministries, research institutes, UNDP, NGOs and academia.

The duties, responsibilities and operating rules of the above PSC are as following:

- Provides assistance and political support to the National Project Director (NPD), National Project Manager and national experts and counterparts during the implementation process of all project activities.
- Reviews and makes necessary comments for the all draft documents prepared by the national climate change team
- Receives information on regular basis on the status of the implementation of the project activities and problems to be faced with. The NPM submits the report on the status of the implementation of project activities.

Rules under which PSC operates:

- NPM serves as Moderator of PSC meetings. NPM chairs the PSC meetings
- PSC meets not less than three times during the project life-time. In special cases the PSC shall meet upon the initiative of the NPM.
- When the PSC does not meet, the NPM may request inputs and support from individual members of the PSC.

In principle, the PSC shall operate on the basis of consensus. If consensus cannot be reached, then the case under discussion may be put to a vote. Voting is performed through secret balloting.

## Appendix H: Endorsement Letter from GEF OFF and UNFCCC Focal Point

**REPUBLIC OF YEMEN**  
Ministry of Water and Environment  
Environment Protection Authority

No/Ref: 1265

Date: 15-10-2006

No.of Pages: \_\_\_\_\_



الجمهورية اليمنية  
وزارة المياه والبيئة  
الهيئة العامة لحماية البيئة  
الرقم / المرجع: \_\_\_\_\_  
التاريخ: \_\_\_\_\_  
عدد المرفقات: \_\_\_\_\_

**To: Ms. Flavia Pansieri  
Resident Representative  
UNDP/Sana'a**

**Subject: Project Proposal for the Preparation of Yemen's  
Second National Communication on Climate Change.**

Dear Pansieri,

With reference to the Second National Communication on Climate Change and in my capacity as the GEF Operational Focal Point and UNFCCC Focal Point, I hereby endorse the request of funding from the Global Environment Facility for the above mentioned project proposal, to be presented through the United Nations Development Program.

In doing so, I express my agreement with the content of the project proposal and with its implementation arrangements.

I look forward to your kind consideration in this matter.

Sincerely yours,

**Mahmoud M. Shidiwah**

**Chairman,  
Environment Protection Authority**

**GEF Operational Focal Point  
UNFCCC Focal Point**



صنعاء- ص.ب: (19719) - هاتف: ٢٠٧٨١٦/٧ - فاكس: ٢٠٧٣٢٧ - بريد إلكتروني: environment@yemen.nef.ye  
Sana'a - P.O. Box: (19719) - Tel: (207816/7) - Fax: (207327) - E-mail: env-yemen@yemen.nef.ye

**SIGNATURE PAGE**

Country: Yemen \_\_\_\_\_

UNDAF Outcome(s)/Indicator(s): Enhanced national and local capacities for sustainable and equitable management of natural resources, including water \_\_\_\_\_  
*(Link to UNDAF outcome., If no UNDAF, leave blank)*

Expected Outcome(s)/Indicator (s): N/A \_\_\_\_\_  
*(CP outcomes linked t the SRF/MYFF goal and service line)*

Expected Output(s)/Indicator(s): Second National Communication prepared, synergy between National Adaptation Action Plan, Initial National Communication and Clean Development established  
*(CP outcomes linked t the SRF/MYFF goal and service line)*

Implementing partner: Environment Protection Authority (EPA)  
*(designated institution/Executing agency)*

Other Partners: \_\_\_\_\_  
*(formerly implementing agencies )*

Programme Period: 3 years  
Programme Component  
Project Title: PIMS 3420 Enabling Activity for the preparation of Yemen’ Second National Communication to the UNFCCC  
Project ID: 00044077  
Project Duration: 3 years  
Management Arrangement: NEX

Budget \$405,000  
General Management Support Fee \_\_\_\_\_  
Total budget: 405,000  
Allocated resources: \_\_\_\_\_  
• Government \_\_\_\_\_  
• Regular \_\_\_\_\_  
• Other: \_\_\_\_\_  
    ○ Donor \_\_\_\_\_  
    ○ Donor \_\_\_\_\_  
    ○ Donor \_\_\_\_\_  
• In kind contributions \_\_\_\_\_  
Unfunded budget: \_\_\_\_\_

**Agreed by (Government):** \_\_\_\_\_  
**Agreed by (Implementing partner/Executing agency):** \_\_\_\_\_  
**Agreed by (UNDP):** \_\_\_\_\_