



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

**PREPARATION OF UGANDA'S SECOND BIENNIAL UPDATE REPORT TO THE UNITED
NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE**

UNEP PROJECT NO: SB-016018.16

JUNE 2023

TERMS OF REFERENCE FOR A NATIONAL CONSULTANCY FIRM/TEAM OF EXPERTS TO DEVELOP UGANDA'S SECOND BIENNIAL UPDATE REPORT (SBUR) TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

1. BACKGROUND/ CONTEXT:

Climate change has emerged as one of the most pressing issues confronting the Uganda and the rest of the world. This is seen in the devastating effects on our communities. The extent of these impacts, such as protracted dry spells resulting in drought and very heavy rainfall resulting in floods, has been growing over the years, significantly impacting the livelihood of our disadvantaged people in the country. As a result, it is critical that we take efforts to minimize and adapt to climate change.

The Climate Change Department of the Ministry of Water and Environment received support from the Global Environment Facility through the United Nations Environment Programme to prepare Uganda's Second Biennial Update report (BUR2) for submission to the Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in accordance with its commitment as a party to the Convention as per Decision 2/CP.17 taken at COP 17.

The project will build on and update work carried out under the previous Biennial Update Reports and National Communications namely the Initial National Communication (INC, 2002), the Second National Communication (SNC, 2014), the First Biennial Update Report (FBUR, 2019), and the Third National Communication (TNC, 2022).

The main components of the BUR2 are as follows:

- (a)** information on national circumstances and institution arrangements relevant to the preparation of the national communications on a continuous basis;
- (b)** GHG inventory anthropogenic emissions by sources and removal by sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, including a national inventory report;
- (c)** Information on mitigation actions and their effects including associated methodologies and assumptions;
- (d)** constraints and gaps and related financial, technical and capacity needs; including information on the level of support received to enable the preparation and submission of biennial update reports;
- (e)** Information on domestic Measurement Reporting and Verification (MRV).
- (f)** Any other information that Uganda as a non-Annex I Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in the biennial update report.

Uganda has received support from the Global Environment Facility (GEF) through the United Nations Environment Programme (UNEP) to undertake the FBUR project. The project will be prepared as per requirements of the UNFCCC for BURs and based on Decision 17/CP. 8 - Guidelines for the preparation of Biennial Update Report from Parties not included in Annex I to the Convention.

1.1 Project Objectives:

The project is based on three broad objectives;

- i. To undertake national stocktaking and stakeholder consultations to review work carried out under previous climate change enabling activities and identify gaps and propose relevant activities to be undertaken within the framework of preparing the Second Biennial Update Report (BUR2) under the UNFCCC.
- ii. To prepare the second biennial update report of Uganda under the UNFCCC, as per the approved implementation plan for the BUR2.
- iii. To undertake National Stakeholders' engagement and institutional arrangement for preparation of subsequent reports under the UNFCCC

The Biennial Update Report will also assist the country in mainstreaming and integrating climate change considerations into national and sectoral development policies by ensuring continuity to the institutional and technical capacity strengthening process, partly initiated and sustained by the First, Second and Third National Communications.

Based on the above background therefore, the Ministry of Water and Environment seeks to procure the services of a qualified Firm / Team of Experts to develop Uganda's Second Biennial Update Report (SBUR) to the United Nations Framework Convention on Climate Change (UNFCCC).

2.0 FOCUS AREAS:

1) National Green House Gas Inventory for Energy, Industrial Processes and Product Use (IPPU) and Waste Sectors of the Inter-Governmental Panel on Climate Change (IPCC).

The consultant will be responsible for the following tasks;

- (i) Compilation of energy, industrial processes and Waste sectors GHG Inventory sector of the IPCC
- (ii) Information on support received for preparation and submission on BUR
- (iii) Other relevant information for inclusion in the BUR
- (iv) Stocktaking assessment and institutional arrangements for preparation of INITIAL BTR

2) National Green House Gas Inventory for Agriculture, Forestry and Other Land Uses (AFOLU) As Well As Domestic Measurement, Reporting and Verification (MRV)

The consultant will be responsible for the following tasks;

- (i) Domestic Measurement, Reporting and Verification (MRV).
- (ii) Compilation of AFOLU GHG Inventory sector of the IPCC
- (iii) Overall compilation of the national GHG inventory comprising of AFOLU and non AFOLU sectors.
- (iv) Preparation of the National Inventory Report for the AFOLU sector for the years 1995 - 2022 of Greenhouse Gas Sources and Sinks.

3) Mitigation actions and their effects including associated methodologies and assumptions

The consultant will be responsible for the following tasks;

- (i) Information on Mitigation Actions and their Effects including associated methodologies and assumptions (chapter 4) and
- (ii) National circumstances and institutional arrangements
- (iii) Constraints and gaps, and related financial, technical and capacity needs
- (iv) Cost Benefit Analysis (CBA) of the mitigation actions

4) Cost Benefit Analysis (CBA) of the mitigation actions being developed is conducted

The consultant will be responsible for the following tasks;

- (i) Carrying out a Cost Benefit Analysis (CBA) of the mitigation actions being developed up until 2040.

3.0 DELIVERABLES

- 1) Inception Report articulating the methodology and understanding of the assignment; and workshop reports.
- 2) Quarterly progress report indicating the status of the work being undertaken.
- 3) National Greenhouse Gas Database for AFOLU, Energy and Transport, IPPU and Waste Sector of the Inter-Governmental Panel on Climate Change for the years 1995 – 2022.
- 4) Report on Mitigation actions and their effects including associated methodologies and assumptions.
- 5) National Inventory Report covering AFOLU, Energy and Transport, IPPU and Waste Sector of the IPCC for the years 1995 - 2022 of Greenhouse Gas Sources and Sinks.
- 6) Report on Domestic Measurement, Reporting and Verification (MRV) according to national circumstances and capacity and considering the different nature of mitigation actions.
- 7) A draft SBUR
- 8) Final SBUR
- 9) Stocktaking assessment and institutional arrangements for preparation of the initial Biennial Transparency Report (BTR)

4.0 STAFFING REQUIREMENTS AND QUALIFICATIONS

The following key personnel should be included as a minimum requirement for the assignment.

4.1 Team Leader

The Team Leader shall have the following competencies.

- An advanced degree in engineering, climate change, energy, environmental management/science, Natural Resources management, Project planning and management, environment economics or any other field relevant to the assignment
- At least 7 years of professional experience in managing and implementing climate change related assignments
- Experience in international climate change negotiations and related processes under the UNFCCC
- Good understanding of global and national climate change issues in particular related to mitigation, greenhouse gas Inventories, MRV and UNFCCC reporting obligations and guidelines for BURs development.

Duties of the Team Leader

- Consolidation of inputs from all outputs/reports leading to a draft and final SBUR
- Coordinating Internal and external technical reviews of the draft SBUR in consultation with the Project Management Unit (PMU) at the Climate Change Department (CCD)
- In consultation with the CCD, coordinate stakeholder trainings, validation and endorsement workshops
- Timely submission of all the project deliverables to the PMU at the CCD

4.2 National Green House Gas Inventory Expert (Energy, Industrial Processes AND Product Use (IPPU) and Waste Sector of the Inter-Governmental Panel on Climate Change (IPCC).

The Expert should possess any or all of the following qualifications and skills;

- More than 5 years' experience in developing a GHG inventory of the Energy, waste and Industrial Processes sectors of the IPCC
- Knowledgeable in compiling national GHG Emissions inventories, related reports
- Wide knowledge and experience and working knowledge of energy and transport sector, waste management, and industry.
- Good understanding of climate change and the role played by each of the sub-sectors
- Participation in previous climate change related activities in the sub-sectors
- Working knowledge of main sectors policies, development, models and interpretation of model results
- Broad understanding and appreciation of development and climate change issues from a national as well as an international perspective.

- The MRV applications in the Mitigation, Finance and other sectors.
- Relevant experience in the field of climate change for at least 7 years
- Familiarity with national communications, and with international negotiations and processes under the UNFCCC
- An advanced degree in fields of forestry, engineering, energy, climate change, natural resources Management, environmental management, or other field relevant to the assignment.

The expert will be responsible for the following tasks.

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| I. National GHG inventories. |
| Output 1.1: National GHG Inventory Team established and their capacities to undertake GHG inventory strengthened |
| Activity 1.1.1 Reviewing the composition of the existing national Energy, Waste and Industry GHG inventory team |
| Activity 1.1.2 Identifying additional stakeholders, if any, to the existing national GHG inventory team so that it covers all the 5 IPCC emitting sectors |
| Activity 1.1.3 Mobilizing key stakeholders in Energy, Waste and industrial processes emitting sectors to support the national GHG inventory process |
| Activity 1.1.4 Selecting team leaders or lead institutions of each of the above IPCC sectors to ensure efficient coordination |
| Activity 1.1.5 Technical capacity building for the Energy, Waste and Industrial processes sector working groups conducted |
| Output 2.1 The availability of GHG data for the Energy, Waste and Industrial processes for the year 2018 established; and national inventory of the same sectors for the years 1995 – 2022 prepared |
| Activity 2.1.1 Establish the applications of the IPCC guidelines, methodologies, IPCC Good Practice Guidelines (GPG) and related software packages |
| Activity 2.1.2 Establish a scheme for a national inventory and database management of the three sectors (Energy, Waste and Industrial processes) |
| Activity 2.1.3 Assessing data availability and collection procedures of GHG data from, Energy, Waste and Industrial processes using the IPCC guidelines. |
| Activity 2.1.4 Assess National emissions factors for key source categories of the above sectors |
| Activity 2.1.5 Identify areas where recalculations are necessary, plan strategy to ensure consistency and recalculate the GHG inventory of the above sectors for years 1995 – 2017. |
| Activity 2.1.6 Estimate emissions and compile the national inventory of greenhouse gas sources and sinks for 2018 - 2022 following the Revised 2006/2019 IPCC Guidelines of the above sectors. |

Activity 2.1.7 Provide information on methodologies used in the estimation of GHG emissions by sources and removals by sinks, including a brief explanation of the sources of emission factors and activity data.

Activity 2.1.8 Undertake an uncertainty Assessment of the National Inventory of Greenhouse Gas Sources and Sinks and setup QA/QC plans for activity data; provide information on the level of uncertainty with inventory data and their underlying assumptions, and describe the methodologies used for estimating these uncertainties.

Activity 2.1.9 Prepare the National Inventory Report for the Energy, Waste and Industrial processes for the years 1995 - 2022 of Greenhouse Gas Sources and Sinks in the Republic of Uganda; circulate the National Inventory Report for peer review and comments.

Activity 2.1.10 Presentation of the results of the National Inventory of the Greenhouse Gas Sources and Sinks for 1995 - 2022 periods at a national workshop

Output 3.1: National emission factors for key source categories including activity data documented

Activity 3.1.1 Archive activity data, emission factors and conversion factors used in the inventory preparation process and describe in the NIR the procedures and arrangement undertaken to archive data for the preparation of the national GHG inventory, as well as the role of the institutions involved.

II. Other relevant information for inclusion in the BUR

Output 2.1: Any other information relevant to the achievement of the objective of the convention including information on Gender mainstreaming provided

Activity 2.1.1 Identify and review all the information considered relevant to the achievement of the objective of the convention

Activity 2.1.2 Workshop on gender mainstreaming

Activity 2.1.3 Draft and compile the chapter on all the information considered relevant to the achievement of the objective of the convention including Gender mainstreaming

III. Information on support received for preparation and submission on BUR

Output 3.1: Information on support received for preparation of BUR1 provided

Activity 3.1.1 Describe the level of support received to enable the preparation and submission of BUR1

IV Stocktaking assessment and institutional arrangements for preparation of INITIAL BTR

Output 4.1: Stocktaking assessment conducted and institutional arrangements for preparation of subsequent BUR described.

Activity 4.1.1 Undertake a self-assessment and stocktaking exercise and prepare a summary of activities and results achieved.

Activity 4.1.2 Prepare a strategy to incorporate all relevant stakeholders, including their potential roles in the BTR processes and identify key focal points in working groups to track issues arising linked to financing, constraints and gaps, technical and capacity needs.

Activity 4.1.3 Propose measures to strengthen and retain the existing institutional arrangement, including possible technical assistance needed, as well as strategies for increasing synergies with related programmes and institutions

4.3 National Green House Gas Inventory Expert (Agriculture, Forestry and Other Land Uses (AFOLU))

Qualifications

The Expert should possess any or all of the following qualifications and skills;

- More than 5 years' experience in developing a GHG inventory of the AFOLU sector of the IPCC
- Knowledgeable in compiling national GHG Emissions inventories ,related reports and mitigation analysis in the context of BUR
- Experience and working knowledge of agricultural, forestry and other land use sector.
- Good understanding of climate change and the role played by each of the sub-sector
- Participation in previous climate change related activities in the sub-sectors
- Working knowledge of main sectors policies, development, models and interpretation of model results
- Broad understanding and appreciation of development and climate change issues from a national as well as an international perspective.
- The MRV applications in the Mitigation, Finance and other sectors.
- Relevant experience in the field of climate change for at least 7 years
- Familiarity with national communications, and with international negotiations and processes under the UNFCCC
- Excellent written and oral communication
- An advanced degree in forestry, engineering, energy, environmental management, environment economics or other field relevant to the assignment

The Expert will be responsible for the following tasks.

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| 1. Domestic measurement reporting and verification |
| Output 1.1: Identification and assessment of the different options and possibilities for the domestic Measurement, Reporting & Verification (MRV) according to national circumstances and capacity and considering the different nature of mitigation actions |
| Activity 1.1.1 Identify and assess different options and possibilities for domestic MRV taking into consideration national circumstances, local capacity and the nature of the proposed mitigation actions |
| Activity 1.1.2 Strengthen technical capacities of national teams including participation in national, regional and international workshops/ meetings/ workshops |
| Output 1.2: The process of development of the national institutional arrangements and frameworks for domestic MRV supported. |
| Activity 1.2.1 Assess and describe the national arrangements for Measurement, Reporting and Verification (MRV) related to mitigation actions and their effects. |
| Activity 1.2.2 Provide information on the protocols and operation procedures of the MRV system, including support given for the process of developing the national institutional and legal framework for the establishment of the MRV system |
| Activity 1.2.3 Design and set up a domestic MRV system to support the implementation of Mitigation Actions |
| Activity 1.2.4 Draft the chapter on domestic MRV for inclusion in the BUR2 |
| Output 2.1: National GHG Inventory Team established and their capacities to undertake GHG inventory strengthened. |
| 2.1.1 Reviewing the composition of the existing national AFOLU GHG inventory team |
| 2.1.2 Identifying additional stakeholders, if any, to the existing national GHG inventory team so that it covers all the 5 IPCC emitting sectors |
| 2.1.3 Mobilizing key stakeholders in AFOLU emitting sectors to support the national GHG inventory process |
| 2.1.4 Selecting team leaders or lead institutions of each of the 5 IPCC sectors to ensure efficient coordination |
| 2.1.5 Technical capacity building for the AFOLU GHG sector working groups conducted |
| Output 2.2: The availability of GHG data from agriculture and LULUCF for the year 2018 established; and AFOLU inventory for the years 1995 – 2022 prepared |
| 2.2.1 Establish the applications of the IPCC guidelines, methodologies, IPCC Good Practice Guidelines (GPG) and related software packages |

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| 2.2.2 Establish a scheme for the AFOLU inventory and database management |
| 2.2.3 Assessing data availability and collection procedures of GHG data from, Agriculture and LULUCF using the IPCC guidelines. |
| 2.2.4 Assess National emissions factors for key source categories |
| 2.2.5 Identify areas where recalculations are necessary, plan strategy to ensure consistency and recalculate the GHG inventory for years 1995 – 2017. |
| 2.2.6 Estimate emissions and compile the national inventory of greenhouse gas sources and sinks for 2018 - 2022 following the Revised 2006/2019 IPCC Guidelines |
| 2.2.7 Provide information on methodologies used in the estimation of GHG emissions by sources and removals by sinks, including a brief explanation of the sources of emission factors and activity data. |
| 2.2.8 Undertake an uncertainty Assessment of the National Inventory of Greenhouse Gas Sources and Sinks and setup QA/QC plans for activity data; provide information on the level of uncertainty with inventory data and their underlying assumptions, and describe the methodologies used for estimating these uncertainties. |
| 2.2.9 Prepare the National Inventory Report for the AFOLU sector for the years 1995 - 2022 of Greenhouse Gas Sources and Sinks in the Republic of Uganda; circulate the National Inventory Report for peer review and comments. |
| 2.2.10 Presentation of the results of the National Inventory of the Greenhouse Gas Sources and Sinks for 1995 - 2022 periods at a national workshop |
| Output 2.3: National emission factors for key source categories including activity data documented |
| 2.3.1 Archive activity data, emission factors and conversion factors used in the inventory preparation process and describe in the NIR the procedures and arrangement undertaken to archive data for the preparation of the national GHG inventory, as well as the role of the institutions involved. |

4.4 Mitigation Expert

The National Expert should possess any or all of the following qualifications and skills;

- Wide knowledge and experience and working knowledge of energy and transport sector, waste management, agricultural forestry practice and industry.
- Good understanding of climate change and the role played by each of the sub-sector
- Participation in previous climate change related activities in the sub-sectors
- Working knowledge of main sectors policies, development, models and interpretation of model results

- Broad understanding and appreciation of development and climate change issues from a national as well as an international perspective.
- Knowledgeable in GHG Emissions, inventories and mitigation analysis in the context of BUR
- The MRV applications in the Mitigation, Finance and other sectors.
- The NAMA process as applicable to Uganda, including the current states of projects in Uganda.
- Relevant experience in the field of climate change for at least 7 years
- Familiarity with national communications, and with international negotiations and processes under the UNFCCC
- Excellent written and oral communication
- An advanced degree in engineering, energy, environmental management, environment economics or other field relevant to Mitigation options, GHG or financing of mitigation.

The Expert will be responsible for the following tasks.

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| I. Mitigation actions and their effects including associated methodologies and assumptions |
| Output 1.1: The National Mitigation Technical working established; and their technical capacity to undertake mitigation analysis and provide information on mitigations actions and their effects is strengthened |
| Activity: 1.1.1 Review the composition of the existing national Mitigation technical working group and Identify and mobilize additional stakeholders, if any, to support and participate in the existing national Mitigation technical working group. |
| Output 1.2: A review of Information provided on the national arrangements to enable the formulation, registration, and implementation of NAMAs, including the operationalisation of the national registry |
| Activity: 1.2.1 Operationalize the approved national governance structure for the establishment and maintenance of NAMAs registry. |
| Activity: 1.2.1 Registration of the identified mitigation actions or group of mitigation action on the NAMA registry |
| Output 1.3: Data collection and analysis of relevant information regarding the mitigation actions or group of actions being developed is described; including name, sector, coverage, goals, objectives, methodologies, inputs and outputs |
| Activity: 1.3.1 Design a standard template for the identification and reporting mitigation actions or group of mitigation actions |
| Activity: 1.3.2 Obtain and compile the status of implementation of mitigation actions or group of mitigation actions and results in a tabular format |
| Activity: 1.3.3 Identify the effects of the mitigation actions |

Activity: 1.3.4 Establish a database with a detailed description of the mitigation or group of mitigation actions, including information on the nature of the action, coverage (i.e. sectors and gases) (b) methodologies and assumptions, (c) objectives of actions and steps taken or envisaged to achieve that action (d) information on progress of implementation, estimated outcomes and emission reduction potential, needs, types and level of support required.

Activity: 1.3.5 Prepare a status report on participation in international carbon market mechanisms.

II National circumstances and institutional arrangements

Output 2.1: Review report on existing institutional arrangements and recommendation on relevant improvements to support successful implementation of the biennial update reports and NCs on a continuous basis prepared.

Activity 2.1.1 Reviewing current/existing institutional arrangements; identifying additional key stakeholders needed to ensure successful update of the BUR; and further recommend targeted capacity building trainings

Output 2.2: A review of information on Uganda's national circumstances which may affect the country's ability to mitigate climate change including geography, demography, natural resources, climate and economy, land use, and environment undertaken

Activity 2.2.1 Reviewing and updating data and information on the National Circumstances using latest data from lead agencies and other institutions in Uganda and other sources of data

Output 2.3: Description of Uganda's national development objectives, priorities and circumstances, and the specific needs and concerns arising from the adverse effects of climate change provided

Activity 2.3.1 Review relevant documents, policies and development programmes, and Population and housing census

Activity 2.3.2 Identify and document important gaps and constraints

Activity 2.3.3 Prepare a chapter on National Circumstances and Institutional arrangement for inclusion in the BUR2

III. Compilation and production of BUR

Output 3.1: BUR2 compiled, validated and submitted to the UNFCCC Secretariat

Activity 3.1.1 Compile draft BUR2 report, circulate them for comments and reviewing

IV. Constraints and gaps, and related financial, technical and capacity needs

Output 4.1: Framework for the continuous assessment and reporting of constraints, gaps and related financial, technical and capacity needs and support needed and received revised; and gaps and related financial, technical and capacity needs and support needed and received reported.

Activity 4.1.1 Review and revise the framework for the continuous assessment and reporting of constraints, gaps and related financial, technical and capacity needs and support needed and received revised;

Activity 4.1.2 Consult with stakeholders to identify and assess the constraints, gaps and related financial, technical and capacity needs.

Activity 4.1.3 Collect, analyse, and update the information on financial resources; technology transfer; capacity building and technical assistance received from the GEF, Annex I Parties and other developed country Parties; the GCF and multilateral institutions for activities relating to climate change including for the preparation of the current Biennial Update report

Activity 4.1.4 Compile and draft Chapter on constraints and gaps, and related financial, technical and capacity needs.

4.5 Economist (Social or Environmental)

The National Expert should possess any or all of the following qualifications and skills.

- Wide knowledge and experience and working knowledge of energy and transport sector, waste management, agriculture and forestry practice and industry
- Knowledgeable in Climate Change economics, Climate Change Finance and climate mitigation assessment.
- Good understanding of climate change and the role played by each of the sub-sector
- Participation in previous climate change related activities in the sub-sectors
- Working knowledge of main sectors policies, development, models and interpretation of model results
- Broad understanding and appreciation of development and climate change issues from a national as well as an international perspective
- Knowledgeable mitigation analysis in the context of BUR
- Knowledgeable in Climate Change economics, Climate Change Finance and climate mitigation assessment.
- 7 years of working experience in the area relevant to the Climate Change
- Knowledge on stakeholder engagement assignments in climate change mitigation
- Excellent written and oral communication
- An advanced degree in social or environment economics or other field relevant to the assignment.

The Expert will be responsible for the following tasks.

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| Output 1: Cost Benefit Analysis (CBA) of the mitigation actions being developed is conducted |
| Activity 1:1 Carrying out a CBA of the mitigation actions |

5.0 Timelines

The duration of the assignment is 11 months with the following milestones;

| # | Deliverable | Timeline |
|---|---|---|
| 1 | An inception report that will be presented during the inception workshop should be prepared detailing the understanding of the task and showing how each task will be met, proposed methods, sources of data and data collection procedures, a detailed work plan, and implementation schedule. | Within two weeks from contract signing |
| 2 | Draft National Greenhouse Gas Database for AFOLU, Energy and Transport, Industrial Processes and Product Use (IPPU) and Waste Sector of the Inter-Governmental Panel on Climate Change (IPCC) for the years 1995 – 2022 | 5 Months after inception but |
| 3 | A draft technical reports of SBUR components | 6 months after inception |
| 4 | Draft SBUR | 1 month after submission of technical reports |
| 5 | Workshop reports | At least 1 week after the workshop |
| 6 | Quarterly progress reports | Every quarter (every 3 months) |
| 7 | Final SBUR | February,2024 |
| 8 | Stocktaking assessment for preparation of the initial Biennial Transparency Report (BTR) | one month after submission of the final SBUR |

6.0. Terms of Payment

- a) The first instalment of 20% to be processed upon the inception workshop
- b) The second instalment of 40% upon delivery of the outputs
- c) The final instalment of 40% after approval of satisfactory report by the Ministry of Water and Environment, Climate Change Department and UNEP.